

PV Module List (Simplified Data)

Data has not changed since November 02, 2020

PV Module List Notes

* BIPV = Building Integrated Photovoltaics

**Any text in brackets at the end of the Model Number is not part of the Manufacturer's Model Number. The bracketed text (e.g. "[Whi]") is shown only if the model number is available in different backsheet colors and the manufacturer has provided different test data for the different options.

PTC refers to PVUSA Test Conditions, which were developed to test and compare PV systems as part of the PVUSA (Photovoltaics for Utility Scale Applications) project. PTC are 1,000 Watts per square meter solar irradiance, 20 degrees C air temperature, and wind speed of 1 meter per second at 10 meters above ground level. PV manufacturers use Standard Test Conditions, or STC, to rate their PV products. STC are 1,000 Watts per square meter solar irradiance, 25 degrees C cell temperature, air mass equal to 1.5, and ASTM G173-03 standard spectrum. The PTC rating, which is lower than the STC rating, is generally recognized as a more realistic measure of PV output because the test conditions better reflect "real-world" solar and climatic conditions, compared to the STC rating. All ratings in the list are DC (direct current) watts.

Neither PTC nor STC account for all "real-world" losses. Actual solar systems will produce lower outputs due to soiling, shading, module mismatch, wire losses, inverter and transformer losses, shortfalls in actual nameplate ratings, panel degradation over time, and high-temperature losses for arrays mounted close to or integrated within a roofline. These loss factors can vary by season, geographic location, mounting technique, azimuth, and array tilt. Examples of estimated losses from varying factors can be found at:

[PVWatts Tool](#)

Please note that PTC values presented on the PV Module List are calculated using laboratory-tested parameter values. After July 1, 2009, if a California solar electric incentive program uses PTC values, the SB 1 Guidelines compliant PTC values must be used for new reservation applications.

Design qualification certification and performance evaluation testing are not required in order to be included on the PV Module List. If applicable, the date of the certificate or test report is listed. Otherwise, the field will be marked as "No Information Submitted".

*** Equipment is in the process of being removed from the list of eligible equipment pursuant to Appendix A, Section B, of the Guidelines for California's Solar Electric Incentive Programs (Senate Bill 1).

[Guidelines for California's Solar Electric Incentive Programs \(Senate Bill 1\)](#)

Blue colored text indicates that the model number occurs multiple times on the list under different manufacturer names.

[Archive of the Prior Incentive Eligible Photovoltaic Modules Expired July 1, 2009.](#)

Manufacturer	Model Number	Description	Safety Certification	Nameplate Pmax (W)	PTC	Notes	Design Qualification Certification (Optional Submission) IEC 61215:2016	Performance Evaluation (Optional Submission) IEC 61853-1:2011
Suzhou Talesun Solar Technologies Co., Ltd.	TP572M-175	175 W Monocrystalline Module	UL 1703	175	157.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP572M-180	180 W Monocrystalline Module	UL 1703	180	162.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP572M-185	185 W Monocrystalline Module	UL 1703	185	166.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP572M-190	190 W Monocrystalline Module	UL 1703	190	171.4		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP572M-195	195 W Monocrystalline Module	UL 1703	195	176.1		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP572M-200	200 W Monocrystalline Module	UL 1703	200	180.7		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-220	220 W Monocrystalline Module	UL 1703	220	198.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-220	220 W Polycrystalline Module	UL 1703	220	197.7		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-225	225 W Monocrystalline Module	UL 1703	225	202.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-225	225 W Polycrystalline Module	UL 1703	225	202.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-230	230 W Monocrystalline Module	UL 1703	230	207.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-230	230 W Polycrystalline Module	UL 1703	230	206.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-235	235 W Monocrystalline Module	UL 1703	235	212.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-235	235 W Polycrystalline Module	UL 1703	235	211.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-240	240 W Monocrystalline Module	UL 1703	240	216.8		No Information Submitted	No Information Submitted

Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-240B	240 W Monocrystalline Module	UL 1703	240	217.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-240	240 W Polycrystalline Module	UL 1703	240	216.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-240B	240 W Polycrystalline Module	UL 1703	240	216.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-245	245 W Monocrystalline Module	UL 1703	245	221.4		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-245B	245 W Monocrystalline Module	UL 1703	245	222.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-245	245 W Polycrystalline Module	UL 1703	245	220.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-245B	245 W Polycrystalline Module	UL 1703	245	221.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TAC208/240	260 W DC, Monocrystalline ACPV Module	UL 1741	250	226.1	This component is specific to ACPV modules and is not available individually.	No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660AM225	250 W DC, 225 W AC Monocrystalline ACPV Module	UL 1741	250	226.1	This component is specific to ACPV modules and is not available individually.	No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660AM240	250 W DC, 240 W AC Monocrystalline ACPV Module	UL 1741	250	226.1	This component is specific to ACPV modules and is not available individually.	No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-250	250 W Monocrystalline Module	UL 1703	250	226.1		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-250B	250 W Monocrystalline Module	UL 1703	250	227.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-250	250 W Polycrystalline Module	UL 1703	250	225.4		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-250B	250 W Polycrystalline Module	UL 1703	250	225.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-255	255 W Monocrystalline Module	UL 1703	255	232.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-255B	255 W Monocrystalline Module	UL 1703	255	231.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-255	255 W Polycrystalline Module	UL 1703	255	230.1		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-255B	255 W Polycrystalline Module	UL 1703	255	230.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-260	260 W Monocrystalline Module	UL 1703	260	237.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-260B	260 W Monocrystalline Module	UL 1703	260	236.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-260	260 W Polycrystalline Module	UL 1703	260	235.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-265	265 W Monocrystalline Module	UL 1703	265	236.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P(H)-265	265 W Polycrystalline Module	UL 1703	265	240.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-265	265 W Polycrystalline Module	UL 1703	265	240.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M-270	270 W Monocrystalline Module	UL 1703	270	241.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P(H)-270	270 W Polycrystalline Module	UL 1703	270	245.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660P-270	270 W Polycrystalline Module	UL 1703	270	245.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP660M(H)-275	275 W Monocrystalline Module	UL 1703	275	251.2		No Information Submitted	No Information Submitted

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Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-300	300 W Monocrystalline Module	UL 1703	300	270.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-300B	300 W Monocrystalline Module	UL 1703	300	272.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-300	300 W Polycrystalline Module	UL 1703	300	270.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-300B	300 W Polycrystalline Module	UL 1703	300	271.1		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-305	305 W Monocrystalline Module	UL 1703	305	275.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-305B	305 W Monocrystalline Module	UL 1703	305	277.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-305	305 W Polycrystalline Module	UL 1703	305	276.7		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-310	310 W Monocrystalline Module	UL 1703	310	280.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-310B	310 W Monocrystalline Module	UL 1703	310	281.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-310	310 W Polycrystalline Module	UL 1703	310	281.4		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-315	315 W Monocrystalline Module	UL 1703	315	285.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P(H)-315	315 W Polycrystalline Module	UL 1703	315	286.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-315	315 W Polycrystalline Module	UL 1703	315	286.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-320	320 W Monocrystalline Module	UL 1703	320	290.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P(H)-320	320 W Polycrystalline Module	UL 1703	320	290.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-320	320 W Polycrystalline Module	UL 1703	320	290.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-325	325 W Monocrystalline Module	UL 1703	325	296.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-325	325 W Monocrystalline Module	UL 1703	325	296.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P(H)-325	325 W Polycrystalline Module	UL 1703	325	295.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-325	325 W Polycrystalline Module	UL 1703	325	295.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M(H)-325	325 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1500V max system Vdc	UL 61730	325	299.5		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M-325	325 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1000V max system Vdc	UL 61730	325	299.5		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-330	330 W Monocrystalline Module	UL 1703	330	301.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-330	330 W Monocrystalline Module	UL 1703	330	301.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P(H)-330	330 W Polycrystalline Module	UL 1703	330	300.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-330	330 W Polycrystalline Module	UL 1703	330	300.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M(H)-330	330 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1500V max system Vdc	UL 61730	330	304.2		2020/4/27	No Information Submitted

Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M-330	330 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1000V max system Vdc	UL 61730	330	304.2		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-335	335 W Monocrystalline Module	UL 1703	335	306.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-335	335 W Monocrystalline Module	UL 1703	335	306.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P(H)-335	335 W Polycrystalline Module	UL 1703	335	304.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-335	335 W Polycrystalline Module	UL 1703	335	304.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M(H)-335	335 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1500V max system Vdc	UL 61730	335	309.0		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M-335	335 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1000V max system Vdc	UL 61730	335	309.0		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-340	340 W Monocrystalline Module	UL 1703	340	310.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-340	340 W Monocrystalline Module	UL 1703	340	310.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P(H)-340	340 W Polycrystalline Module	UL 1703	340	309.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-340	340 W Polycrystalline Module	UL 1703	340	309.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M(H)-340	340 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1500V max system Vdc	UL 61730	340	313.7		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M-340	340 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1000V max system Vdc	UL 61730	340	313.7		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-345	345 W Monocrystalline Module	UL 1703	345	315.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-345	345 W Monocrystalline Module	UL 1703	345	315.6		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P(H)-345	345 W Polycrystalline Module	UL 1703	345	314.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672P-345	345 W Polycrystalline Module	UL 1703	345	314.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M(H)-345	345 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1500V max system Vdc	UL 61730	345	318.5		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M-345	345 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1000V max system Vdc	UL 61730	345	318.5		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-350	350 W Monocrystalline Module	UL 1703	350	320.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-350	350 W Monocrystalline Module	UL 1703	350	320.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M(H)-350	350 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1500V max system Vdc	UL 61730	350	323.2		No Information Submitted	No Information Submitted

Suzhou Talesun Solar Technologies Co., Ltd.	TP6F60M-350	350 W, 120 half-cut cell monocrystalline module, black backsheet and rearside white, 1000V max system Vdc	UL 61730	350	323.2		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-355	355 W Monocrystalline Module	UL 1703	355	325.0		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-355	355 W Monocrystalline Module	UL 1703	355	325.0		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-360	360 W Monocrystalline Module	UL 1703	360	329.7		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-360	360 W Monocrystalline Module	UL 1703	360	329.7		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-365	365 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 1703	365	340.4		2019/3/8	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-365	365 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 1703	365	340.4		2019/3/8	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-370	370 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 1703	370	345.2		2019/3/8	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-370	370 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 1703	370	345.2		2019/3/8	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-375	375 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 1703	375	350		2019/3/8	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-375	375 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 1703	375	350		2019/3/8	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-380	380 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730, UL 1703	380	348.3		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-380	380 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730, UL 1703	380	348.3		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-385	385 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730, UL 1703	385	353.1		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-385	385 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730, UL 1703	385	353.1		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-385	385 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730, UL 1703	385	353.6		2020/1/2	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-385	385 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730, UL 1703	385	353.6		2020/1/2	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-390	390 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 1703	390	357.8		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-390	390 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 1703	390	357.8		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-390	390 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730, UL 1703	390	358.3		2020/1/2	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-390	390 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730, UL 1703	390	358.3		2020/1/2	No Information Submitted

Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M(H)-390	390 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730	390	358.0		2020/2/1	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M-390	390 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730	390	358.0		2020/2/1	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TD6G72M-395	395 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	395	362.9		2020/5/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-395	395 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 1703	395	362.5		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-395	395 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 1703	395	362.5		2019/10/10	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-395	395 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730, UL 1703	395	363.1		2020/1/2	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-395	395 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730, UL 1703	395	363.1		2020/1/2	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M(H)-395	395 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	395	370.9		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M-395	395 W, 144 half-cut cell bifacial monocrystalline module, 1000V max system Vdc	UL 61730	395	370.9		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M(H)-395	395 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730	395	362.7		2020/2/1	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M-395	395 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730	395	362.7		2020/2/1	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TD6G72M-400	400 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	400	367.6		2020/5/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-400	400 W, 72 cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 1703	400	367.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-400	400 W, 72 cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 1703	400	367.3		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-400	400 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730, UL 1703	400	367.8		2020/1/2	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-400	400 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730, UL 1703	400	367.8		2020/1/2	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M(H)-400	400 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	400	375.7		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M-400	400 W, 144 half-cut cell bifacial monocrystalline module, 1000V max system Vdc	UL 61730	400	375.7		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M(H)-400	400 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730	400	367.4		2020/2/1	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M-400	400 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730	400	367.4		2020/2/1	No Information Submitted

Suzhou Talesun Solar Technologies Co., Ltd.	TD6G72M-405	405 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	405	372.4		2020/5/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-405	405 W, 72 cell monocrystalline module, white backsheets, 1500V max system Vdc	UL 1703	405	372.0		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-405	405 W, 72 cell monocrystalline module, white backsheets, 1000V max system Vdc	UL 1703	405	372.0		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-405	405 W, 144 half-cut cell monocrystalline module, white backsheets, 1500V max system Vdc	UL 61730, UL 1703	405	372.6		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-405	405 W, 144 half-cut cell monocrystalline module, white backsheets, 1000V max system Vdc	UL 61730, UL 1703	405	372.6		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M(H)-405	405 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	405	380.6		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M-405	405 W, 144 half-cut cell bifacial monocrystalline module, 1000V max system Vdc	UL 61730	405	380.6		2020/4/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M(H)-405	405 W, 144 half-cut cell monocrystalline module, white backsheets, 1500V max system Vdc	UL 61730	405	372.2		2020/2/1	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M-405	405 W, 144 half-cut cell monocrystalline module, white backsheets, 1000V max system Vdc	UL 61730	405	372.2		2020/2/1	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TD6G72M-410	410 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	410	377.1		2020/5/27	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-410	410 W, 72 cell monocrystalline module, white backsheets, 1500V max system Vdc	UL 1703	410	376.7		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-410	410 W, 72 cell monocrystalline module, white backsheets, 1000V max system Vdc	UL 1703	410	376.7		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-410	410 W, 144 half-cut cell monocrystalline module, white backsheets, 1500V max system Vdc	UL 61730	410	377.3		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-410	410 W, 144 half-cut cell monocrystalline module, white backsheets, 1000V max system Vdc	UL 61730	410	377.3		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M(H)-410	410 W, 144 half-cut cell bifacial monocrystalline module, 1500V max system Vdc	UL 61730	410	385.4		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6G72M-410	410 W, 144 half-cut cell bifacial monocrystalline module, 1000V max system Vdc	UL 61730	410	385.4		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M(H)-410	410 W, 144 half-cut cell monocrystalline module, white backsheets, 1500V max system Vdc	UL 61730	410	376.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6H72M-410	410 W, 144 half-cut cell monocrystalline module, white backsheets, 1000V max system Vdc	UL 61730	410	376.9		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M(H)-415	415 W, 72 cell monocrystalline module, white backsheets, 1500V max system Vdc	UL 1703	415	381.5		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP672M-415	415 W, 72 cell monocrystalline module, white backsheets, 1000V max system Vdc	UL 1703	415	381.5		No Information Submitted	No Information Submitted

Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-415	415 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730	415	382.1		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-415	415 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730	415	382.1		2020/7/14	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M(H)-420	420 W, 144 half-cut cell monocrystalline module, white backsheet, 1500V max system Vdc	UL 61730	420	386.8		No Information Submitted	No Information Submitted
Suzhou Talesun Solar Technologies Co., Ltd.	TP6F72M-420	420 W, 144 half-cut cell monocrystalline module, white backsheet, 1000V max system Vdc	UL 61730	420	386.8		No Information Submitted	No Information Submitted



Product Service

CERTIFICATE

No. Z2 078488 0092 Rev. 00

Holder of Certificate: **Suzhou Talesun Solar Technologies Co., Ltd.**

No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: **Crystalline Silicon Terrestrial Photovoltaic (PV) Modules**
Mono-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061617105-02

Valid until: 2023-08-30

Date, 2018-09-06

(Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 078488 0092 Rev. 00

Model(s):

1000 VDC system voltage modules:

TP672M-xxx, xxx= 275 to 390 in step of 5

TP660M-xxx, xxx= 230 to 325 in step of 5

TP654M-xxx, xxx= 205 to 280 in step of 5

TP648M-xxx, xxx= 185 to 250 in step of 5

TP6H72M-xxx, xxx= 335 to 390 in step of 5

TP6H60M-xxx, xxx= 280 to 325 in step of 5

1500 VDC system voltage modules:

TP672M(H)-xxx, xxx= 300 to 390 in step of 5

TP660M(H)-xxx, xxx= 250 to 325 in step of 5

TP654M(H)-xxx, xxx= 225 to 280 in step of 5

TP648M(H)-xxx, xxx= 200 to 250 in step of 5

TP6H72M(H)-xxx, xxx= 335 to 390 in step of 5

TP6H60M(H)-xxx, xxx= 280 to 325 in step of 5

xxx is standing for rated output power at STC

Parameters:

Rated Output Power at STC:

See the table below

Construction:

Framed, with Junction box,
Cable and Connectors.

Application Class :

Class A

Maximum System Voltage:

1500 V DC or 1000 V DC

Fire Safety Class:

Class C

No. Z2 078488 0092 Rev. 00

Tested according to:	IEC 61215(ed.2) IEC 61730-1(ed.1);am1;am2 IEC 61730-2(ed.1);am1 IEC 62716(ed.1)
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001453, 003671, 078488, 087702, 090968, 096715, 101042

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CERTIFICATE

No. Z2 078488 0094 Rev. 00

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.

No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product:	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules Poly-Crystalline Silicon Photovoltaic Module
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The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061617106-02

Valid until: 2023-08-30

Date, 2018-09-06

(Zhulin Zhang)

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Product Service

CERTIFICATE

No. Z2 078488 0094 Rev. 00

Model(s):

1000 VDC system voltage modules:

TP672P-xxx, xxx= 285 to 360 in step of 5

TP660P-xxx, xxx= 230 to 300 in step of 5

TP654P-xxx, xxx= 205 to 255 in step of 5

TP648P-xxx, xxx= 180 to 230 in step of 5

TP636P-xxx, xxx= 130 to 150 in step of 5

TP6H72P-xxx, xxx= 300 to 360 in step of 5

TP6H60P-xxx, xxx= 250 to 300 in step of 5

1500 VDC system voltage modules:

TP672P(H)-xxx, xxx= 285 to 360 in step of 5

TP660P(H)-xxx, xxx= 235 to 300 in step of 5

TP654P(H)-xxx, xxx= 210 to 255 in step of 5

TP648P(H)-xxx, xxx= 190 to 230 in step of 5

TP6H72P(H)-xxx, xxx= 300 to 360 in step of 5

TP6H72P(H)-xxx, xxx= 250 to 300 in step of 5

xxx is standing for rated output power at STC

Parameters:

Rated Output Power at STC:

See the table below

Construction:

Framed, with Junction box,
Cable and Connectors.

Application Class :

Class A

Maximum System Voltage:

1500 V DC or 1000 V DC

Fire Safety Class:

Class C



Product Service

CERTIFICATE

No. Z2 078488 0094 Rev. 00

Model (1000VDC system voltage normal modules)	Rated Output Power at STC
TP672P-xxx, xxx= 285 to 360 in step of 5	285W,290W,295W,300W,305W,310W,315W,320W,325W,330W,335W,340W,345W,350W,355W,360W
TP660P-xxx, xxx= 230 to 300 in step of 5	230W,235W,240W,245W,250W,255W,260W,265W,270W,275W,280W,285W,290W,295W,300W
TP654P-xxx, xxx= 205 to 255 in step of 5	205W,210W,215W,220W,225W,230W,235W,240W,245W,250W,255W
TP648P-xxx, xxx= 180 to 230 in step of 5	180W,185W,190W,195W,200W,205W,210W,215W,220W,225W,230W
TP636P-xxx, xxx= 130 to 150 in step of 5	130W,135W,140W,145W,150W
TP6H72P-xxx, xxx= 300 to 360 in step of 5	300W,305W,310W,315W,320W,325W,330W,335W,340W,345W,350W,355W,360W
TP6H60P-xxx, xxx= 250 to 300 in step of 5	250W,255W,260W,265W,270W, 275W,280W,285W,290W,295W,300W
Model (1500VDC system voltage normal modules)	Rated Output Power at STC
TP672P(H)-xxx, xxx= 285 to 360 in step of 5	285W,290W,295W,300W,305W 310W,315W,320W,325W,330W,335W,340W,345W,350W,355W,360W
TP660P(H)-xxx,xxx=235 to 300 in step of 5	235W,240W,245W,250W,255W,260W,265W,270W,275W,280W,285W,290W,295W,300W
TP654P(H)-xxx,xxx=210 to 255 in step of 5	210W,215W,220W,225W,230W,235W,240W,245W,250W,255W
TP648P(H)-xxx,xxx=190 to 230 in step of 5	190W,195W,200W,205W,210W,215W,220W,225W,230W
TP6H72P(H)-xxx,xxx=300 to 360 in step of 5	300W,305W,310W,315W,320W,325W,330W,335W,340W,345W,350W,355W,360W
TP6H72P(H)-xxx,xxx=250 to 300 in step of 5	250W,255W,260W,265W,270W,275W,280W,285W,290W,295W,300W

**Tested
according to:**

IEC 61215(ed.2)
IEC 61730-1(ed.1);am1;am2
IEC 61730-2(ed.1);am1
IEC 62716(ed.1)

**Production
Facility(ies):**

001453, 003671, 078488, 087702, 090968, 096715, 101042

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Product Service

Attestation of Conformity

No. N8A 078488 0095 Rev. 01

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.

No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Product:

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Poly-Crystalline Silicon Photovoltaic Module

Model(s):

1000 VDC system voltage normal modules:
TP672P-xxx,xxx=315-355 in step of 5;
TP6H72P-xxx,xxx=325-350 in step of 5;
TP660P-xxx,xxx=255-295 in step of 5;
TP6H60P-xxx,xxx=270-290 in step of 5;
1500 VDC system voltage normal modules:
TP672P(H)-xxx,xxx=315-355 in step of 5;
TP6H72P(H)-xxx,xxx=325-350 in step of 5;
TP660P(H)-xxx,xxx=255-295 in step of 5;
TP6H60P(H)-xxx,xxx=270-290 in step of 5
xxx is standing for rated output power at STC

Parameters:

Construction:	Framed, with Junction box, Cable and Connectors.
Safety Class:	Class II
Maximum System Voltage:	1000 V DC or 1500 V DC Yangzhou Opto-Electrical Products Testing Institute,
Test Laboratory:	No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China.
Fire Safety Class:	Class C according to UL790.
Tested according to:	EN IEC 61730-1:2018 EN IEC 61730-1:2018/AC:2018-06 EN IEC 61730-2:2018 EN IEC 61730-2:2018/AC:2018-06

This Attestation of Conformity is issued on a voluntary basis according to the Low Voltage Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits. It confirms that the listed equipment complies with the principal protection requirements of the directive and is based on the technical specifications applicable at the time of issuance. It refers only to the particular sample submitted for testing and certification. See also notes overleaf.

Test report no.: 704061901204-01

Date, 2020-01-02

(Zhulin Zhang)

Page 1 of 1

After preparation of the necessary technical documentation as well as the EU declaration of conformity the required CE marking can be affixed on the product. The declaration of conformity is issued under the sole responsibility of the manufacturer. Other relevant EU-directives have to be observed.

TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

TUV®

ATTESTATION OF CONFORMITY

Issued to: Suzhou Talesun Solar Technologies Co., Ltd.
No.1 Talesun Road, Shajiabang, Changshu, Suzhou, 215542, Jiangsu, P. R. China

For the product: Mono Crystalline Silicon PV Modules

Trade name: Talesun

Type/Model: see annex for details

Ratings: Maximum System Voltage: 1500 V; Protection Class: Class II; Pollution Degree: 1,
Fire rating: C.

Manufactured by: Suzhou Talesun Solar Technologies Co., Ltd.
No.1 Talesun Road, Shajiabang, Changshu, Suzhou, 215542, Jiangsu, P. R. China

Requirements: EN 61215-1:2016
EN 61215-1-1:2016
EN 61215-2:2017
EN IEC 61730-1:2018
EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018
EN IEC 61730-2:2018/AC:2018-06

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6080539 050A 001 and 6080539 050B 001.

This Attestation implies that the examined types are in accordance with the standards designated under the Low Voltage Directive (LVD) 2014/35/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 16 June 2020

Number: 6080539.01AOC

DEKRA Testing and Certification (Shanghai) Ltd.

C. Lin
Certification Manager



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DEKRA Testing and Certification (Shanghai) Ltd.

3F #250 Jiangchangsan Road Building 16 Headquarter Economy Park Shibe Hi-Tech Park, Jing'an District, Shanghai 200436 China
T +86 21 6056 7600 F +86 21 6056 7555 www.dekra-certification.com

Annex

Document no. : 6080539.01AOC

Types:

With Mono c-Si cells:

TD6G72M-xxx (xxx=395-410, in steps of 5, 144 cells)

TD6G60M-xxx (xxx=330-340, in steps of 5, 120 cells)

ATTESTATION OF CONFORMITY

Issued to: Suzhou Talesun Solar Technologies Co., Ltd.
No.1 Talesun Road, Shajiabang, Changshu, Suzhou, 215542, Jiangsu, P. R. China

For the product: Mono Crystalline Silicon PV Modules

Trade name: Talesun

Type/Model: see annex for details

Ratings: Maximum System Voltage: 1500 V; Protection Class: Class II; Pollution Degree: 1,
Fire rating: C.

Manufactured by: Suzhou Talesun Solar Technologies Co., Ltd.
No.1 Talesun Road, Shajiabang, Changshu, Suzhou, 215542, Jiangsu, P. R. China

Requirements: EN 61215-1:2016
EN 61215-1-1:2016
EN 61215-2:2017
EN IEC 61730-1:2018
EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018
EN IEC 61730-2:2018/AC:2018-06

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6080539 050A 001 and 6080539 050B 001.

This Attestation implies that the examined types are in accordance with the standards designated under the Low Voltage Directive (LVD) 2014/35/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 16 June 2020

Number: 6080539.01AOC

DEKRA Testing and Certification (Shanghai) Ltd.

C. Lin
Certification Manager



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DEKRA Testing and Certification (Shanghai) Ltd.

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T +86 21 6056 7600 F +86 21 6056 7555 www.dekra-certification.com

Annex

Document no. : 6080539.01AOC

Types:

With Mono c-Si cells:

TD6G72M-xxx (xxx=395-410, in steps of 5, 144 cells)

TD6G60M-xxx (xxx=330-340, in steps of 5, 120 cells)



EU Declaration of Conformity

No. CE20200618_001

This declaration of conformity is provided under the responsibility under manufacturer:

Suzhou Talesun Solar Technologies Co., Ltd.

No.1 Talesun Road, Changkun Industrial Park, Shajiabang Town, Changshu, Suzhou, Jiangsu province 215542, P. R. China

And we here declare that our products Terrestrial crystalline silicon photovoltaic (PV) modules:

- ☒ TP678M-xxx(xxx=400-415, in increment of 5, 78 cells)
- ☒ TP672M-xxx(xxx=325-395, in increment of 5, 72 cells)
- ☒ TP6H72M-xxx(xxx=365-405, in increment of 5, 144 cells)
- ☒ TP6F72M-xxx(xxx=385-415, in increment of 5, 144 cells)
- ☒ TP6G72M-xxx(xxx=390-405, in increment of 5, 144 cells)
- ☒ TP660M-xxx(xxx=270-330, in increment of 5, 60 cells)
- ☒ TP6H60M-xxx(xxx=305-335, in increment of 5, 120 cells)
- ☒ TP6F60M-xxx(xxx=320-345, in increment of 5, 120 cells)
- ☒ TP6G60M-xxx(xxx=325-335, in increment of 5, 120 cells)
- ☒ TP678M(H)-xxx(xxx=400-415, in increment of 5, 78 cells)
- ☒ TP672M(H)-xxx(xxx=325-395, in increment of 5, 72 cells)
- ☒ TP6H72M(H)-xxx(xxx=365-405, in increment of 5, 144 cells)
- ☒ TP6F72M(H)-xxx(xxx=385-415, in increment of 5, 144 cells)
- ☒ TP6G72M(H)-xxx(xxx=390-405, in increment of 5, 144 cells)
- ☒ TP660M(H)-xxx(xxx=270-330, in increment of 5, 60 cells)
- ☒ TP6H60M(H)-xxx(xxx=305-335, in increment of 5, 120 cells)
- ☒ TP6F60M(H)-xxx(xxx=320-345, in increment of 5, 120 cells)
- ☒ TP6G60M(H)-xxx(xxx=325-335, in increment of 5, 120 cells)

- ☒ TP672P-xxx(xxx=315-355, in increment of 5, 72 cells)
- ☒ TP6H72P-xxx(xxx=325-350, in increment of 5, 144 cells)
- ☒ TP660P-xxx(xxx=255-295, in increment of 5, 60 cells)
- ☒ TP6H60P-xxx(xxx=270-290, in increment of 5, 120 cells)
- ☒ TP672P(H)-xxx(xxx=315-355, in increment of 5, 72 cells)
- ☒ TP6H72P(H)-xxx(xxx=325-350, in increment of 5, 144 cells)
- ☒ TP660P(H)-xxx(xxx=255-295, in increment of 5, 60 cells)
- ☒ TP6H60P(H)-xxx(xxx=270-290, in increment of 5, 120 cells)

are in conformity with the requirements set out in the Low Voltage Directive 2014/35/EU and standards EN IEC 61730-1:2018+ EN IEC 61730-1:2018/AC:2018-06 and EN IEC 61730-2:2018+ EN IEC 61730-2:2018/AC:2018-06, and relevant tests results refer to test report 704061901204-01



Suzhou Talesun Solar Technologies Co., Ltd.

and 704061901205-02 issued by TÜV SUD Product Service GmbH.

The products can be produced at the below factories:

☒ Factory 1: Name: Suzhou Talesun Solar Technologies Co., Ltd.

Address: No.1 Talesun Road, Changkun Industrial Park, Shajiabang Town, Changshu, Suzhou, Jiangsu province 215542, P. R. China.

☒ Factory 2: Name: Talesun Technologies (Thailand) Co., Ltd.

Address: No.7/473 Moo.6 Mabyangporn, Pluakdaeng, Rayong, Thailand 21140.

The declaration is in valid from the issued date.



Signature: _____

Title: Quality Manager

Place: Changshu

Date: _____



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[Product recalls \(https://www.cleanenergycouncil.org.au/industry/products/product-recalls/\)](https://www.cleanenergycouncil.org.au/industry/products/product-recalls/)

[Product faults and testing \(https://www.cleanenergycouncil.org.au/industry/products/product-faults-and-testing/\)](https://www.cleanenergycouncil.org.au/industry/products/product-faults-and-testing/)

Browse the Clean Energy Council's list of building approved
~~Product Listing Review Panel (<https://www.cleanenergycouncil.org.au/industry/products/product-listing-1>~~
(fire-tested) solar photovoltaic (PV) modules suitable for
installation under the Small-scale Renewable Energy
~~Scheme (SRES). See the bottom of this page for the~~
~~Terms & Conditions (<https://www.cleanenergycouncil.org.au/industry/products/product-listing-1/terms-and-conditions>)~~
approved module list for the Victorian Solar Homes
Program.

MODULES

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Manufacturer

119 products from 1 manufacturers, showing manufacturers 1 - 1

119	Suzhou Talesun Solar Technologies Co Ltd			
MODEL NUMBER	ENHANCED LISTINGS	APPROVAL DATE	EXPIRY D	
TP6L72M-445	-	04/12/2020	04/12/202	
TP6L72M(H)-435	-	04/12/2020	04/12/202	
TP6L72M(H)-440	-	04/12/2020	04/12/202	
TP6L72M(H)-445	-	04/12/2020	04/12/202	
TP6F60M-330	-	04/12/2020	04/12/202	
TP6L60M-370	-	04/12/2020	04/12/202	
TP6F60M(H)-330	-	04/12/2020	04/12/202	

MODEL NUMBER	ENHANCED LISTINGS	APPROVAL DATE	EXPIRY D
TP6L60M(H)-365	-	04/12/2020	04/12/202
TP6L60M(H)-370	-	04/12/2020	04/12/202
TD6G72M-405	-	04/12/2020	04/12/202
TD6G72M-410	-	04/12/2020	04/12/202
TD6G60M-335	-	04/12/2020	04/12/202
TD6G60M-340	-	04/12/2020	04/12/202
TP6G72M(H)-405	-	04/12/2020	04/12/202
TP6G60M(H)-335	-	04/12/2020	04/12/202
TP6F72M(H)-410	-	04/12/2020	04/12/202
TP6F72M(H)-415	-	04/12/2020	04/12/202
TP6F60M(H)-340	-	04/12/2020	04/12/202
TP6F60M(H)-345	-	04/12/2020	04/12/202
TP6L72M-440	-	04/12/2020	04/12/202
TP6H60M-335	-	19/12/2019	19/12/2022
TP6H60M(H)-335	-	19/12/2019	19/12/2022
TP6H72P(H)-350	-	19/12/2019	19/12/2022
TP6H60P-290	-	19/12/2019	19/12/2022
TP6H60P(H)-290	-	19/12/2019	19/12/2022
TP678M(H)-400	-	19/12/2019	19/12/2022
TP678M(H)-405	-	19/12/2019	19/12/2022
TP678M(H)-410	-	19/12/2019	19/12/2022
TP678M(H)-415	-	19/12/2019	19/12/2022
TP672M(H)-385	-	19/12/2019	19/12/2022
TP672M(H)-390	-	19/12/2019	19/12/2022
TP672M(H)-395	-	19/12/2019	19/12/2022

MODEL NUMBER	ENHANCED LISTINGS	APPROVAL DATE	EXPIRY D
TP6H72M-405	-	19/12/2019	19/12/2022
TP6H72M(H)-405	-	19/12/2019	19/12/2022
TP660M-320	-	19/12/2019	19/12/2022
TP660M-325	-	19/12/2019	19/12/2022
TP660M-330	-	19/12/2019	19/12/2022
TP660M(H)-320	-	19/12/2019	19/12/2022
TP660M(H)-325	-	19/12/2019	19/12/2022
TP660M(H)-330	-	19/12/2019	19/12/2022
TP6H72M-385	-	09/09/2019	09/09/2022
TP6H72M(H)-395	-	09/09/2019	09/09/2022
TP6H60M(H)-320	-	09/09/2019	09/09/2022
TP672M(H)-380	-	09/09/2019	09/09/2022
TP6H72M-390	-	09/09/2019	09/09/2022
TP6H72M-395	-	09/09/2019	09/09/2022
TP6H72M-400	-	09/09/2019	09/09/2022
TP6H72M(H)-385	-	09/09/2019	09/09/2022
TP6H72M(H)-390	-	09/09/2019	09/09/2022
TP660M(H)-315	-	09/09/2019	09/09/2022
TP6H72M(H)-400	-	09/09/2019	09/09/2022
TP6H60M-320	-	09/09/2019	09/09/2022
TP6H60M-325	-	09/09/2019	09/09/2022
TP6H60M-330	-	09/09/2019	09/09/2022
TP6H60M(H)-325	-	09/09/2019	09/09/2022
TP6H60M(H)-330	-	09/09/2019	09/09/2022
TP672P-350	-	09/09/2019	09/09/2022

MODEL NUMBER	ENHANCED LISTINGS	APPROVAL DATE	EXPIRY D
TP660P-290	-	09/09/2019	09/09/202
TP660P-295	-	09/09/2019	09/09/202
TP672P-355	-	09/09/2019	09/09/202
TP6H60M-315	-	21/06/2019	21/06/202.
TP6H60M(H)-310	-	21/06/2019	21/06/202.
TP6H72M(H)-380	-	21/06/2019	21/06/202.
TP6H60M-310	-	21/06/2019	21/06/202.
TP6H60M(H)-315	-	21/06/2019	21/06/202.
TP6H72M-365	-	21/06/2019	21/06/202.
TP6H72M-370	-	21/06/2019	21/06/202.
TP6H72M-375	-	21/06/2019	21/06/202.
TP6H60M-305	-	21/06/2019	21/06/202.
TP6H72M-380	-	21/06/2019	21/06/202.
TP6H72M(H)-375	-	21/06/2019	21/06/202.
TP6H60P-280	-	21/06/2019	21/06/202.
TP6H60P(H)-285	-	21/06/2019	21/06/202.
TP6H72P(H)-340	-	21/06/2019	21/06/202.
TP6H72P(H)-345	-	21/06/2019	21/06/202.
TP6H60P-275	-	21/06/2019	21/06/202.
TP6H60P-285	-	21/06/2019	21/06/202.
TP6H72P-335	-	21/06/2019	21/06/202.
TP6H72P-340	-	21/06/2019	21/06/202.
TP6H72P-345	-	21/06/2019	21/06/202.
TP660P(H)-275	-	13/02/2019	13/02/202:
TP672P(H)-335	-	13/02/2019	13/02/202:

MODEL NUMBER	ENHANCED LISTINGS	APPROVAL DATE	EXPIRY D
TP672P(H)-340	-	13/02/2019	13/02/2022
TP672P(H)-345	-	13/02/2019	13/02/2022
TP672P(H)-350	-	13/02/2019	13/02/2022
TP672P(H)-355	-	13/02/2019	13/02/2022
TP660P(H)-280	-	13/02/2019	13/02/2022
TP660P(H)-285	-	13/02/2019	13/02/2022
TP660P(H)-290	-	13/02/2019	13/02/2022
TP660P(H)-295	-	13/02/2019	13/02/2022
TP672M-355	-	01/12/2018	20/12/2022
TP660M-280	-	01/12/2018	20/12/2022
TP660M-285	-	01/12/2018	20/12/2022
TP672M-340	-	01/12/2018	20/12/2022
TP672M-345	-	01/12/2018	20/12/2022
TP672M-350	-	01/12/2018	20/12/2022
TP672M-360	-	01/12/2018	20/12/2022
TP660M-290	-	01/12/2018	20/12/2022
TP660M-295	-	01/12/2018	20/12/2022
TP660M-300	-	01/12/2018	20/12/2022
TP672P-345	-	01/12/2018	20/12/2022
TP660P-275	-	01/12/2018	20/12/2022
TP672P-325	-	01/12/2018	20/12/2022
TP672P-335	-	01/12/2018	20/12/2022
TP672P-340	-	01/12/2018	20/12/2022
TP660P-265	-	01/12/2018	20/12/2022
TP660P-270	-	01/12/2018	20/12/2022

MODEL NUMBER	ENHANCED LISTINGS	APPROVAL DATE	EXPIRY D
TP660P-280	-	01/12/2018	20/12/2021
TP660P-285	-	01/12/2018	20/12/2021
TP660M-310	-	14/02/2019	14/02/2022
TP672M(H)-360	-	14/02/2019	14/02/2022
TP672M(H)-370	-	14/02/2019	14/02/2022
TP672M(H)-375	-	14/02/2019	14/02/2022
TP660M(H)-300	-	14/02/2019	14/02/2022
TP660M(H)-310	-	14/02/2019	14/02/2022
TP672M-365	-	14/02/2019	14/02/2022
TP660M-305	-	14/02/2019	14/02/2022
TP672M(H)-365	-	14/02/2019	14/02/2022
TP660M(H)-305	-	14/02/2019	14/02/2022



System designers are responsible for following manufacturer's installation instructions and requirements. If multiple products from different manufacturers are to be installed, designers are responsible to ensure manufacturer's compatibility requirements are met prior to installation.

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Solar Victoria Approved PV Module List

Additional information is included on those module that meet Solar Victoria's additional recommended criteria for quality-control certification.

Licensee/Certificate Holder	Model Number/s	IEC 62804 PID resistance	IEC 62941 Quality standard	VDE quality tested	Approved Date	Expiry Date
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612MHV-365	Yes	-	-	12/02/2019	12/02/2022
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612MHV-370	-	-	-	7/11/2019	7/11/2022
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612MHV-375	-	-	-	7/11/2019	7/11/2022
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612MHV-380	-	-	-	7/11/2019	7/11/2022
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612MHV-385	-	-	-	7/11/2019	7/11/2022
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612P-330	Yes	-	-	13/02/2019	13/02/2022
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612PHV-330	Yes	-	-	12/02/2019	12/02/2022
Suzhou Akcome Optronics Science & Technology Co Ltd	SK6612PHV-335	Yes	-	-	12/02/2019	12/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M(H)-300	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M(H)-305	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M(H)-310	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M(H)-315	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M(H)-320	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M(H)-325	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M(H)-330	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M-280	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660M-285	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660M-290	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660M-295	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660M-300	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660M-305	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M-310	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M-320	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M-325	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660M-330	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660P(H)-275	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660P(H)-280	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660P(H)-285	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660P(H)-290	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660P(H)-295	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660P-265	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660P-270	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660P-275	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660P-280	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660P-285	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP660P-290	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP660P-295	-	-	-	9/09/2019	9/09/2022

Current at - 4/02/2020

Product approval dates can vary from time to time.

All PV Modules listed have been Fire-tested

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Solar Victoria Approved PV Module List

Additional information is included on those module that meet Solar Victoria's additional recommended criteria for quality-control certification.

Licensee/Certificate Holder	Model Number/s	IEC 62804 PID resistance	IEC 62941 Quality standard	VDE quality tested	Approved Date	Expiry Date
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-360	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-365	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-370	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-375	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-380	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-385	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-390	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M(H)-395	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672M-340	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672M-345	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672M-350	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672M-355	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672M-360	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672M-365	-	-	-	14/02/2019	14/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672P(H)-335	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672P(H)-340	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672P(H)-345	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672P(H)-350	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672P(H)-355	-	-	-	13/02/2019	13/02/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672P-325	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672P-330	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672P-335	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672P-340	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672P-345	-	-	-	1/12/2018	20/12/2021
Suzhou Talesun Solar Technologies Co Ltd	TP672P-350	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP672P-355	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP678M(H)-400	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP678M(H)-405	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP678M(H)-410	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP678M(H)-415	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M(H)-310	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M(H)-315	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M(H)-320	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M(H)-325	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M(H)-330	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M(H)-335	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M-305	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M-310	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M-315	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M-320	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M-325	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M-330	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60M-335	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60P(H)-285	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60P(H)-290	-	-	-	19/12/2019	19/12/2022

Current at - 4/02/2020

Product approval dates can vary from time to time.

Solar Victoria Approved PV Module List

Additional information is included on those module that meet Solar Victoria's additional recommended criteria for quality-control certification.

Licensee/Certificate Holder	Model Number/s	IEC 62804 PID resistance	IEC 62941 Quality standard	VDE quality tested	Approved Date	Expiry Date
Suzhou Talesun Solar Technologies Co Ltd	TP6H60P-275	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60P-280	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60P-285	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H60P-290	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M(H)-375	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M(H)-380	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M(H)-385	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M(H)-390	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M(H)-395	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M(H)-400	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M(H)-405	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-365	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-370	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-375	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-380	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-385	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-390	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-395	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-400	-	-	-	9/09/2019	9/09/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72M-405	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72P(H)-340	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72P(H)-345	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72P(H)-350	-	-	-	19/12/2019	19/12/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72P-335	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72P-340	-	-	-	21/06/2019	21/06/2022
Suzhou Talesun Solar Technologies Co Ltd	TP6H72P-345	-	-	-	21/06/2019	21/06/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM240PA-54	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM265PA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM270MA-54	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM270PA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM275MA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM275PA-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM280MA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM280PA-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM285MA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM285PA-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM285PH-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM290MA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM290PA-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM290PH-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM295MA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM300MA-60	-	-	-	21/01/2019	6/03/2020
Tangshan Haitai New Energy Technology Co Ltd	HTM310MA-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM315MA-60	-	-	-	20/09/2019	20/09/2022
Tangshan Haitai New Energy Technology Co Ltd	HTM315MH-60	-	-	-	20/09/2019	20/09/2022

Current at - 4/02/2020

Product approval dates can vary from time to time.

All PV Modules listed have been Fire-tested

80 of 100

Please use the search function on our website for the most current database information.

Equipment meeting eligibility requirements for DEWA Distributed Renewable Resources Generation programme (Shams Dubai)

Non exhaustive list of eligible equipment based on manufacturers' submissions reviewed by DEWA as of below date. Any other equipment meeting the eligibility requirement will be accepted by DEWA in design phase, provided that proof of compliance will be provided.

DISCLAIMER FOR CUSTOMERS

Please note that the information presented in this document provides an overview of the manufacturers and equipment that meet the required standards based on type-test certification. However, this does not constitute an endorsement or warranty of any kind, whether expressed, implied or statutory, including but not limited to warranties of title, merchantability, satisfactory quality, fitness for particular purpose, warranty for performance, professional advice, professional financial guidance, and shall not be relied upon as the only source of information for purchasing, contracting, investment decisions or for executing other binding agreements.

Last updated

Thursday, January 23, 2020

PV MODULES		
Manufacturer name	Product ID	Description
Aleo Solar GmbH	S18JXXX	250-255W (in steps of 5) Poly crystalline Si
	S19LXXX	280-300W (in steps of 5) Mono crystalline Si
	S19JXXX	265-275W (in steps of 5) Mono crystalline Si
	P18JXXX	250-260W (in steps of 5) Poly crystalline Si
	P19XXX	280-295W (in steps of 5) Poly crystalline Si
	P19LXXX	290-300 W (in steps of 5) Mono crystalline Si
	P19JXXX	290 -300 W (in steps of 5) Mono crystalline Si
	S19LXXX	300-310 W (in steps of 5) Mono crystalline Si
	X59LXXX	300-310 W (in steps of 5) Mono crystalline Si
	X79LXXX	300-310 W (in steps of 5) Mono crystalline Si
Almaden MENA FZE	SEAM 18W - xxx	sc-Si, xxx= 70 - 85 (in step of 5)
	SEAM 18T - xxx	sc-Si, xxx= 70 - 85 (in step of 5)
	SEAM 36W - xxx	sc-Si, xxx= 145 - 175 (in step of 5)
	SEAM 36T - xxx	sc-Si, xxx= 145 - 175 (in step of 5)
	SEAM 40W - xxx	sc-Si, xxx= 155 - 195 (in step of 5)
	SEAM 40T - xxx	sc-Si, xxx= 155 - 195 (in step of 5)
	SEAM 42W - xxx	sc-Si, xxx= 155 - 205 (in step of 5)
	SEAM 42T - xxx	sc-Si, xxx= 155 - 205 (in step of 5)
	SEAM 48W - xxx	sc-Si, xxx= 180 - 230 (in step of 5)
	SEAM 48T - xxx	sc-Si, xxx= 180 - 230 (in step of 5)
	SEAM 50W - xxx	sc-Si, xxx= 200 - 240 (in step of 5)
	SEAM 50T - xxx	sc-Si, xxx= 200 - 240 (in step of 5)
	SEAM 54W - xxx	sc-Si, xxx= 205 - 260 (in step of 5)
	SEAM 54T - xxx	sc-Si, xxx= 205 - 260 (in step of 5)
	SEAM 60W - xxx	sc-Si, xxx= 225 - 290 (in step of 5)
	SEAM 60T - xxx	sc-Si, xxx= 225 - 290 (in step of 5)
	SEAM 66W - xxx	sc-Si, xxx= 250 - 320 (in step of 5)
	SEAM 66T - xxx	sc-Si, xxx= 250 - 320 (in step of 5)
	SEAM 72W - xxx	sc-Si, xxx= 275 - 350 (in step of 5)
	SEAM 72T - xxx	sc-Si, xxx= 275 - 350 (in step of 5)
	SEAP 18W- xxx	mc-Si, xxx= 70 - 85 (in step of 5)
	SEAP 18T- xxx	mc-Si, xxx= 70 - 85 (in step of 5)
	SEAP 36W- xxx	mc-Si, xxx= 145 - 170 (in step of 5)
	SEAP 36T- xxx	mc-Si, xxx= 145 - 170 (in step of 5)
	SEAP 40W- xxx	mc-Si, xxx= 155 - 185 (in step of 5)
	SEAP 40T- xxx	mc-Si, xxx= 155 - 185 (in step of 5)
	SEAP 42W- xxx	mc-Si, xxx= 155 - 195 (in step of 5)

PV MODULES		
Manufacturer name	Product ID	Description
Almaden MENA FZE	SEAP 42T- xxx	mc-Si, xxx= 155 - 195 (in step of 5)
	SEAP 48W- xxx	mc-Si, xxx= 175 - 225 (in step of 5)
	SEAP 48T- xxx	mc-Si, xxx= 175 - 225 (in step of 5)
	SEAP 50W- xxx	mc-Si, xxx= 190 - 235 (in step of 5)
	SEAP 50T- xxx	mc-Si, xxx= 190 - 235 (in step of 5)
	SEAP 54W- xxx	mc-Si, xxx= 200 - 250 (in step of 5)
	SEAP 54T- xxx	mc-Si, xxx= 200 - 250 (in step of 5)
	SEAP 60W- xxx	mc-Si, xxx= 220 - 280 (in step of 5)
	SEAP 60T- xxx	mc-Si, xxx= 220 - 280 (in step of 5)
	SEAP 66W- xxx	mc-Si, xxx= 240 - 310 (in step of 5)
	SEAP 66T- xxx	mc-Si, xxx= 240 - 310 (in step of 5)
	SEAP 72W- xxx	mc-Si, xxx= 295 - 335 (in step of 5)
	SEAP 72T- xxx	mc-Si, xxx= 295 - 335 (in step of 5)
	SEAC 18W - xxx	sc-Si, xxx= 90
	SEAC 18T - xxx	sc-Si, xxx= 90
	SEAC 30W - xxx	sc-Si, xxx= 140 - 155 (in step of 5)
	SEAC 30T - xxx	sc-Si, xxx= 140 - 155 (in step of 5)
	SEAC 36W - xxx	sc-Si, xxx= 170 - 185 (in step of 5)
	SEAC 36T - xxx	sc-Si, xxx= 170 - 185 (in step of 5)
	SEAC 40W - xxx	sc-Si, xxx= 185 - 205 (in step of 5)
	SEAC 40T - xxx	sc-Si, xxx= 185 - 205 (in step of 5)
	SEAC 42W - xxx	sc-Si, xxx= 195 - 215 (in step of 5)
	SEAC 42T - xxx	sc-Si, xxx= 195 - 215 (in step of 5)
	SEAC 48W - xxx	sc-Si, xxx= 220 - 245 (in step of 5)
	SEAC 48T - xxx	sc-Si, xxx= 220 - 245 (in step of 5)
	SEAC 50W - xxx	sc-Si, xxx= 230 - 255 (in step of 5)
	SEAB72W/B/T-xxx	sc-Si, xxx= 335 W
	SEAB72W/B/T-xxx	sc-Si, xxx= 360 W
	SEAB72W/B/T-xxx	sc-Si, xxx= 365 W
	SEAB72W/B/T-xxx	sc-Si,xxx=370W
	SEAB66W/B/T-xxx	sc-Si,xxx=325W
	SEAB66W/B/T-xxx	sc-Si,xxx=330W
	SEAB66W/B/T-xxx	sc-Si,xxx=340W
	SEAB60W/B/T-xxx	sc-Si,xxx=295W
	SEAB60W/B/T-xxx	sc-Si,xxx=300W
	SEAB60W/B/T-xxx	sc-Si,xxx=305W
	SEAB60W/B/T-xxx	sc-Si,xxx=310W
	SEAB50W/B/T-xxx	sc-Si,xxx=245W
	SEAB50W/B/T-xxx	sc-Si,xxx=250W
	SEAB48W/B/T-xxx	sc-Si,xxx=235W
	SEAB48W/B/T-xxx	sc-Si,xxx=240W
	SEAB42W/B/T-xxx	sc-Si,xxx=210W
	SEAB42W/B/T-xxx	sc-Si,xxx=215W
	SEAB40W/B/T-xxx	sc-Si,xxx=195W
	SEAB40W/B/T-xxx	sc-Si,xxx=200W
	SEAB36W/B/T-xxx	sc-Si,xxx=175W
	SEAB36W/B/T-xxx	sc-Si,xxx=180W
	SEAB18W/B/T-xxx	sc-Si,xxx=90W
	SEAC 50T - xxx	sc-Si, xxx= 230 - 255 (in step of 5)
	SEAC 54W - xxx	sc-Si, xxx= 245 - 275 (in step of 5)
	SEAC 54T - xxx	sc-Si, xxx= 245 - 275 (in step of 5)
	SEAC 60W - xxx	sc-Si, xxx= 270 - 310 (in step of 5)
	SEAC 60T - xxx	sc-Si, xxx= 270 - 310 (in step of 5)
	SEAC 66W - xxx	sc-Si, xxx= 300 - 340 (in step of 5)
	SEAC 66T - xxx	sc-Si, xxx= 300 - 340 (in step of 5)
	SEAC 72W- xxx	sc-Si, xxx= 325 - 370 (in step of 5)
	SEAC 72T- xxx	sc-Si, xxx= 325 - 370 (in step of 5)

PV MODULES		
Manufacturer name	Product ID	Description
Alternative Energy (AE) Solar GmbH.	AExxxM5-36	mono c-Si 90 - 110W, in steps of 5
	AExxxM5-48	mono c-Si 120 - 145W, in steps of 5
	AExxxM5-60	mono c-Si 150 - 180W, in steps of 5
	AExxxM5-72	mono c-Si 180 - 215W, in steps of 5
	AExxxM5-96	mono c-Si 240 - 290W, in steps of 5
	AExxxM6-36	mono c-Si 140 - 165W, in steps of 5
	AExxxM6-48	mono c-Si 185 - 225W, in steps of 5
	AExxxM6-54	mono c-Si 210 - 250W, in steps of 5
	AExxxM6-60	mono c-Si 230 - 280W, in steps of 5
	AExxxM6-72	mono c-Si 280 - 335W, in steps of 5
	AExxxP6-36	Poly-Si 135 - 160W, in steps of 5
	AExxxP6-48	Poly-Si 180 - 215W, in steps of 5
	AExxxP6-54	Poly-Si 205 - 245W, in steps of 5
	AExxxP6-60	Poly-Si 225 - 270W, in steps of 5
Azimut	AExxxP6-72	Poly-Si 270 - 325W, in steps of 5
	AZM606/xxxP	210-275, in step of 5 Polycrystalline
AVANCIS GmbH	AZM666/xxxP	245-300, in step of 5 Polycrystalline
	PowerMax 3.5	CIGS (130 - 145, in step of 5W)
Anhui Schutten Solar Energy Co.Ltd	STP6-XXX/72	sc-Si, mc-Si 245-300W, in steps of 5
	STP6-XXX/60	sc-Si, mc-Si 205-250W, in steps of 5
	STP6-XXX/54	sc-Si, mc-Si 185-225W, in steps of 5
	STP6-XXX/48	sc-Si, mc-Si 165-200W, in steps of 5
	STP6-XXX/36	sc-Si, mc-Si 125-150W, in steps of 5
	STM6-XXX/72	sc-Si, mc-Si 245-300W, in steps of 5
	STM6-XXX/60	sc-Si, mc-Si 205-250W, in steps of 5
	STM6-XXX/54	sc-Si, mc-Si 185-225W, in steps of 5
	STM6-XXX/48	sc-Si, mc-Si 165-200W, in steps of 5
	STM6-XXX/36	sc-Si, mc-Si 125-150W, in steps of 5
Aplicaciones Tecnicas De La Energia S.L. (Atersa)	A-255P	Poly crystalline 255W
	A-260P	Poly crystalline 260W
	A-305P	Poly crystalline 305W
	A-310P	Poly crystalline 310W
	A-315P	Poly crystalline 315W
	A-255M	Mono crystalline 255W
	A-260M	Mono crystalline 260W
	A-265M	Mono crystalline 265W
	A-305M	Mono crystalline 305W
	A-310M	Mono crystalline 310W
	A-315M	Mono crystalline 315W
Axitec Energy GmbH & CO, KG	AC-260P/156-60S	Poly crystalline 260W
	AC-275M/156-60S	Mono crystalline 275W
	AC-310P/156-72S	Poly crystalline 310W
AUJO TECHNOLOGY/ BENQ SOLAR		PM096BXXX-XXX
BYD	mc-s i320-335 W, in step of 5	
	BYD P6C-36	255-315 W sc-Si Poly crystalline
	BYD P6C-30	255-315 W sc-Si Poly crystalline
	BYD 340W P6C-36	MC-Si 340W/ 265-340W
BHEL	BYD P6C-30	255-315 W sc-Si Poly crystalline
	L20220P	Poly crystalline, (215-265 Wp), in step of 1
	L24270P	Poly crystalline, (260 - 320 Wp), in step of 1
Calyxo GmbH	CX3-70	CdTe 70W
	CX3-72	CdTe 72W
	CX1	70W-80W
	CX3	72W-87W
	Cx3pro	72W-90W
	Cxpro/2	80W-90W

PV MODULES		
Manufacturer name	Product ID	Description
Canadian Solar	CS6P250P	Poly crystalline-Si 250W
	CS6P255P	Poly crystalline-Si 255W
	CS6P260P	Poly crystalline-Si 260W
	CS6P260M	Monocrystalline silicon 260W
	CS6P265M	Monocrystalline silicon 265W
	CS6P270M	Monocrystalline silicon 270W
	CS6X305P	Poly crystalline-Si 305W
	CS6X310P	Poly crystalline-Si 310W
	CS6X315P	Poly crystalline-Si 315W
	CS6K-xxxP-FG	Poly crystalline-260-275, in step of 5
	CS6X-xxxP-FG	Poly crystalline- 315-330, in step of 5
	CS6K-XXX-MS	Mono-crystalline Silicon 290-300 W, in step of 5
	CS3K-300MS, CS3K-305MS, CS3K-310MS,CS3K-315MS	Mono-crystalline Silicon 300-315W in step of 5
	CS3K-275P, CS3K-280P, CS3K-285P, CS3K-290P	Poly-crystalline Silicon 275-290W in step of 5
	CS3K-285P, CS3K-290P, CS3K-295P, CS3K-300P	Poly-crystalline Silicon 285-300W, in step of 5
	CS3U-360MS, CS3U-365MS, CS3U-370MS,CS3U-375MS	Mono-crystalline Silicon 360-375W, in step of 5
	CS3U-330P, CS3U-335P, CS3U-340P, CS3U-345P	Poly-crystalline Silicon 330-345W, in step of 5
	CS3U-345P, CS3U-350P, CS3U-355P, CS3U-360P	Poly-crystalline Silicon 345-360W, in step of 5
	CS6K-275M, CS6K-280M, CS6K-285M, CS6K-290M	Mono-crystalline Silicon 275-290W, in step of 5
	CS6U-330M, CS6U-335M, CS6U-340M, CS6U-345M	Mono-crystalline Silicon 330-345W, in step of 5
	CS6X-310P, CS6X-315P, CS6X-320P, CS6X-325P	Poly-crystalline Silicon 310-325, in step of 5
	CS6U-325P, CS6U-330P, CS6U-335P, CS6U-340P	Poly-crystalline Silicon 325-340W, in step of 5
	CS6K-XXX-P	Poly-crystalline Silicon 265-275W,in step of 5
	CS3U-xxxPB-FG	Poly-crystalline Silicon, xxx=350-360 Wp in step of 5
	CS3U-xxxMB-FG	Mono-crystalline Silicon, xxx=360-375 Wp in step of 5
	CS3W-xxxP	Poly-crystalline Silicon, xxx=390-410 Wp in step of 5
	CS3K-320MS	Mono-crystalline Silicon, 320 Wp
	CS3U-xxxP	Poly-crystalline Silicon, xxx=365-385 Wp in step of 5
	CS6K-xxxMS	Mono-crystalline Silicon, xxx=305-310 Wp in step of 5
	CS6U-xxxP	Poly-crystalline Silicon, xxx=350-355 Wp in step of 5
	CS3U-xxxP-FG	Poly-crystalline Silicon, xxx=335-370 Wp in step of 5
Caterpillar	PVT110	CdTe 110W
	PVT115	CdTe 115W
	PVT117	CdTe 117W
Chinaland Solar energy Co.Ltd.	CHN250 - 60P	sc-Si 250 W
	CHN260 - 60P	sc-Si 260 W
	CHN300 - 72P	sc-Si 300 W
	CHN310 - 72P	sc-Si 310 W
	CHNXXX-72P	Poly crystalline 315-335, in step of 5W
	CHNXXX-60P	Poly crystalline 265-280, in step of 5W
	CHNXXX-72M	Mono crystalline 330-350, in step of 5W
	CHNXXX-60M	Mono crystalline 275-290, in step of 5W
Chint Solar (Zhejiang) Co., Ltd	CHSM6612P-XXX	mc-Si 315, 320 W
	CHSM6612P-XXX	PC-Si 315-320-325-330-335-340 W
	CHSM6612P-xxx	mc-Si, 310-375W, in step of 5
	CHSM6610P-xxx	mc-Si, 260-310W, in step of 5
	CHSM6612P/(BL)-xxx	mc-Si, 310-375W, in step of 5
	CHSM6610P/(BL)-xxx	mc-Si, 260-310W, in step of 5
	CHSM6612M-xxx	sc-Si, 330-390W, in step of 5
	CHSM6610M-xxx	sc-Si, 275-325W, in step of 5
	CHSM6612M/(BL)-xxx	sc-Si, 330-390W, in step of 5
	CHSM6610M/(BL)-xxx	sc-Si, 275-325W, in step of 5
Changzhou EGing Photovoltaic Technology Co., Ltd.	EG-xxxM60-C	Mono-crystalline Silicon 200-320W
	EG-xxxM72-C	Mono-crystalline Silicon 240-385W
	EG-xxxP60-c	Poly-crystalline Silicon 200-290W
	EG-xxxP72-c	Poly-crystalline silicion 235-350W

RECOM AG	RCM-xxx-6MB RCM-xxx-6PB RCM-xxx-6PB RCM-xxx-6PB-c-de-f RCM-xxx-6PA-SW RCM-xxx-6PA-SW RCM-xxx-6PA-SW	MONO-Si 250-280W Poly-Si 240-260W sc-Si 240-280W sc-Si 240-280 290 to 305 W , in step of 5 310 to 340 W, in step of 5 345 to 350 W, in step of 5
PV MODULES		
Manufacturer name	Product ID	Description
duSol	DS60250W DS72300W DS60270W DS60260W DS72200W DS72225W DS72175W DS36150W DS36100W DS36125W DS3675W DS3660W DS3650w DS3640w	Mc-Si 250W Mc-Si 300W MC-Si 270W Mc-Si 260W Mc-Si 200W Mc-Si 225W Mc-Si 175W MC-Si 150W Mc-Si 100W Mc-Si 125W Mc-Si 75W MC-Si 60W Mc-Si 50W Mc-si 40w
ECONESS ENERGY	EN156-M-60-265 EN156-M-72-315 EN156-P-60-250 EN156M-60-XXX EN156M-72-XXX EN156P-60-XXX EN156P-72-XXX EN156-P-72-300	Mono crysalline 265W Mono crysalline 315W Poly crystalline 250W SC-Si,215W-280W (in step of 5) SC-Si,260W-340W (in step of 5) MC-Si,210W-280W (in step of 5) MC-Si,255W-340W (in step of 5) Poly crystalline 300W
Eging Photovoltaic Technology Co.LTd	EG-xxxP60-C EG-xxxP72-C	Sc-Si 200-255W Sc-Si 245-305W
Einnova Solarline	ES-P672xxxYZ	Sc-Si 250/260/300/310 W
ET solar Industry limited	ET-P660 Series ET-P672 Series ET-M660 Series ET-M672 Series	Poly-Si 250-265W Poly-Si 300-315W Mono-si 255-270W Mono-si 305-320W
First Solar	FS-4110-2 FS-4107A-2 FS-4110A-2 FS-4112A-2 FS-4112-2 FS-4105A-2 FS-4107-2 FS-4102A-2 FS-4105-2 FS-4102-2 FS-4xxx-3 FS-4xxxA-3 FS-6xxx FS-6xxxA	Cd-Te 110W Cd-Te 107.5W Cd-Te 110W Cd-Te 112.5W Cd-Te 112.5W Cd-Te 105W Cd-Te 107.5W Cd-Te 102.5W Cd-Te 105W Cd-Te 102.5W CdTe 105 - 122.5 W CdTe 105 - 122.5W CdTe 420-445 W, in 5W steps CdTe 420-445 W, in 5W steps
Futurasun	FUXXXM FUXXXM FUXXXP FUXXXP	sc-Si 300-315 Wp sc-Si 245-260 W mc-Si 240-265 Wp mc-Si 295-305 Wp

GCL System Integration Technology Co., Ltd	GCL-P6/72-310 GCL-P6/60-xxx GCL-M6/72HXXX GCL-P6/72HXXX GCL-P6/72-xxx GCL-M6/72GDFxxx	mc-Si 310 W mc-si 260-285W, in step of 5 sc-Si , 365~390W, 0~+5W mc-Si, 335~370W, 0~+5W mc-Si 310-330W, in step of 5 c-Si, 325-390W, in step of 5
General Energy Solutions	7NAC000-06Axxx 7NAC000-06Cxxx 7NAC001-06Axxx 7NAC001-06Cxxx 7NAE001-06Axxx 7NAE001-06Cxxx	mc-Si 215-275W mc-Si 255-330W mc-Si 195-295W mc-Si 235-350W sc-Si 220-300W sc-Si 245-360W
PV MODULES		
Manufacturer name	Product ID	Description
Gintung Energy Corp	GTEC-xxxG6S66 GTEC-xxxG6S68 GTEC-xxxG6S69 GTEC-xxxG6S6A GTEC-xxxG6S6B GTEC-xxxG6S GTEC-xxxG6M66 GTEC-xxxG6M68 GTEC-xxxG6M69 GTEC-xxxG6M6A GTEC-xxxG6M6B GTEC-xxxG6M	Sc-Si 140-175W ,in steps of 5 Sc-Si 190-235 W,in steps of 5 Sc-Si 210-265 W,in steps of 5 Sc-Si 230-295 W,in steps of 5 Sc-Si 260-325 W ,in steps of 5 Sc-Si 280-355 W,in steps of 5 Mc-Si 140-175 W,in steps of 5 Mc-Si 190 - 235 W,in steps of 5 Mc-Si 210 - 265 W,in steps of 5 Mc-Si 230-295 W,in steps of 5 Mc-Si 260-325 W,in steps of 5 Mc-Si 280-355 W,in steps of 5
GreenBrilliance Energy Pvt. Ltd	GB54P6-XXX GB60P6-XXX GB72P6-XXX	mc-Si 185-225 Wp, in steps of 5 mc-Si 230-250 Wp, in steps of 5 mc-Si 250-300 Wp, in steps of 5
Goldi Solar PVT. LTD	GOLDI032FXXXXPY12 GOLDI036FXXXXPY12 GOLDI048FXXXXPY12 GOLDI054FXXXXPY12 GOLDI060FXXXXPY24 GOLDI066FXXXXPY24 GOLDI072FXXXXPY24	Sc-Si 140 to 150 Wp, in steps of 5 Sc-Si 155 to 170 Wp, in steps of 5 Sc-Si 210 to 225 Wp, in steps of 5 Sc-Si 235 to255 Wp, in steps of 5 Sc-Si 260 to 285 Wp, in steps of 5 Sc-Si 290 to 310 Wp, in steps of 5 Sc-Si 315 to 350 Wp, in steps of 5
HanwhaSolarOne (Qidong) Co., Ltd	HSL72P6-PC-1-XXX HSL60P6-PC-1-XXX	mc-Si (multicrystalline) 250-270 W, in steps of 5 mc-Si (multicrystalline) 290-310 W, in steps of 5
Hangzhou Sunny Energy Science & Technology	ZDNY-xxxCS4 ZDNY-xxxC60 ZDNY-xxxC72 ZDNY-xxxCB54 ZDNY-xxxCB60 ZDNY-xxxCB72 ZNDY-xxxP54 ZNDY-xxxP60 ZNDY-xxxP72	sc-Si 190-250W, in steps of 5 sc-Si 210-275W, in steps of 5 sc-Si 255-330W, in steps of 5 sc-Si 190-235W, in steps of 5 sc-Si 210-260W, in steps of 5 sc-Si 255-310W, in steps of 5 mc-Si 180-250W, in steps of 5 mc-Si 200-275W, in steps of 5 mc-Si 245-330W, in steps of 5
	HPS0xxxP-28 HPS0xxxP-32 HPS0xxxP-36 HPS0xxxP-48 HPS0xxxP-54	mc-Si 105 W, 110 W mc-Si 120W , 125W mc-Si 140W, 145W mc-Si 160 - 210 W, in steps of 5 mc-Si 180 - 235 W, in steps of 5

Hollandia Power Solutions Inc.	HPS0xxxP-60	mc-Si 200 - 260 W, in steps of 5
	HPS0xxxP-72	mc-Si 240 - 315W, in steps of 5
	HPS0xxxM-28	sc-Si 105 - 125 W, in steps of 5
	HPS0xxxM-32	sc-Si 120 - 145 W, in steps of 5
	HPS0xxxM-36	sc-Si 135 - 160 W, in steps of 5
	HPS0xxxM-48	sc-Si 170 - 215 W, in steps of 5
	HPS0xxxM-54	sc-S 190 - 240 W, in steps of 5
	HPS0xxxM-60	sc-Si 210 - 270 W, in steps of 5
	HPS0xxxM-72	sc-Si 250 - 325 W, in steps of 5
	HPS0xxxD-16	sc-Si 040 - 045 W, in steps of 5
	HPS0xxxD-20	sc-Si 050 - 060 W, in steps of 5
	HPS0xxxD-24	sc-Si 060 - 070 W, in steps of 5
	HPS0xxxD-28	sc-Si 065 - 080 W, in steps of 5
	HPS0xxxD-32	sc-Si 075 - 095 W, in steps of 5
	HPS0xxxD-36	sc-Si 080 - 105 W, in steps of 5
	HPS0xxxD-40	sc-Si 090 - 120 W, in steps of 5
	HPS0xxxD-72	sc-Si 155 - 215 W, in steps of 5
	HPS0xxxD-84	sc-Si 165 - 250 W, in steps of 5
HYUNDAI Heavy Industries (HHI)	HiS-SxxxRG (BK)	Sc-Si 245-285W
	HiS-SxxxRF (BK)	Sc-Si 225-255W
	HiS-SxxxRI	Sc-Si 300-345W
	HiS-MxxxRG (BK)	Mc-S I 240-270W
HECKERT Solar GmbH (Gilco)	MEMO 60 P255 19	sc-si 255W
	MEMO 60 P260 19	sc-si 260W
	MEMO 60 P265 19	sc-si 265W
	NEMO 60 P270 19	sc-si 270W
	MEMO 60 P275 19	sc-si 275W
PV MODULES		
Manufacturer name	Product ID	Description
HENGDIAN GROUP,DMEGC CO.,LTD	DMxxx-M156-72	Monocrystalline Sillion (xxx=320 to 360 in step of 5)
	DMxxx-M156-60	Monocrystalline Sillion (xxx=270 to 300 in step of 5)
	DMxxx-P156-72	Poly crystalline(xxx=310 to 350 in step of 5)
	DMxxx-P156-60	Poly crystalline(xxx=250 to 290 in step of 5)
Hanwha Q.CELLS GmbH	Q.PRIME L-G5	Mono-Crystalline 335 - 345 (in step of 5 Wp)
	Q.PRIME-G5	Mono-Crystalline 280 - 290 (in step of 5)
	Q.POWER-G5	poly-crystalline 265 - 275 (in step of 5)
	Q.PEAK G4 (60 Cells)	Sc-Si, 300-310 (in step of 5)
	Q.PEAK L_G4 (72 Cells)	Sc-Si, 345-360 (in step of 5)
	Q.PLUS G4 (60 Cells)	mc-Si, 270-280 (in step of 5)
	Q.PLUS L_G4 (72 Cells)	mc-Si, 330-340 (in step of 5)
	Q.PEAK G4 (60 Cells)	Sc-Si, 300-310 (in step of 5)
	Q.PEAK L_G4 (72 Cells)	Sc-Si, 345-360 (in step of 5)
	Q.PLUS G4 (60 Cells)	mc-Si, 270-280 (in step of 5)
	Q.PEAK G4 (60 Cells)	sc-Si,300~310wp (in step of 5wp)
	Q.PEAK L_G4 (72 Cells)	sc-Si,345~360wp (in step of 5wp)
	Q.PLUS G4 (60 Cells)	mc-si,270~280wp (in step of 5wp)
	Q.PLUS L_G4 (72 Cells)	mc-si,330~340wp (in step of 5wp)
	Q.PLUS L_G4 (72 Cells)	mc-Si, 330-340 (in step of 5)
	Q.Power LG-5	Poly-crystalline 315-330W, in step of 5
	Q.PEAK L-G5	Monocrystalline, 355-370 Wp, in step of 5
	Q.PEAK-G5.0.G	Monocrystalline, 295-310 Wp, in step of 5
	Q.PEAK BLK-G4.1	sc-Si, Mono, PERC(Q.ANTUM),290-305Wp, in step of 5
	Q.PEAK BLK-G4.4	sc-Si, Mono, PERC, 300-310Wp, in step of 5
	Q.PEAK-G4.1	sc-Si, Mono, PERC(Q.ANTUM), 300-320 Wp, in step of 5
	Q.PEAK-G4.2	sc-Si, Mono, PERC(Q.ANTUM), 300-310 Wp, in step of 5
	Q.PEAK-G4.4	sc-Si, Mono, PERC, 295-315 Wp, in step of 5
	Q.PEAK-G4.5	sc-Si, Mono, PERC, 295-315 Wp, in step of 5
	Q.PEAK L-G4.1	sc-Si, Mono, PERC(Q.ANTUM), 360-370 Wp, in step of 5
	Q.PEAK L-G4.2	sc-Si, Mono, PERC(Q.ANTUM),360-370 Wp, in step of 5
	Q.PEAK L-G4.4	sc-Si, Mono, PERC, 355-375 Wp, in step of 5
	Q.PEAK L-G4.5	sc-Si, Mono, PERC, 355-375 Wp, in step of 5
	Q.PEAK DUQ-G5	sc-Si, Mono, PERC(Q.ANTUM), Half-Cell , 315-355 Wp, in step of 5
Infinty New Energy Co., Ltd	INE-xxx-6PA	Sc-Si(poly), 300 - 340 W, in step of 5
	INE-xxx-6PB	Sc-Si(poly), 250-280 W, in step of 5
	INE-xxx-6PC	Sc-Si(poly), 225-255 W, in step of 5
	INE-xxx-6PD	Sc-Si(poly), 200-225 W, in step of 5

JA Solar	JAM6-48-XXX/PR	(xxx=220-230) Mc-Si
	JAM6-60/72-XXX/PR	(xxx=285-295/335-350)Mc-Si
	JAP6-60/72-XXX/4BB	(xxx=270-275/315-325) Polychristaline - Si
	JAM6(L)-60/72-XXX/4BB	(xxx=270-280/320-330)Mc-Si
	JAM6-72-XXX/Si	(xxx=285-325W) Mc-Si
	JAP6-60/72-XXX/3BB	(xxx=260-275/310-325) Polychristaline-Si
	JAP6(K) 60/72 4BB	(xxx=255-275/305-325) Polychristaline-Si
	JAP6(K)(DG) 60/72 4BB/1500V	(xxx=255-275/310-325) Polychristaline-Si
	JAM6(K)(DG) 60-72 4BB/1500v	(xxx=260-285/325-340) Mono crystalline
	JAM72D00 - xxx/PR	(xxx=330-360) Mono crystalline
	JAM72D00 - xxx/SC	(xxx=320-340) Mono crystalline
	JAM60D00 - xxx/PR	(xxx=285-300) Mono crystalline
	JAM72D00 - xxx/SC	(xxx=265-280) Mono crystalline
	JAM72S01- xxx/SC	(xxx=320-340) Mono crystalline
	JAM72S01- xxx/PR	(xxx=345-365) Mono crystalline
	JAM6(K)(DG) 60/72/PR/1500	(xxx=270-295/330-350) Mono crystalline
	JAM60S01- xxx/SC	(xxx=265-280) Mono crystalline
	JAM60S01- xxx/PR	(xxx=285-300) Mono crystalline
	JAP72D00- xxx/SC	(xxx=310-330)Poly-crystalline
	JAP72D00- xxx/SC	(xxx=260-270)Poly-crystalline
	JAP72S01- xxx/SC	(xxx=305-330)Poly-crystalline
	JAP72S01- xxx/PR	(xxx=305-345)Poly-crystalline
	JAP60S01- xxx/SC	(xxx=255-280)Poly-crystalline
	JAP60S01- xxx/PR	(xxx=275-285)Poly-crystalline
	JAM72D00-xxx/BP	mono crystalline-Si, 340-390 W in step of 5
	JAP72S01-xxx/SC	poly crystalline-Si, 305-340 W in step of 5
	JAM72D00-xxx/ PR	mono crystalline-Si, 330-375 in step of 5
	JAM72S01-xxx/ PR	mono crystalline-Si, 325-380 in step of 5
	JAP60S03-xxx/ SC	poly crystalline-Si, 270-290 W in step of 5
PV MODULES		
Manufacturer name	Product ID	Description
JA Solar	JAP72S03-xxx/ SC	poly crystalline-Si, 320-345 W in step of 5
	JAM72D09-xxx/ BP	mono crystalline-Si,370-385W in step of 5
	JAM60D09 -xxx/ BP	mono crystalline-Si,305-320W in step of 5
	JAM60S09-xxx/ PR	mono crystalline-Si,310-325W in step of 5
	JAM60S10-xxx/ PR	mono crystalline-Si,320-330W in step of 5
	JAM72S09-xxx/ PR	mono crystalline-Si,375-390W in step of 5
	JAM72S10-xxx/ PR	mono crystalline-Si,390-400W in step of 5
	JAP60S09-xxx/ SC	poly crystalline-Si,270-280W in step of 5
	JAP60S10-xxx/ SC	poly crystalline-Si,275-290W instep of 5
	JAP72S09-xxx/ SC	poly crystalline-Si,325-340W in step of 5
	JAP72S10-xxx/ SC	poly crystalline-Si,335-350W in step of 5
	JAM72D09-xxx/ BP	mono crystalline-Si,370-385W in step of 5
	JAM60D09-xxx/ BP	mono crystalline-Si,305-320W in step of 5
	JAM60S01-xxx/ PR	mono crystalline-Si, 280-315 W in step of 5
	JAM60D00-xxx/ PR	mono crystalline-Si, 270-315 W in step of 5
	JAM60S03-xxx/ PR	mono crystalline-Si, 295-335 W in step of 5
	JAM72D09-xxx/ BP	mono crystalline-Si, 405 W
	JAM60D09 -xxx/ BP	mono crystalline-Si, 325W-345W in step of 5
	JAM60S09-xxx/ PR	mono crystalline-Si, 390W-420W in step of 5
	JAM60S10-xxx/ PR	mono crystalline-Si, 425W-440W in step of 5
	JAM72S09-xxx/PR	mono crystalline-Si, 345W-380W in step of 5
	JAM72S10-xxx/ PR	mono crystalline-Si, 390W-410W in step of 5
	JAM60S10-xxx/ MR	mono crystalline-Si, 320W-340W in step of 5
	JAM72S10-xxx/ MR	mono crystalline-Si, 390-420W in step of 5
	JAM78S10-xxx/ MR	mono crystalline-Si, 425-440W in step of 5
	JAM66S10-xxx/ MR	mono crystalline-Si, 345-380W in step of 5
	JAM72D10-xxx/ MB	mono crystalline-Si, 390-410W in step of 5
	JAM60D10-xxx/ MB	mono crystalline-Si, 320-340W in step of 5

JAKSON Engineers Limited	JP-AXB (A=24; B=270-330)	270-330 Multi c-Si
	JP-AXB (A=24; B=240-280)	240-280 Multi c-Si
	JP-AXB (A=24; B=200-230)	200-230 Multi c-Si
	JP-AXB (A=24; B=175-200)	175-200 Multi c-Si
	JP-AXB (A=24; B=150-175)	150-175 Multi c-Si
	JP-AXB (A=24; B=120-140)	120-140 Multi c-Si
	JP-AXB (A=24; B=100-115)	100-115 Multi c-Si
	JP-AXB (A=24; B=220-290)	220-290 Multi c-Si
	JP-AXB (A=24; B=200-235)	200-235 Multi c-Si
	JP-AXB (A=24; B=165-190)	165-190 Multi c-Si
	JP-AXB (A=24; B=145-170)	145-170 Multi c-Si
	JP-AXB (A=24; B=125-140)	125-140 Multi c-Si
	JP-AXB (A=24; B=100-120)	100-120 Multi c-Si
	JP-AXB (A=12; B=270-330)	270-330 Multi c-Si
	JP-AXB (A=12; B=240-280)	240-280 Multi c-Si
	JP-AXB (A=12; B=200-230)	200-230 Multi c-Si
	JP-AXB (A=12; B=175-200)	175-200 Multi c-Si
	JP-AXB (A=12; B=150-175)	150-175 Multi c-Si
	JP-AXB (A=12; B=120-140)	120-140 Multi c-Si
	JP-AXB (A=12; B=100-115)	100-115 Multi c-Si
	JP-AXB (A=12; B=200-260)	200-260 Multi c-Si
	JP-AXB (A=12; B=180-215)	180-215 Multi c-Si
	JP-AXB (A=12; B=130-175)	130-175 Multi c-Si
	JP-AXB (A=12; B=120-140)	120-140 Multi c-Si
	JP-AXB (A=12; B=100-110)	100-110 Multi c-Si
	JP-AXB (A=12; B=90-95)	90-95 Multi c-Si
	JP-AXB (A=12; B=80-90)	80-90 Multi c-Si
	JP-AXB (A=12; B=74-80)	74-80 Multi c-Si
	JP-AXB (A=12; B=60-65)	60-65 Multi c-Si
	JP-AXB (A=12; B=50-55)	50-55 Multi c-Si
	JP-AXB (A=12; B=37-45)	37-45 Multi c-Si
	JP-AXB (A=12; B=24-30)	24-30 Multi c-Si
	JP-AXB (A=12; B=18-22)	18-22 Multi c-Si
	JP-AXB (A=12; B=13-17)	13-17 Multi c-Si
	JP-AXB (A=12; B=10-12)	10-12 Multi c-Si
PV MODULES		
Manufacturer name	Product ID	Description
	JKMxxxP-60	210-280W, in steps of 5 6'poly
	JKMxxxP-72	250-335W, in steps of 5 6'poly
	JKMxxxPP-60	210-280W, in steps of 5 6'poly
	JKMxxxPP-72	250-335W, in steps of 5 6'poly
	JKMSxxxP-60	210-280W, in steps of 5 6'poly
	JKMSxxxP-72	250-335W, in steps of 5 6'poly
	JKMxxxPP-60-V	210-280W, in steps of 5 6'poly
	JKMxxxPP-72-V	250-340, in steps of 5 6'poly
	JKMxxxPP-60-DV	240-285, in steps of 5 6'poly
	JKMxxxPP-72-DV	285-345, in steps of 5 6'poly
	JKMxxxM-60	305-325, in steps of 5 6'Mono
	JKMxxxM-72	370-390, in steps of 5 6'Mono
	JKMSxxxPP-60	210-280, in steps of 5 6'poly
	JAM6(K)-72-xxx/PR	mono-crystalline 345-360, in step of 5W
	JAM6(K)-72-xxx/PR	mono-crystalline 285-300, in step of 5W
	JKMxxxM-60	mono-crystalline 265-285, in step of 5 W
	JKMxxxM-72	mono-crystalline 325-345, in step of 5 W
	JKMxxxM-60	mono-crystalline 290-310, in step of 5 W
	JKMxxxM-72	mono-crystalline 340-360, in step of 5 W
	JKMxxxPP-60	poly-crystalline 260-280, in step of 5 W

Jinko Solar	JKMxxxPP-72 JKMSxxxPP-72 JKMxxxM-72-DV JKMxxxM-60H JKMxxxM-72H JKMxxxM-72H-V JKMxxxM-60-V JKMxxxM-72-V JKMxxxM-72-BDV JKMxxxM-60H-V JKMxxxM-72H-V JKMxxxM-60-BDVP JKM320-340N-60H-TV JKMxxxM - 60 H - TV JKMxxxM - 72H - TV JKM390-410N-72H-TV JKMxxxM-72-BDVP JKMxxxM-72H-BDVP JKMxxxM-60-DV JKMxxxM-72-DV JKMxxxM - 60 H - TV JKMxxxM - 72H - TV	poly-crystalline 315-335, in step of 5 W 250-340, in steps of 5 6'poly sc-Si, 375-385, in step of 5W sc-Si, 315-335, in step of 5W sc-Si, 380-400, in step of 5W sc-Si, 380-400, in step of 5W sc-Si, 305-325, in step of 5W sc-Si, 370-390, in step of 5W sc-Si, 360 - 400Wp, , in step of 5W sc-Si, 315-335Wp in steps of 5 W sc-Si, 380-400Wp in steps of 5W sc-Si, 295-315Wp in steps of 5W sc-Si,320-340W in steps of 5W sc-Si,315-335W insteps of 5W sc-Si,380-400W insteps of 5W sc-Si,390-410W insteps of 5W sc-Si, 360-380Wp in steps of 5W sc-Si, 370-380Wp in steps of 5W sc-Si, 305-325Wp in step of 5W sc-Si, 375-395Wp in step of 5W sc- Si, 315 - 335Wp in step of 5W sc- Si, 380 - 400 in step of 5W
Jiangsu Aiduo Photovoltaic Technology Co., Ltd.	ADXXX-36P ADXXX-36S ADXXX-48P ADXXX-48S ADXXX-54P ADXXX-54S ADXXX-60P ADXXX-60S ADXXX-72M ADXXX-72P ADXXX-72S ADXXX-72M ADXXX-36S ADXXX-48S ADXXX-54S ADXXX-60S ADXXX-72S ADXXX-36P ADXXX-40P ADXXX-48P ADXXX-54P ADXXX-72P ADXXX-60P	Poly-Crystalline Silicon XXX=130-150W, in step of 5 Mono-Crystalline Silicon XXX=135-155W, in step of 5 Poly-Crystalline Silicon XXX=175-225W, in step of 5 Mono-Crystalline Silicon XXX=180-205W, in step of 5 Poly-Crystalline Silicon XXX=200-225W, in step of 5 Mono-Crystalline Silicon XXX=210-235W, in step of 5 Poly-Crystalline Silicon XXX=255-265W, in step of 5 Mono-Crystalline Silicon XXX=230-260W, in step of 5 Mono-Crystalline Silicon XXX=175-205W, in step of 5 Poly-Crystalline Silicon XXX=270-320W, in step of 5 Mono-Crystalline SiliconXXX=280-320W, in step of 5 Mono-crystalline Silicon XXX=175-205W, in step of 5 Mono-crystalline SiliconXXX=135-175W, in step of 5 Mono-crystalline SiliconXXX=180-235W, in step of 5 Mono-crystalline SiliconXXX=210-265W, in step of 5 Mono-crystalline SiliconXXX=230-295W, in step of 5 Mono-crystalline Silicon XXX=280-355W, in step of 5 Poly-crystalline Silicon XXX=130-170W, in step of 5 Poly-crystalline Silicon XXX=160-185W, in step of 5 Poly-crystalline Silicon XXX=175-225W, in step of 5 Poly-crystalline Silicon XXX=200-255W, in step of 5 Poly-crystalline Silicon XXX=270-340W, in step of 5 Poly-crystalline SiliconXXX=225-280W, in step of 5
Jinneng Photovoltaic Technology Ltd	JNHM72-xxx JNHM60-xxx	HJT xxx = 330-370, in increment of 5 HJT xxx = 275-310, in increment of 5
Juli New Energy	JLS60P250W(156)	mc-si 250 W

PV MODULES			
Manufacturer name	Product ID	Description	
Jyotitech Solar LLP	JTS xxx	mc-si 37W	
	JTS xxx	mc-si 40W	
	JTS xxx	mc-si 50W	
	JTS xxx	mc-si 75W	
	JTS xxx	mc-si 100W	
	JTS xxx	mc-si 150W	
	JTS xxx	mc-si 255W	
	JTS xxx	mc-si 260W	
	JTS xxx	mc-si 200W	
	JTS xxx	mc-si 250W	
	JTS xxx	mc-si 300W	
	JTS xxx	mc-si 305W	
	JTS xxx	mc-si 310W	
	JTS xxx	mc-si 315W	
	JTS xxx	mc-si 320W	
Jolywood(taizhou)solar technology	JW-D72N-XXX	xxx=310-360W, in steps of 5	
	JW-D60N-xxx	xxx=255-300W, in steps of 5	
	JW-T72N-xxx	xxx=310-355W, in steps of 5	
	JW-T60N-xxx	xxx=255-295W, in steps of 5	
Jiangyin Shine Science and Technology Co	SSxxx-72S	monocrystalline Silicon, xxx=320-370W insteps of 5	
	SSxxx-72S-V	monocrystalline Silicon, xxx=320-370W insteps of 5	
	SSxxx-60S	monocrystalline Silicon, xxx=265-310W insteps of 5	
	SSxxx-60S-V	monocrystalline Silicon, xxx=265-310W insteps of 5	
	SSxxx-72P	Polycrystalline Silicon, xxx=305-345w insteps of 5	
	SSxxx-72P-V	Polycrystalline Silicon, xxx=305-345 insteps of 5	
	SSxxx-60P	Polycrystalline Silicon, xxx=250-290W insteps of 5	
Jiangsu Sunport Power Corp.,LTD	SSxxx-60P-V	Polycrystalline Silicon, xxx=250-290W insteps of 5	
	SPPXXXM7	Mono-crystalline Silicon , 345-385W in steps of 5	
	SPPXXXM72	Mono-crystalline Silicon , 345-395W in steps of 5	
	SPPXXXM6	Mono-crystalline Silicon , 285-320W in steps of 5	
	SPPXXXM60	Mono-crystalline Silicon , 285-330W in steps of 5	
	SPPXXXM60	Mono-crystalline Silicon , 345-340W in steps of 5	
	SPPXXXD72	Poly-crystalline Silicon , 325-350W insteps of 5	
	SPPXXXP7	Poly-crystalline Silicon , 325-350W insteps of 5	
	SPPXXXP72	Poly-crystalline Silicon , 325-375W insteps of 5	
	SPPXXXD6	Poly-crystalline Silicon , 275-300W insteps of 5	
	SPPXXXD60	Poly-crystalline Silicon , 275-295W insteps of 5	
	SPPXXXP6	Poly-crystalline Silicon , 275-290W insteps of 5	
	SPPXXXP60	Poly-crystalline Silicon , 275-315W insteps of 5	
	SPP290M60S	sc-Si, 290W	
	SPP295M60S	sc-Si, 295W	
	SPP300M60S	sc-Si, 300W	
	SPP305M60S	sc-Si, 305W	
	SPP310M60S	sc-Si, 310W	
	SPP315M60S	sc-Si, 315W	
	SPP320M60S	sc-Si, 320W	

KOSOL HIRAMRUT ENERGIES PVT.LTD.	KE40	40Wp
	KE50	50Wp
	KE60	60Wp
	KE100	100Wp
	KE150	150Wp
	KE155	155Wp
	KE160	160Wp
	KE210	210Wp
	KE235	235Wp
	KE240	240Wp
	KE245	245Wp
	KE250	250Wp
	KE260	260Wp
	KE265	265Wp
	KE270	270Wp
	KE275	275Wp
	KE280	280Wp
	KE315	315Wp
	KE320	320Wp
	KE325	325Wp
Kyocera	KU315-7ZPA	mc-Si 315 Wp
	KU320-7ZPA	mc-Si 320 Wp
	KG160GX-LFE-S	mc-Si, 160Wp
	KG165GX-LFE-S	mc-Si, 165Wp
	KG170GX-LFE-S	mc-Si, 170Wp
	KG175GX-LFE-S	mc-Si, 175Wp
	KK275P-3CD3CG	mc-Si, 275Wp
	KK280P-3CD3CG	mc-Si, 280Wp
	mc-Si, 165+C631:E644Wp	mc-Si, 285Wp
	KK290P-5CD3CG	mc-Si, 290Wp
	KV275P-3CD3CG	mc-Si, 275Wp
	KV280P-3CD3CG	mc-Si, 280Wp
	KV285P-3CD3CG	mc-Si, 285Wp
	KV290P-3CD3CG	mc-Si, 290Wp
PV MODULES		
Manufacturer name	Product ID	Description
LG electronics	LG275S1C-B3	sc-Si 275 Wp/0 - +3%
	LG280S1C-B3	sc-Si 280 Wp/0 - +3%
	LG300N1C-B3	sc-Si 300 Wp/0 - +3%
	LG305N1C-B3	sc-Si 305 Wp/0 - +3%
	LG300N1C-G4	sc-Si 300W/0 - +3%
	LG280S1C-L4	sc-Si 280 Wp/0 - +3%
	LG285S1C-L4	sc-Si 285 Wp/0 - +3%
	LG290S1C-L4	sc-Si 290 Wp/0 - +3%
	LG300N1K-G4	sc-Si 300W/0 - +3%
	LG305N1C-G4	sc-Si 305W/0 - +3%
	LG310N1C-G4	sc-Si 310W/0 - +3%
	LG315N1C-G4	sc-Si 315W/0 - +3%
	LG320N1C-G4	sc-Si 320W/0 - +3%
	LGxxxN1C-A5	Sc-Si 335W, 330W,325W
	LGxxxN1K-A5	Sc-Si 320W, 315W
	LGxxxN2C-A5	Sc-Si 410W, 405W, 400W, 395W, 390W
	LGxxxN2W-A5	Sc-Si 410W, 405W, 400W, 395W, 390W
	LGxxxS1C-A5	Sc-Si 300W, 295W, 290W
	LG315N1W-G4	Sc-si 315W
	LGxxxS2W-A5	Sc-Si 360W, 355W, 350W
	LGxxxQ1C-A5	sc-Si 350-370, in step of 5
	LG340N1C-A5	sc-Si 340 Wp
	LGxxxN1C-V5	sc-Si 340, 345, 350, 355 W
	LGxxxN2W-V5	sc-Si 400, 405, 410, 415, 420 W
LARRI Solar Technology Co.Ltd	LR6-60-xxxM	mc-Si 300 -360 W,in steps of 5
	LR6-72-xxxM	mc-Si 250 -300 W,in steps of 5

Loop Inc	LPW-270P-60H	mc-Si 270W
	LPW-275P-60H	mc-Si 275W
Longi green energy technology Co., Ltd	LR6-60-xxxM	mc-Si, 270-300 (in step of 5)
	LR6-72-xxxM	mc-Si, 320-350 (in step of 5)
	LR6-60PE-xxxM	mc-Si, 280-310 (in step of 5)
	LR6-72PE-xxxM	mc-Si, 340-375 (in step of 5)
	LR6-60-xxxM	mc-Si,270W-300W
	LR6-72-xxxM	mc-si,320W-350W
	LR6-60PE-xxxM	mc-si,280W-310W
	LR-60BP-xxx	mc-Si, 290 - 305, in step of 5
	LR-72BP-xxx	mc-Si,350-370, in step of 5
	LR6-72PE-xxxM	mc-si,340W-375W
	LR6-60HV-xxxM	280-300 Wp, in step of 5
	LR6-60PH-xxxM	280-310 Wp, in step of 5
	LR6-72HV-xxxM	320-350 Wp, in step of 5
	LR6-72PH-xxxM	340-385 Wp, in step of 5
	LR4-60HBD-xxxM	mc-Si,345-360W in steps of 5
	LR4-72HBD-xxxM	mc-Si, 415-430W in steps of 5
	LR4-60HPH-xxxM	mc-Si, 350-370W insteps of 5
	LR4-72HPH-xxxM	mc-Si, 420-440W in steps of 5
	LR6-60HPB-xxxM	mc-Si, 300-320W insteps of 5
	LR4-60HPB-xxxM	mc-Si,335-350W insteps of 5
	LR6-72BP-xxxM	mc-Si 375-380 W ; in step of 5
	LR6-60BP-xxxM	mc-Si 310-315W; in step of 5
	LR6-72HBD-xxxM	mc-Si 360-385 W; in step of 5
	LR6-60HBD-xxxM	mc-Si 300-320 W; in step of 5
	LR6-78HBD-xxxM	mc-Si 395-410 W; in step of 5
	LR6-72HPH-xxxM,	xxx=350-405,in step of 5
	LR6-60HPH-xxxM,	xxx=295-335,in step of 5
	LR6-72PE-380M	mc-Si 380 W
MAYSUN SOLAR FZCO	MSxxxM-72	Mono-Crystalline Silicon xxx=285-340,in step of 5
	MSxxxM-60	Mono-Crystalline Silicon xxx=240-285,in step of 5
	MSxxxM-36	Mono-Crystalline Silicon xxx=145-170,in step of 5
	MSxxxP-72	Poly-Crystalline Silicon xxx=285-340,in step of 5
	MSxxxP-60	Poly-Crystalline Silicon xxx=235-280,in step of 5
	MSxxxP-36	Poly-Crystalline Silicon xxx=140-165,in step of 5
Merlin Solar Technologies, Inc.	BR320	Mono-Si, 320 W
	BR325	Mono-Si, 325 W
	BR330	Mono-Si, 330 W
	BR335	Mono-Si, 335 W
	BR340	Mono-Si, 335 W
	BR345	Mono-Si, 345 W
	BR350	Mono-Si, 350 W
	FX105	Mono-Si, 105 W
	FX110	Mono-Si, 110 W

PV MODULES		
Manufacturer name	Product ID	Description
Miasole Hi-tech Corp	FLEX-02 xxx NS	CIGS- 65-85W, in step of 5
	FLEX-02 xxx N	CIGS-110-130W, in step of 5
	FLEX-02 xxx WS	CIGS-210-250W, in step of 10
	FLEX-02 W	CIGS-340-380W, in step of 10
	FLEX-02 XXX C132	CIGS-255 -305W, in step of 5
	ASM-7-PERC-AAA (AAA: Peak Power in Wp)	Monocrystalline, 305-375 Wp, in step of 5W
	ASM-6-PERK-AAA (AAA: Peak Power in Wp)	Monocrystalline, 255-315 Wp, in step of 5
	ASP-7-AAA (AAA: Peak Power in Wp)	Polycrystalline, 285-350 Wp, in step of 5W
Mysolar Manufacturing(Shanghai) Co.,Ltd	ASP-6-AAA (AAA: Peak Power in Wp)	Polycrystalline, 235-290 Wp, in step of 5W
	MSxxxM-S	sc-Si, mc-Si, 95 to 375
Nanjing Sunport power	MSxxxP-S	sc-Si, mc-Si, 90 to 350
	SPPXXXP60	6"Poly - Crystalline (XXX=270-290)
	SPPXXXP72	6"Poly - Crystalline(XXX=325-345)
United Renewable Energy Co., Ltd. (URE)	D6PxxxB3A	mc-Si 210 -275 W
	D6PxxxB5A	mc-Si 185-245 W
	D6PxxxB2A	mc-Si 170 - 220 W
	D6PxxxB1A	mc-Si 125-165 W
	D6PxxxA3A	mc-Si 210 - 250 W
	D6PxxxA5A	mc-Si 185 - 225 W
	D6PxxxA2A	mc-Si 170 - 200 W
	D6PxxxA1A	mc-Si 125 - 145 W
	D6LxxxK4A	sc-Si 360 Wp
	D6LxxxL3A	sc-Si 290-305, in step of 5
NICE SUN PV Co., Ltd	D6LxxxL4A	sc-Si 350-365, in step of 5
	NCS-6BMXXX	sc-Si 215-285 in increments of 5
	NCS-6AMXXX	sc-Si 255-345 in increments of 5
Ningbo Ulica Solar	NCS-6APXXX	mc-Si 255-340 in increments of 5
	UL-xxxM-60	sc-Si 270 W
	UL-xxxP-60	mc-Si 260-270W, in steps of 5
	UL-xxxM-72	sc-Si 320-330W, in steps of 5
	UL-xxxP-72	mc-Si 310-320W, in steps of 5
	UL-XXXP-72	mc-Si 320-335 W, in steps of 5
	UL-XXXM-72	Sc-Si 340-345W, in steps of 5
	UL-XXXM-60	Sc-Si 280-290W, in steps of 5
	UL-XXXM-72	Sc-Si 360-375W, in steps of 5
	UL-XXXP-60	Sc-Si 270-285W, in steps of 5
	UL_XXXP_72	mc_Si,320-335WP in steps of 5
	UL_XXXM_72	Sc-Si,340-345WP in steps of 5
	UL_XXXM_60	Sc-Si,280-290WP in steps of 5
	UL_XXXM_72	Sc-Si,360-375WP in steps of 5
	UL_XXXP_60	mc-Si,270-285WP in steps of 5
	UL-xxxM-24	sc-si,105-120WP in step of 5

PV MODULES		
Manufacturer name	Product ID	Description
Noor Solar Technology	NST18-6-xxxP	mc-Si xxx=70 - 80 Wp, in step of 5
	NST32-6-xxxP	mc-Si xxx=120-145 Wp, in step of 5
	NST36-6-xxxP	mc-Si xxx=135-160 Wp, in step of 5
	NST40-6-xxxP	mc-Si xxx=150-180 Wp, in step of 5
	NST48-6-xxxP	mc-Si xxx=180-220 Wp, in step of 5
	NST54-6-xxxP	mc-Si xxx=205-245 Wp, in step of 5
	NST60-6-xxxP	mc-Si xxx=225-275 Wp, in step of 5
	NST66-6-xxxP	mc-Si xxx=250-300 Wp, in step of 5
	NST72-6-xxxP	mc-Si xxx=270-330 Wp, in step of 5
	NST18-6-xxxM	sc-Si xxx=85-95 Wp, in step of 5
	NST32-6-xxxM	sc-Si xxx=145-175 Wp, in step of 5
	NST36-6-xxxM	sc-Si xxx=165-195 Wp, in step of 5
	NST40-6-xxxM	sc-Si xxx=180-220 Wp, in step of 5
	NST48-6-xxxM	sc-Si xxx=220-260 Wp, in step of 5
	NST54-6-xxxM	sc-Si xxx=245-295 Wp, in step of 5
	NST60-6-xxxM	sc-Si xxx=270-330 Wp, in step of 5
	NST18-6-xxxP	sc-Si xxx= 70-80WP , insteps of 5
	NST32-6-xxxP	sc-Si xxx= 120-145Wp, insteps of 5
	NST36-6-xxxP	sc-Si xxx= 135-160WP, insteps of 5
	NST40-6-xxxP	sc-Si xxx= 150-180Wp, insteps of 5
	NST48-6-xxxP	sc-Si xxx= 180-220WP, insteps of 5
	NST54-6-xxxP	sc-Si xxx= 205-245Wp, insteps of 5
	NST60-6-xxxP	sc-Si xxx= 225-275Wp, insteps of 5
	NST66-6-xxxP	sc-Si xxx= 250-300Wp, insteps of 5
	NST72-6-xxxP	sc-Si xxx= 270-300Wp, insteps of 5
	NST18-6-xxxM	mc-Si xxx= 85-95Wp, insteps of 5
	NST32-6-xxxM	mc-Si xxx=145-175Wp, insteps of 5
	NST36-6-xxxM	mc-Si xxx=165-195Wp, insteps of 5
	NST40-6-xxxM	mc-Si xxx=180-220 Wp, insteps of 5
	NST48-6-xxxM	mc-si xxx=225-260Wp, insteps of 5
	NST54-6-xxxM	mc-Si xxx=245-295Wp, insteps of 5
	NST60-6-xxxM	mc-Si xxx=270-330 Wp, in step of 5
	NST66-6-xxxM	mc-Si xxx=300-360Wp, insteps of 5
	NST72-6-xxxM	mc-Si xxx=325-395Wp, insteps of 5
Omsun Power Private Limited	OM60XXX	Mc-Si 210-275 W
	OM60XXX	Mc-Si 180-200 W
	OM54XXX	Mc-Si 150-170 W
	OM36XXX	Mc-Si 110-140 W
	OM36XXX	Mc-Si 100 W
ONYX SOLAR ENERGY, S.L.	434 BA-10000500-20-1	a-Si 16W (+/-10%)
	X3X-BN-12451849-00-1	X= 4/5/6, a- Si 136.53 Wp
	X3X-BN-12451849-10-1	X= 4/5/6, a-Si 99.36 Wp
	X3X-BN-12451849-20-1	X= 4/5/6, a-Si 78.84 Wp
	X3X-BN-12451849-30-1	X= 4/5/6, a-Si 60.71 Wp
	X3X-BN-12452456-00-1	X= 4/5/6, a-Si 182.04 Wp
	X3X-BN-12452456-10-1	X= 4/5/6, a-Si 132.48 Wp
	X3X-BN-12452456-20-1	X= 4/5/6, a-Si 105.12 Wp
	X3X-BN-12452456-30-1	X= 4/5/6, a-Si 80.94 Wp
	X3X-BN-12450635-00-1	X= 4/5/6, a-Si 45.51 Wp
	X3X-BN-12450635-10-1	X= 4/5/6, a-Si 33.12 Wp
	X3X-BN-12450635-20-1	X= 4/5/6, a-Si 26.28 Wp
	X3X-BN-12450635-30-1	X= 4/5/6, a-Si 20.24 Wp
	X3X-BN-12451242-00-1	X= 4/5/6, a-Si 91.02 Wp
	X3X-BN-12451242-10-1	X= 4/5/6, a-Si 66.24 Wp
	X3X-BN-12451242-20-1	X= 4/5/6, a-Si 52.56 Wp
	X3X-BN-12451242-30-1	X= 4/5/6, a-Si 40.47 Wp
	636-BN-06000600-00-1	a-Si 20.06 Wp
	636-BN-24620635-10-1	a-Si 63.0 Wp

	ONYX G/G A <u>XXXX</u>	A: M Monocrystalline or P Multicrystalline, <u>XXX</u> = Quantity of Cells (036 to 168), X=Frontal Glass Thickness (4mm to 10mm), X=Rear Glass Thickness (4mm to 10mm), Peak Power: 140 - 650 Wp
Panasonic	VBMS260AE04 VBMS255AE04 VBMS250AE04 VBHN235SJ25	Poly 260 W Poly 255 W Poly 250 W HIT Cell Technology 235W
PV MODULES		
Manufacturer name	Product ID	Description
Panasonic	VBHN240SJ25 VBHN245SJ25 VBHN235SE10 VBHN294SJ45 AE6PXXXWB5B AE7PXXXVB5B VBHN325SJ47	HIT Cell Technology 240W HIT Cell Technology 245W HIT Cell Technology 235W HIT Cell Technology 294W mc-si,265W-275W (in step of 5) mc-si,320W-325 w (in step of 5) HIT Cell Technology 325W
Perlight Solar Co. Ltd	PLM-XXXP-72 PLM-XXXP-60 PLM-XXXP-60 PLM-XXXP-54 PLM-XXXP-36 PLM-XXXP-48 PLM-XXXM-96 PLM-XXXM-72 PLM-XXXM-60 PLM-XXXM-54 PLM-XXXM-36 PLM-XXXM-48 PLM-XXXM-66 PLM-XXXMB-72	mc-Si 235-320W, in steps of 5 mc-Si 195-265W, in steps of 5 mc-Si 240-260W, in steps of 5 mc-Si 220-235W, in spets of 5 mc-Si 145-155W, in steps of 5 mc-Si 195-210W, in steps of 5 sc-Si 230-280W, in steps of 5 sc-Si 290-315W, in steps of 5 sc-Si 240-265 W, in steps of 5 sc-Si 220-235W, in steps of 5 sc-Si 145-155W, in steps of 5 sc-Si 195-210W, in steps of 5 sc-Si 265-290W, in steps of 5 sc-Si 290-315 W, in steps of 5
Philadelphia Solar	PLM-XXXMB-60 PLM-XXXMB-54 PLM-XXXMB-48 PS-P72 XXX PS-P60 XXX PS-M72 XXX PS-M60 XXX	sc-Si 240-265W, in steps of 5 sc-Si 220-235W, in steps of 5 sc-Si 195-210W, in steps of 5 mc-Si 300-330W, in steps of 5 mc-Si 250-275W, in steps of 5 sc-Si 300-345W, in steps of 5 sc-Si 250-290W, in steps of 5
Phono Solar Technology Co., Ltd	PSXXXM-24/F PSxxxPH-24/T PSxxxPH-20/U PSxxxPH-24/TH PSxxxPH-20/UH PSxxxP-24/T PSxxxP-20/U PSxxxP-20/UH PSxxxP-24/TH PSxxxMH-24/T PSxxxMH-20/U PSxxxMH-24/TH PSxxxMH-20/UH PSxxxM-24/T PSxxxM-20/U PSxxxM-24/TH PSxxxM-20/UH PSXXXM-20/U PSXXXM-24/T PSXXXP-20/U PSXXXP-24/T	C-Si 170-210 W mc-Si,315W/335W, in steps of 5w; mc-Si,260W/280W,in steps of 5w; mc-Si,325W/340W,in steps of 5w; mc-Si,270W/280W. In steps of 5W mc-Si,315W/335W,in steps of 5w; mc-Si,260W/280W,in steps of 5w; mc-Si,270W/280W. In steps of 5W mc-Si,325W/340W,in steps of 5w; sc-Si,325W/385W,insteps of 5w; sc-Si,275W/320W,insteps of 5w; sc-Si, 360W/390W,insteps of 5w; sc-Si,300W/325W,insteps of 5w; sc-Si,325W/385W,insteps of 5w; sc-Si,275W/320W,insteps of 5w; sc-Si,360/390,in steps of 5w; sc-Si,300W/325W,insteps of 5w; C-Si 215-280W C-Si 280-340W C-Si 215-275W C-Si 275-335W

RenewSys India Private Limited	DESERV 3M6 XXX DESERV 3M6 XXX DESERV 3M6 XXX DESERV 3M6 XXX 3S6H Series DESERV 3M6 XXX	mc-si (36 cells) 140 W - 170 W mc-si (48 cells) 185 W - 230W mc-si (54 cells) 210 W - 260 W mc-si (60 cells) 235 W - 285 W Sc-Si,160Wp to 390Wp mc-si (72 cells) 280 W - 345 W
Saatvik Green Energy Pvt. Ltd	SGE325-72P SGE330-72P SGE260-60P SGE270-60P	ms-Si 325 W ms-Si 330 W ms-Si 260 W ms-Si 270 W
S-Energy	SM-xxxPC8 SM-xxxPC8 SN-xxxP10 SN-xxxP10	Mc-Si 250-260W, in steps of 5 Mc-Si 295-305W, in steps of 5 Mc-Si 250-265W, in steps of 5 Mc-Si 295-315W, in steps of 5
Solvis d.o.o.	SV60-xxxE SV60-xxx SV72-xxxE SV72-xxx	monocrystalline 290-405, in step of 5 polycrystalline 270-290, in step of 5 monocrystalline 345-365, in step of 5 polycrystalline 320-340, in step of 5
PV MODULES		
Manufacturer name	Product ID	Description
Sunovation	SUNOVATION eFORM Arc GG-260-C SUNOVATION eFORM Arc GG-125-C SUNOVATION eFORM Arc GG-160-C SUNOVATION eFORM Arc GG-130-C SUNOVATION eFORM Color GG-195-F SUNOVATION eFORM Color GG-95-F SUNOVATION eFORM Color GG-120-F SUNOVATION eFORM Color GG-100-F SUNOVATION eFORM Color GG-160-F SUNOVATION eFORM Color GG-190-F	sc-Si 215.8 Wp sc-Si 107.9 Wp sc-Si 134.9 Wp sc-Si 107.9 Wp sc-Si 161.8 Wp sc-Si 80.9 Wp sc-Si 100.1 Wp sc-Si 80.9 Wp sc-Si 134.9 Wp sc-Si 161.8 Wp
Sunman (Hong Kong) Limited	SMF160M-6X6 SMF270M-6X10 SMF325M-6X12	sc-Si 160 Wp sc-Si 270 Wp sc-Si 325 Wp
SERAPHIM SOLAR SYSTEM CO.,LTD	SRP-XXX-6PA SRP-XXX-6PB SRP-XXX-6PA SRP-XXX-6PA-H SRP-XXX-6PB SRP-XXX-6PB-HV SRP-XXX-6MA SRP-XXX-6MA-HV SRP-XXX-6MB SRP-XXX-6MB-HV SRP-XXX-BPA SRP-XXX-BPA-HV SRP-XXX-BPB SRP-XXX-BPB-HV SRP-XXX-BMA SRP-XXX-BMA-HV SRP-XXX-BMB SRP-XXX-BMB-HV SRP-XXX-E11A SRP-XXX-E11A-HV SRP-XXX-E11A/SRP-XXX-E11A-HV SRP-XXX-E11B/SRP-XXX-E11B-HV SRP-XXX-E01A/SRP-XXX-E01A-HV SRP-XXX-E01B/SRP-XXX-E01B-HV SRP-XXX-BPA/SRP-XXX-BPA-HV SRP-XXX-BPB/SRP-XXX-BPB-HV SRP-XXX-BMA/SRP-XXX-BMA-HV SRP-XXX-BMB/SRP-XXX-BMB-HV SRP-XXX-6PA/SRP-XXX-6PA-HV	mc-Si (XXX=305-320), in steps of 5 mc-Si (XXX=225-265), in steps of 5 sc-Si, mc-Si(XXX=320-350),in steps of 5 sc-Si, mc-Si(XXX=320-350),in steps of 5 sc-Si, mc-Si(XXX=270-290),in step of 5 sc-Si, mc-Si(XXX=270-290),in step of 5 sc-Si, mc-Si(XXX=340-380), instep of 5 sc-Si, mc-Si(XXX=340-380), instep of 5 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=320-355),in step of 5 sc-Si, mc-Si(XXX=320-355),in step of 5 sc-Si, mc-Si(XXX=270-295),in step of 5 sc-Si, mc-Si(XXX=270-295),in step of 5 sc-Si, mc-Si(XXX=340-380),in step of 5 sc-Si, mc-Si(XXX=340-380),in step of 5 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=340-380),in step of 5 sc-Si, mc-Si(XXX=340-380),in step of 5 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=365-410),in step of 5 sc-Si, mc-Si(XXX=305-340),in step of 5 sc-Si, mc-Si(XXX=320-355),in step of 5 sc-Si, mc-Si(XXX=270-295),in step of 5 sc-Si, mc-Si(XXX=340-380),in step of 5 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=320-350),in step of 6

	SRP-XXX-6PB/SRP-XXX-6PB-HV SRP-XXX-6MA/SRP-XXX-6MA-HV SRP-XXX-6MB/SRP-XXX-6MB-HV SRP-XXX-E11B SRP-XXX-E11B-HV SRP-XXX-E01A /SRP-XXX-E01A-HV SRP-XXX-E01B SRP-XXX-E01B-HV SRP-XXX-6MA SRP-XXX-6MB	sc-Si, mc-Si(XXX=270-290),in step of 7 sc-Si, mc-Si(XXX=340-380),in step of 8 sc-Si, mc-Si(XXX=285-315),in step of 9 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=285-315),in step of 5 sc-Si, mc-Si(XXX=365-410),in step of 5 sc-Si, mc-Si(XXX=365-410),in step of 5 sc-Si, mc-Si(XXX=305-340),in step of 5 sc-Si, mc-Si(XXX=305-340),in step of 5 sc-Si (XXX=310-325), in steps of 5 sc-Si (XXX=265-280), in steps of 5
Shandong Linuo Photovoltaic Hi-tech Co., Ltd	LN260(30) M-4-xxx LN260(30) P-4-xxx	sc-Si, 270 -280 in steps of 5 Mc-Si, 260 -270 in steps of 5
Shanghai Aerospace Automobile Electromechanical Co., Ltd	HT72-156P-XXX HT60-156P-XXX HT72-156M-XXX HT60-156M-XXX	Poly c-Si (XXX=310-330, in steps of 5) Poly c-Si (XXX=260-275, in steps of 5) mono c-Si(XXX=330-345, 355-360 in steps of 5) mono c-Si(XXX=270-310, in steps of 5)
PV MODULES		
Manufacturer name	Product ID	Description
Sharp Electronics	NU-RJ XXX ND-RJ XXX ND-RCXXX NU-RDXXX NU-RCXXX ND-RBxxx NU-SCxxx NQ-RxxxA ND-Ahxxx ND-RKxxx NU-AHxxx ND-AKxxx ND-AC275 ND-AF330C NU-AC310 NU-AF370	mono c-Si 280 - 285W (in steps of 5W) Poly c-Si 255 - 275W (in steps of 5W) poly crystalline 215-310 in steps of 5 mono crystalline 215-310 in steps of 5 Poly crystalline215-310 in steps of 5 Poly crystalline 245-290 (in steps of 5W) Mono crystalline 335-375 (in steps of 5W) 256- 260W (in steps of 2W) mono crystalline 285-340 W, in steps of 5 poly crystalline 235-285W , in steps of 5 poly crystalline, 285-345W , in steps of 5 poly crystalline, 235-285W , in steps of 5 Poly Crystalline, 275w Poly Crystalline, 330w Mono Crystalline, 310w Mono Crystalline, 370w
SolarWorld AG	Sunmodule Plus SW XXX poly Sunmodule Plus SW XXX mono Sunmodule SW XXX XL mono Sunmodule Protect SW 280 mono black Sunmodule Plus SW 260 poly Sunmodule Plus SW 265 poly Sunmodule Plus SW 285 mono Sunmodule Plus SW 285 mono black Sunmodule Plus SW 290 mono black Sunmodule Plus SW 300 mono Sunmodule SW 325 XL mono Sunmodule SW 335 XL mono Sunmodule SW 340 XL mono Sunmodule SW 345 XL mono Sunmodule SW 350 XL mono Sunmodule Bisun SW 280 duo Sunmodule Bisun SW 325 duo	Mc-Si, 260 W sc-Si, 270, 290, 295W sc-Si, 340, 345W Mono-Crystalline 280 Watt peak 0 / + 5 Wp Poly-Crystalline Si 260 Watt peak 0/+ 5 Wp Poly-Crystalline Si 265 Watt peak 0/+ 5 Wp Mono-Crystalline Si 285 Watt peak 0 / + 5 Wp Mono-Crystalline Si 285 Watt peak 0 / + 5 Wp Mono-Crystalline Si 290 Watt peak 0 / + 5 Wp Mono-Crystalline Si 300 Watt peak 0 / + 5 Wp Mono-Crystalline Si 325 Watt peak 0 / + 5 Wp Mono-Crystalline Si 335 Watt peak 0 / + 5 Wp Mono-Crystalline Si 340 Watt peak 0 / + 5 Wp Mono-Crystalline Si 345 Watt peak 0 / + 5 Wp Mono-Crystalline Si 350 Watt peak 0 / + 5 Wp Mono-Crystalline Si 280 Watt peak 0 / + 5 Wp Mono-Crystalline Si 325 Watt peak 0 / + 5 Wp

SOLARWATT GmbH	Vision 60P Vision 60P style Vision 60M style Vision 60M high power	Poly-Crystalline Si (275-285 Wp, in step of 5) Poly-Crystalline Si (265 Wp , 270 Wp) Mono-Crystalline Si (280-295 Wp), in step of 5 Mono-Crystalline Si (295 Wp, 300 Wp)
Solar Frontier	SFXXX-S	CIGS 130-170W
Solar Leading Group Limited	JKMXXXP-60 JKMXXXP-72 JKMXXXM-60 JKMXXXM-72	mc-si 245-265W, in steps of 5 mc-Si 295-320W, in steps of 5 sc-Si 255-280W, in steps of 5 sc-Si 300-320W, in steps of 5
Solar Solution (AEG)	AS-P368 - xxx AS-P548 - xxx AS-P608 - xxx AS-P728 - xxx	c-Si, 140-170 Wp, in steps of 5 Wp c-Si, 210-250 Wp, in steps of 5 Wp c-Si, 235-280 Wp, in steps of 5 Wp c-Si, 285-335 Wp, in steps of 5 Wp
Solon International LL FZE	Solon Blue/Black 220/16 Solon Blue/black 230/07 Solon Black 230/02 Solon Blue 270/11 Solon Blue 270/12 Solon Blue 270/17 Solon Black 280/11 Solon Black 280/12 Solon Black 280/17	sc-Si, mc-Si 225 - 275 WP sc-Si, mc-Si 225-275 WP sc-Si, mc-Si 225-275 WP sc-Si, mc-Si 300-330 WP sc-Si, mc-Si 300-330 WP sc-Si, mc-Si 300-330 WP sc-Si, mc-Si 300-330 WP sc-Si, mc-Si 300-330 WP sc-Si, mc-Si 300-330 WP
Stion	STO-XXXX STL-XXXX	CIGS 120-160W, in steps of 5 - +2% CIGS 120-160W, in steps of 5 - +2%
SunPower	SPR-X21-345-COM SPR-E20-435 COM SPR-E20-327 COM SPR-P17-3xx COM SPR-E20-327 SPR-P19-xxx-COM PVC385 MP SRP-MAX2-xxx-COM SRP-MAX2-xxx SRP-MAX3-xxx-COM SRP-MAX3-xxx SRP-P19-xxx-BLK	Back Contact Cell Mono Crystalline Maxeon) 327- 450W Back Contact Cell Mono Crystalline Maxeon) 327- 450W Back Contact Cell Mono Crystalline Maxeon) 327- 450W mc-si (xxx=315-85 in steps of 1, 498 cells) Back Contact Cell Mono Crystalline Maxeon) 327- 450W Monocrystalline, 380-405, in step of 1 Sc-Si, 385 W Mono crystalline ,xxx= 340 - 360, in step of 5 Mono crystalline ,xxx= 340 - 360, in step of 5 Mono crystalline ,xxx= 370-400, in step of 5 Mono crystalline ,xxx= 370-400, in step of 5 Mono crystalline ,xxx=310-335, in tsep of 5

PV MODULES		
Manufacturer name	Product ID	Description
Solibro GmbH PV module	SL2	CIGS 125-150
	SL2-F	CIGS 125-150
Sunset Energietechnik GmbH	ASxxx/72	250-345W in steps of 5
	ASxxx/60	210-290W in steps of 5
	ASxxx/50	180-235W in steps of 5
	ASxxx/36	130-170W in steps of 5
	PXxxx/72	240-340W in steps of 5
	PXxxx/60	205-285W in steps of 5
	PXxxx/50	175-235W in steps of 5
Suzhou Akcome Optronics Science &Technology Co., Ltd	PXxxx/36	130-170W in steps of 5
	SK6612M-xxx	Mono-crystalline Silicon, 340W-375W in steps of 5
	SK6610M-xxx	Mono-crystalline Silicon, 280W-315W in steps of 5
	SK6612P-xxx	Poly-crystalline Silicon, 320W-350W in steps of 5
Swelect Energy Systems Ltd	SK6610P-xxx	Poly-crystalline Silicon, 265W-290W in steps of 5
	HST72F320P	sc-Si , 320WP- 345WP
	HST72F345P	sc-Si , 320WP-345WP
	HST72F340M	mc-Si, 340Wp – 365Wp
Tata Power Solar Modules	HST72F365M	mc-Si, 340Wp – 365Wp
	TS XXX SBZ	130-160 W in steps of 5, 36 cells
	TPXXX SBZ	130-160 W in steps of 5, 36 cells
	TS XXX XBZ	175-215 W in steps of 5, 48 cells
	TP XXX XBZ	175-215 W in steps of 5, 48 cells
	TS XXX XBZ	200-245 W in steps of 5, 54 cells
	TP XXX XBZ	200-245 W in steps of 5, 54 cells
	TS XXX MBZ	220-270 W in steps of 5, 60 cells
	TP XXX MBZ	220-270 W in steps of 5, 60 cells
	TP XXX LBZ	265-325 W in steps of 5, 72 cells
	TS XXX SGZ	155-170 W in steps of 5, 36 cells
	TP XXX SGZ	155-170 W in steps of 5, 36 cells
	TS XXX XGZ	185-225 W in steps of 5, 48 cells
	TP XXX XGZ	185-225 W in steps of 5, 48 cells
	TS XXX XGZ	210-255 W in steps of 5, 54 cells
	TP XXX XGZ	210-255 W in steps of 5, 54 cells
	TS XXX MGZ	230-285 W in steps of 5, 60 cells
	TP XXX MGZ	230-285 W in steps of 5, 60 cells
	TP XXX LGZ	280-340 W in steps of 5, 72 cells
	TC XXX	295-320 W in steps of 5, 72 cells

Trina Solar Co., Ltd.	TSM-xxxPDG5	Poly c-Si 230-290 W,in steps of 5
	TSM-xxxPDG5.50	Poly c-Si 230-290W, in steps of 5
	TSM-xxx PEG5	Poly c-Si 230-290W, in steps of 5
	TSM-xxx PEG5.50	Poly c-Si 230-290W, in steps of 5
	TSM-xxxPEG14(II)	mc-Si, 315-340 W, in step of 5
	TSM-xxxDE15M(II)	ms-Si, 355-420Wp, insteps of 5
	TSM-xxxPD05	mc-Si, 265-275W, in steps of 5
	TSM-xxxDD05A(II)	mono c-Si, 270-315W, in step of 5
	TSM-DD014A(II)	mono c-Si, 325-375W, in step of 5
	TSM-DEG5(II)	mc-Si, 260-315W, in step of 5
	TSM-xxxPD14	mc-Si 325-345, in step of 5
	TSM-DEG14(II)	mc-Si, 325-375W, in step of 5
	TSM-xxxDEG14C.07 (II)	mc-Si 345-365 Wp, in step of 5
	TSM-xxxDEG5C.07 (II)	mc-Si 290-310 Wp, in step of 5
	TSM-xxxDE05H(II)	mc-Si 285-315, in step of 5
	TSM-xxxPD14	mc-Si, 320 watt
	TSM-xxxPEG14H	mc-Si, 330-345 W, in step of 5 W
	TSM-xxxDEG14H(II)	mc-Si, 350-385 W, in step of 5
	TSM-xxxDEG5H(II)	mc-Si, 295-320 W, in step of 5
	TSM-xxxPEG5H(II)	mc-Si, 270-290 W, in step of 5
TSMC Solar Europe GmbH	TSM-xxxDE14H(II)	mc-Si, 355-395 W, in step of 5
	TSM-xxxPE05H(II)	mc-Si, 275-290 W, in step of 5
Upsolar Global CO.,Ltd	TSM-xxxDE15H (II)	mc-Si, xxx=335-420, in step of 5
	TSM-xxxPE14A	mc-Si, 320-340 W, in step of 5
	TSM-DE06M(II)	mc- Si, 325-340W, in step of 5
	TSM-DEG6H20(II)	mc- Si, 315-335W, in step of 5
	TSM-DE15M(II)	mc- Si, 390-410W, in step of 5
	TS-xxxC2	CIGS 140-150W, in steps of 5
	TS-xxxC1	CIGS 140/150/155/165W
	Up-MxxxM	sc-Si 260-325W, in step of 5
	Up-MxxxM	sc-Si 310-390W, in step of 5
	Up-MxxxP	mc-Si 250-305W, instep of 5
	Up-MxxxP	mc-Si 300-370W, instep of 5

PV MODULES		
Manufacturer name	Product ID	Description
Viessmann Werke Gmbh &Co	VITOVOLT 300 Pxxx PSEB	mc-Si 250 – 260 W, in steps of 5 W
VIKRAM SOLAR PRIVATE LIMITED	ELDORA VSP.36.AAA.03	sc-Si 137-168 Wp
	ELDORA VSP.72.AAA.03	sc-Si 275-335 Wp
	ELDORA VSPB.60.AAA.03	sc-Si 228wp-279wp
	ELDORA VSPB.72.AAA.03	sc-Si 275Wp-335wp
	ELDORA VSPBB.60.AAA.03	sc-Si 228wp-279wp
	ELDORA VSP.60.AAA.03	sc-si 240-270W
	ELDORA VSP.72.AAA.03.04	mc-Si AAA=285-350Wp
	SOMERA VSM.72.AAA.03.04	sc-Si AAA=310-380WP
WAAREE Energies Ltd.	WS-XXX	mc-Si 230-270 W, in steps of 5
	WS-XXX	mc-Si 280-320 W, in steps of 5
WUXI Suntech Power Co, Ltd	STPxxx-20/Wem	mc-si xxx= 210-290 Wp
	STPxxx-24/Vem	mc-si xxx= 220-350 Wp
	STPxxxS-20/Wem	sc-si xxx=210-310 Wp
	STPxxxS-24/Vem	sc-si xxx= 220-370 Wp
	STPXXX-20/WFW	Poly-crystalline, XXX=255W-285W
	STPXXX-24/VFW	Poly-crystalline, XXX=290W-350W
	STPXXXS-20/WFW	Mono-crystalline, XXX=265W-310W
	STPXXXS-24/VFW	Mono-crystalline, XXX=305W-370W
	STPXXX-20/WFH	Poly-crystalline, half cell, XXX=250W-305W
	STPXXX-24/VFH	Poly-crystalline, half cell XXX=300W-365W
	STPXXXS-20/WFH	Mono-crystalline, half cell, XXX= 270W-330W
	STPXXXS-24/VFH	Mono-crystalline, half cell, XXX=325W-400W
WeCo Italy Srl	WE-xxx/72P	Poly-crystalline xxx=310-370W in step of 20 W
	WE-xxx/60P	Poly-crystalline xxx=230 Wp, 270-280 Wp in step of 5 W
	WE-xxx/54P	Poly-crystalline xxx=255W
Worldwide Energy and Manufacturing USA, CO., Ltd, (Amerisolar)	AS-6M-xxxW	mono-crystalline 325-365, in increment of 5
	AS-6M30-xxxW	mono-crystalline 275-305, in increment of 5
	AS-6M27-xxxW	mono-crystalline 245-275, in increment of 5
	AS-6M18-xxxW	mono-crystalline 135-165, in increment of 5
	AS-5M-xxxW	mono-crystalline 175-210, in increment of 5
	AS-5M18-xxxW	mono-crystalline 90-105, in increment of 5
	AS-6P-xxxW	Poly-crystalline 270-345, in increment of 5
	AS-6P30-xxxW	Poly-crystalline 265-290, in increment of 5
	AS-6P27-xxxW	Poly-crystalline 235-260, in increment of 5
	AS-6P18-xxxW	Poly-crystalline135-165, in increment of 5
Yingli Solar	YLxxxP-29b	multi 240-260kW in steps of 5
	YLxxxP-35b	multi 290-310kW in steps of 5
Yingli Energy (China) Company Limited	YLXXXCG2536F-1	sc-si 310-375 W, in steps of 5
	YLXXXCG25360F-1	sc-si 260-310 W, in steps of 5
	YLXXD-36b	sc-si 340-390 W, in steps of 5
	YLXXD-30b	sc-si 280-325 W, in steps of 5
	YLXXP-29b 1500v	sc-si 275-305 W, in steps of 5
	YLXXP-35b 1500v	sc-si 330-365 W, in steps of 5
	YLXXP-35b	sc-si 310-350 W, in steps of 5
	YLXXP-29b YL270C-30b	sc-si 260-290 W, in steps of 4 sc-si 270.
Zhejiang G&P New Energy Technology Co, Ltd	GPPxxx(72)	Crystalline Silicon , 285-340 in Step of 5
Zhejiang Trunsun Solar Co., Ltd	TSPxxx -72	mc-Si 315-345 W, in Steps of 5
	TSPxxx -60	mc-Si 255-285 W, in Steps of 5
Zhejiang Xiongtai Photovoltaic Technology Co.	XTM6-36-XXX	sc-si 140-160 W, in steps of 5
	XTM6-48-XXX	sc-si 200-220 W, in steps of 5
	XTM6-54-XXX	sc-si 220-250 W, in steps of 5
	XTM6-60-XXX	sc-si 250-265 W, in steps of 5
	XTM6-72-XXX	sc-si 290-310 W, in steps of 5
	XTP6-36-XXX	mc-si 240-260 W, in steps of 5
	XTP6-48-XXX	mc-si 240-260 W, in steps of 5
	XTP6-54-XXX	mc-si 240-260 W, in steps of 5
	XTP6-60-XXX	mc-si 240-260 W, in steps of 5
	XTP6-72-XXX	mc-si 290-305 W, in steps of 5

PV MODULES		
Manufacturer name	Product ID	Description
Suzhou Talesun Solar Technologies Co., Ltd	TP672M-xxx	sc-Si 275-390 W, in steps of 5
	TP672M(H)-xxx	sc-Si 300-390 W, in steps of 5
	TP6H72M-xxx	sc-Si 335-390 W, in steps of 5
	TP6H72M(H)-xxx	sc-Si 335-390 W, in steps of 5
	TP660M-xxx	sc-Si 230-325 W, in steps of 5
	TP660M(H)-xxx	sc-Si 250-325 W, in steps of 5
	TP6H60M-xxx	sc-Si 280-325 W, in steps of 5
	TP6H60M(H)-xxx	sc-Si 280-325 W, in steps of 5
	TP672P-xxx	mc-Si 285-360 W, in steps of 5
	TP672P(H)-xxx	mc-Si 285-360 W, in steps of 5
	TP6H72P-xxx	mc-Si 300-360 W, in steps of 5
	TP6H72P(H)-xxx	mc-Si 300-360 W, in steps of 5
	TP660P-xxx	mc-Si 230-300 W, in steps of 5
	TP660P(H)-xxx	mc-Si 235-300 W, in steps of 5
	TP6H60P-xxx	mc-Si 250-300 W, in steps of 5
'ZNSHINE PV-TECH Co., Ltd	ZXM6-72-xxx/M	Mono-crystalline Silicon, xxx=270-320W, in steps of 5
	ZXM6-60-xxx/M	Mono-crystalline Silicon, xxx=230-270W, in steps of 5
	ZXM6-54-xxx/M	Mono-crystalline Silicon, xxx=200-240W, in steps of 5
	ZXP6-72-xxx/P	Poly-crystalline Silicon, xxx=265-340W, in steps of 5
	ZXP6-60-xxx/P	Poly-crystalline Silicon, xxx=220-280W, in steps of 5
	ZXP6-54-xxx/P	Poly-crystalline Silicon, xxx=200-235W, in steps of 5
	ZXM6-T60-xxx/M	Mono-crystalline Silicon, xxx= 300-315W
	ZXM6-72-xxx/M	Mono-crystalline Silicon, xxx= 340-375W
	ZXM6-60-xxx/M	Mono-crystalline Silicon, xxx= 280-310W
	ZXM6-T72-xxx/M	Mono-crystalline Silicon, xxx=360-380W
	ZXM6-TLD72-xxx/M	Mono-crystalline Silicon, xxx=360-385W
	ZXM6-TLD60-xxx/M	Mono-crystalline Silicon, xxx=300-320W
	ZXM6-LD72-xxx/M	Mono-crystalline Silicon, xxx=340-355W
	ZXM6-LD60-xxx/M	Mono-crystalline Silicon, xxx= 280-310W
	ZXP6-72-xxx/P	Poly-crystalline Silicon, xxx=315-340W
	ZXP6-60-xxx/P	Poly-crystalline Silicon, xxx=260-280W
	ZXP6-T72-xxx/P	Poly-crystalline Silicon, xxx=330-350W
	ZXP6-T60-xxx/P	poly-crystalline Silicon, xxx=275-290W
	ZXP6-TLD72-xxx/P	poly-crystalline Silicon, xxx=320-335W
	ZXP6-TLD60-xxx/P	poly-crystalline Silicon, xxx=270-280W
	ZXP6-LD72-xxx/P	poly-crystalline Silicon, xxx=315-340W
	ZXP6-LD60-xxx/P	Poly-crystalline Silicon, xxx=260-280W
CW Enerji	CWTXXX-72P	Poly Crystalline, xxx=305-335W, in step of 5
	CWTXXX-60P	Poly Crystalline, xxx=260-280W, in step of 5
	CWTXXX-72PM	Mono Crystalline (PERC), xxx=265-385W, in step of 5
	CWTXXX-60PM	Mono Crystalline (PERC), xxx=220-320W, in step of 5

PV INVERTERS			
Manufacturer name	Product ID	Description	Usage Category
ABB	PVI-3.0-TL-OUTD(-S)	3kW	Residential, Commercial and Light Industrial Environment
	PVI-3.6-TL-OUTD(-S)	3.6kW	Residential, Commercial and Light Industrial Environment
	PVI-4.2-TL-OUTD(-S)	4.2kW	Residential, Commercial and Light Industrial Environment
	PVI-5000-TL-OUTD(-S)	5kW	Residential, Commercial and Light Industrial Environment
	PVI-6000-TL-OUTD(-S)	6kW	Residential, Commercial and Light Industrial Environment
	PVI-10.0-TL-OUTD(-S)(-FS)	10 kW	Residential, Commercial and Light Industrial Environment
	PVI-12.5-TL-OUTD(-S)(-FS)	12.5 kW	Residential, Commercial and Light Industrial Environment
	TRIO - 5.8 - TL - OUTD	5.8 kW	Residential, Commercial and Light Industrial Environment
	TRIO - 7.5 - TL - OUTD	7.5 kW	Residential, Commercial and Light Industrial Environment
	TRIO - 8.5 - TL - OUTD	8.5 kW	Residential, Commercial and Light Industrial Environment
	TRIO - 20.0 - TL - OUTD	20 kW	Residential, Commercial and Light Industrial Environment
	TRIO - 27.6 - TL - OUTD	27.6 kW	Residential, Commercial and Light Industrial Environment
	TRIO-50.0-TL-OUTD	50 kW	All - Residential, Commercial and Industrial Environment
	ULTRA -700.0 TL -OUTD	700 kW	Industrial Environment
	ULTRA -1050.0 TL -OUTD	1050 kW	Industrial Environment
	TRIO-TM-50.0-400	50kW	All - Residential, Commercial and Industrial Environment
	TRIO-TM-60.0-480	60kW	All - Residential, Commercial and Industrial Environment
	ULTRA -1400.0 TL -OUTD	1400 kW	Industrial Environment
	PVS-100/120-TL	100kW/120kW	Industrial Environment
	PVS-100-TL	100 kW	All - Residential, Commercial and Industrial Environment
	PVS-120-TL	120 kW	All - Residential, Commercial and Industrial Environment
	UNO-DM-xxx-TL-PLUS	1.2/2.0/3.3/4.0/4.6/5.0 KW	All - Residential, Commercial and Industrial Environment
	PVS800-57B-1645kW-C	1645 kW	Industrial Environment
	PVS800-57B-1732kW-C	1732 kW	Industrial Environment
	UNO-DM-5.0-TL-PLUS-SB-QU	5 KW	All - Residential, Commercial and Industrial Environment
	UNO-DM-5.0-TL-PLUS-B-QU	5 KW	All - Residential, Commercial and Industrial Environment
	UNO-DM-1.2/2.0/3.0/3.3/4.0/4.6-TL-PLUS-SB-Q	1.2/2.0/3.0/3.3/4.0/4.6 KW	All - Residential, Commercial and Industrial Environment
	UNO-DM-1.2/2.0/3.0/3.3/4.0/4.6-TL-PLUS-B-Q	1.2/2.0/3.0/3.3/4.0/4.6	All - Residential, Commercial and Industrial Environment
	PVS980-58-1818kVA-I	1818	Industrial Environment
	PVS980-58-1909kVA-J	1909	Industrial Environment
	PVS980-58-2000-K	2000	Industrial Environment
	PVS980-58-2091kVA-L	2091	Industrial Environment
	PVS-175-TL-S	175kW	Industrial Environment
	PVS-175-TL-S2	175kW	Industrial Environment
	PVS-175-TL-SX	175kW	Industrial Environment
	PVS-175-TL-SX2	175kW	Industrial Environment
	PVS-50-TL	50kW	All - Residential, Commercial and Industrial Environmen
	PVS-50-TL-S	50kW	All - Residential, Commercial and Industrial Environmen
	PVS-50-TL-SX	50kW	All - Residential, Commercial and Industrial Environmen
	PVS-50-TL-SX2	50kW	All - Residential, Commercial and Industrial Environmen
	PVS-60-TL	60kW	All - Residential, Commercial and Industrial Environmen
	PVS-60-TL-S	60kW	All - Residential, Commercial and Industrial Environmen
	PVS-60-TL-SX	60kW	All - Residential, Commercial and Industrial Environmen
	PVS-60-TL-SX+K192	60kW	All - Residential, Commercial and Industrial Environmen

Fronius International GmbH	Primo 3.0 -1	3.0kW	All - Residential, Commercial and Industrial Environment
	Primo 3.5 -1	3.5kW	All - Residential, Commercial and Industrial Environment
	Primo 3.6 -1	3.6kW	All - Residential, Commercial and Industrial Environment
	Primo 4.0 -1	4kW	All - Residential, Commercial and Industrial Environment
	Primo 4.6 -1	4.6kW	All - Residential, Commercial and Industrial Environment
	Primo 5.0-1	5kW	All - Residential, Commercial and Industrial Environment
	Primo 6.0-1	6kW	All - Residential, Commercial and Industrial Environment
	Primo 8.2-1	8.2kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 3.0-3-M	3 kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 3.7-3-M	3.7 kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 4.5-3-M	4.5 kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 5.0-3-M	5 kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 6.0-3-M	6 kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 7.0-3-M	7 kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 8.2-3-M	8.2 kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 10.0-3-M	10kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 12.5-3-M	12.5kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 15.0-3-M	15kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 17.5-3-M	17.5kW	All - Residential, Commercial and Industrial Environment
	Fronius Symo 20.0-3-M	20kW	All - Residential, Commercial and Industrial Environment
Canadian Solar Inc.	Fronius Eco 25.0-3-S	25kW	All - Residential, Commercial and Industrial Environment
	Fronius Eco 27.0-3-S	27kW	All - Residential, Commercial and Industrial Environment
	CSI-20KTL-GI-FL	20kW	All - Residential, Commercial and Industrial Environment
	CSI-25KTL-GI-FL	25kW	All - Residential, Commercial and Industrial Environment
	CSI-30KTL-GI-FL	30kW	All - Residential, Commercial and Industrial Environment
	CSI-40KTL-GI-HFL	40kW	All - Residential, Commercial and Industrial Environment
	CSI-40KTL-GI-FL	40kW	Industrial Environment
	CSI-50KTL-GI	50kW	Industrial Environment
Gree Electric Appliances, Inc. of Zhuhai	CSI-50KTL-GI-HFL	50kW	Industrial Environment
	CSI-60KTL-GI-H	60kW	Industrial Environment
	GMV-Y224WM/C-X	20kW	All - Residential, Commercial and Industrial Environment
Jiangsu GoodWe Power Supply Technology Co., Ltd.	GMV-Y280WM/C-X	20kW	All - Residential, Commercial and Industrial Environment
	GMV-Y335WM/C-X	20kW	All - Residential, Commercial and Industrial Environment
	GW50K-MT	50 kW	Industrial Environment
GW60K-MT		60 kW	Industrial Environment
PV INVERTERS			
Manufacturer name	Product ID	Description	Usage Category
Huawei	SUN2000-8KTL	8 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-12KTL	12 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-17KTL	17 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-20KTL	20 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-36KTL	36 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-42KTL	42 kW	All - Residential, Commercial and Industrial Environment
	SUN 2000 – 55KTL	55 KW	All - Residential, Commercial and Industrial Environment
	SUN2000-50KTL-M0	50 kW	All - Residential, Commercial and Industrial Environment
	SUN 2000 -60KTL- M0	60 kW	All - Residential, Commercial and Industrial Environment
	SUN2000(10)KTL-M0	10KW	All - Residential, Commercial and Industrial Environment
	SUN2000(12)KTL-M0	12KW	All - Residential, Commercial and Industrial Environment
	SUN2000(15)KTL-M0	15KW	All - Residential, Commercial and Industrial Environment
	SUN2000(17)KTL-M0	17KW	All - Residential, Commercial and Industrial Environment
	SUN2000(20)KTL-M0	20KW	All - Residential, Commercial and Industrial Environment
	SUN2000-3KTL_M0	3 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-4KTL_M0	4 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-5KTL_M0	5 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-6KTL_M0	6 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-8KTL_M0	8 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-10KTL_M0	10 kW	All - Residential, Commercial and Industrial Environment
	SUN2000-65KTL-M0	65 kW	Industrial Environment
	SUN2000-185 KTL-H1	185 KW	Industrial Environment
	SUN2000-105 KTL-H1	105 KW	Industrial Environment

Ingeteam	INGECON SUN 2.5 TL M	2.5 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 2.7 TL M	2.7 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 TL M	3 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3.3 TL M	3.3 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3.68 TL M	3.68 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 4.6 TL M	4.68 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 5 TL M	5 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 5.5 TL M	5.5 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 6 TL M	6 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 10 TL M	10 kW	
	INGECON SUN 12.5 TL M	12.5 kW	
	INGECON SUN 15 TL M	15 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 20 TL M	20 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 10 TL	10 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 12.5 TL	12.5 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 15 TL	15 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 20 TL	20 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 10 TL	10 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 12.5 TL	12.5 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 15 TL	15 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 20 TL	20 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 28 TL	28 kW	
	INGECON SUN 3 PLAY 33 TL	33 kW	
	INGECON SUN 3 PLAY 10 TLM	10 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 12.5 TLM	12.5 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 15 TLM	15 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 20 TLM	20 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 24 TLM	24 kW	
	INGECON SUN 3 PLAY 28 TLM	28 kW	
	INGECON SUN 3 PLAY 33 TLM	33 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 3 PLAY 40 TLM	40 kW	All - Residential, Commercial and Industrial Environment
	INGECON SUN 275TL M220	304.8 kW	
	INGECON SUN 275TL X220	304.8 kW	
	INGECON SUN 350TL M275	381.1 kW	
	INGECON SUN 350TL X275	381.1 kW	
	INGECON SUN 380TL M300	415.7 kW	
	INGECON SUN 380TL X300	415.7 kW	
	INGECON SUN 400TL M320	443.4 kW	

PV INVERTERS			
Manufacturer name	Product ID	Description	Usage Category
Ingeteam	INGECON SUN 400TL X320	443.4 kW	
	INGECON SUN 440TL M345	478 kW	
	INGECON SUN 440TL X345	478 kW	
	INGECON SUN 460TL M360	498.8 kW	
	INGECON SUN 460TL X360	498.8 kW	
	INGECON SUN 500TL M400	554.3 kW	
	INGECON SUN 500TL X400	554.3kW	
	INGECON SUN 535TL M420	582 kW	
	INGECON SUN 535TL X420	582 kW	
	INGECON SUN 410TL M220	457.3 kW	
	INGECON SUN 410TL X220	457.3 kW	
	INGECON SUN 520TL M275	571.6 kW	
	INGECON SUN 520TL X275	571.6 kW	
	INGECON SUN 570TL M300	623.5 kW	
	INGECON SUN 570TL X300	623.5 kW	
	INGECON SUN 605TL M320	665.1 kW	
	INGECON SUN 605TL X320	665.1 kW	
	INGECON SUN 660TL M345	717.1 kW	
	INGECON SUN 660TL X345	717.1 kW	
	INGECON SUN 690TL M360	748.2 kW	
	INGECON SUN 690TL X360	748.2 kW	
	INGECON SUN 750TL M400	831.4 kW	
	INGECON SUN 750TL X400	831.4 kW	
	INGECON SUN 805TL M420	873 kW	
	INGECON SUN 805TL X420	873 kW	
	INGECON SUN 550TL M220	609.7 kW	
	INGECON SUN 550TL X220	609.7 kW	
	INGECON SUN 695TL M275	762.1 kW	
	INGECON SUN 695TL X275	762.1 kW	
	INGECON SUN 760TL M300	831.4 kW	
	INGECON SUN 760TL X300	831.4 kW	
	INGECON SUN 800TL M320	886.8 kW	
	INGECON SUN 800TL X320	886.8 kW	
	INGECON SUN 880TL M345	956.1 kW	
	INGECON SUN 880TL X345	956.1 kW	
	INGECON SUN 920TL M360	997.7 kW	
	INGECON SUN 920TL X360	997.7 kW	
	INGECON SUN 1000TL M400	1108.5 kW	
	INGECON SUN 1000TL X400	1108.5 kW	
	INGECON SUN 1070TL M420	1163.9 kW	
	INGECON SUN 1070TL X420	1163.9 kW	
	INGECON SUN 830TL B300	830 kW	Industrial Environment
	INGECON SUN 860TL B310	860 kW	Industrial Environment
	INGECON SUN 890TL B320	890 kW	Industrial Environment
	INGECON SUN 915TL B330	915 kW	Industrial Environment
	INGECON SUN 940TL B340	940 kW	Industrial Environment
	INGECON SUN 970TL B350	970 kw	Industrial Environment
	INGECON SUN 1000TL B360	1000 kW	Industrial Environment
	INGECON SUN 1025TL B370	1025 kW	Industrial Environment
	INGECON SUN 1050TL B380	1050 kW	Industrial Environment
	INGECON SUN 1070TL B385	1070 kW	Industrial Environment
	INGECON SUN 1080TL B390	1080 kW	Industrial Environment
	INGECON SUN 1110TL B400	1110 kW	Industrial Environment

PV INVERTERS			
Manufacturer name	Product ID	Description	Usage Category
Ingeteam	INGECON SUN 1140TL B410	1140 kW	Industrial Environment
	INGECON SUN1165TL B420	1165 kW	Industrial Environment
	INGECON SUN 1170TL B450	1170W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1195TL B460	1195W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1220TL B470	1220W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1247TL B480	1247W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1273TL B490	1273W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1300TL B500	1300W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1325TL B510	1325W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1350TL B520	1350W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1376TL B530	1376W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1400TL B540	1400W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1430TL B550	1430W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1455TL B560	1455W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1480TL B570	1480W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1500TL B578	1500W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1532TL B590	1532W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1560TL B600	1560W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1600TL B615	1600W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 1640TL B630	1640W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 830TL B300	830W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 860TL B310	860W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 890TL B320	890W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 915TL B330	915W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 940TL B340	940W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 970TL B350	970W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1000TL B360	1000W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1025TL B370	1025W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1050TL B380	1050W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1070TL B385	1070W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1080TL B390	1080W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1110TL B400	1110W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1140TL B410	1140W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1165TL B420	1165W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1170TL B450	1170W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1195TL B460	1195W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1220TL B470	1220W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1247TL B480	1247W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1273TL B490	1273W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1300TL B500	1300W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1325TL B510	1325W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1350TL B520	1350W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1376TL B530	1376W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1400TL B540	1400W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1430TL B550	1430W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1455TL B560	1455W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1480TL B570	1480W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1500TL B578	1500W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1532TL B590	1532W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1560TL B600	1560W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1600TL B615	1600W	All - Residential, Commercial and Industrial Environment
	INGECON SUN STORAGE 1640TL B630	1640W	All - Residential, Commercial and Industrial Environment
	INGECON SUN 720TL B260	720W	Industrial Environment

PV INVERTERS			
Manufacturer name	Product ID	Description	Usage Category
Ingeteam	INGECON SUN 748TL B270	748W	Industrial Environment
	INGECON SUN 1190TL B430	1190W	Industrial Environment
	INGECON SUN 1220TL B440	1220W	Industrial Environment
	INGECON SUN 1250TL B450	1250W	Industrial Environment
	INGECON SUN 1275TL B460	1275W	Industrial Environment
	INGECON SUN 1580TL B630	1580W	Industrial Environment
	INGECON SUN 1665TL B640	1665W	Industrial Environment
	INGECON SUN 1690TL B650	1690W	Industrial Environment
	INGECON SUN 1715TL B660	1715W	Industrial Environment
	INGECON SUN 1740TL B670	1740W	Industrial Environment
	INGECON SUN 1767TL B680	1767W	Industrial Environment
	INGECON SUN 1800TL B690	1800W	Industrial Environment
	INGECON SUN 1820TL B700	1820W	Industrial Environment
	INGECON SUN STORAGE 720TL B260	720W	Industrial Environment
	INGECON SUN STORAGE 748TL B270	748W	Industrial Environment
	INGECON SUN STORAGE 1190TL B430	1190W	Industrial Environment
	INGECON SUN STORAGE 1220TL B440	1220W	Industrial Environment
	INGECON SUN STORAGE 1250TL B450	1250W	Industrial Environment
	INGECON SUN STORAGE 1275TL B460	1275W	Industrial Environment
	INGECON SUN STORAGE 1303TL B470	1303W	Industrial Environment
	INGECON SUN STORAGE 1665TL B640	1665W	Industrial Environment
	INGECON SUN STORAGE 1690TL B650	1690W	Industrial Environment
	INGECON SUN STORAGE 1715TL B660	1715W	Industrial Environment
	INGECON SUN STORAGE 1740TL B670	1740W	Industrial Environment
	INGECON SUN STORAGE 1767TL B680	1767W	Industrial Environment
	INGECON SUN STORAGE 1800TL B690	1800W	Industrial Environment
	INGECON SUN STORAGE 1820TL B700	1820W	Industrial Environment
	INGECON SUN 3Play 100 TL	100W	All - Residential, Commercial and Industrial Environment
KACO New Energy GmbH	Blueplanet 50.0 TL3 M1 WM OD IIGM	50 kW	All-Residential, Commercial and industrial Environment
	Blueplanet 50.0 TL3 M1 WM OD IIGX	50 kW	All-Residential, Commercial and industrial Environment
	Blueplanet 50.0 TL3 M1 WM OD IIGB	50 kW	All-Residential, Commercial and industrial Environment
	Blueplanet 50.0 TL3 M1 WM OD IIGS	50 kW	All-Residential, Commercial and industrial Environment
	Blueplanet 50.0 TL3 M1 WM OD FRGS	50 kW	All-Residential, Commercial and industrial Environment
	bluplanet 20.0 TL3 M2 WM OD IIG0	20 kW	All-Residential, Commercial and industrial Environment
	bluplanet 15.0 TL3 M2 WM OD IIG0	15 kW	All-Residential, Commercial and industrial Environment
Lti REEnergy GmbH	PVM3.57.300.EM	300 kW	Industrial Environment
	PVMS.40K	40 kW	All - Residential, Commercial and Industrial Environment
	PVMS.46K	46 kW	Industrial Environment
	PVMS.20K	30 kW	All - Residential, Commercial and Industrial Environment
	PVMS.23K	34.5 kW	All - Residential, Commercial and Industrial Environment
	PVMS.20K	20 Kw	All - Residential, Commercial and Industrial Environment
	PVMS.23K	23 Kw	All - Residential, Commercial and Industrial Environment

Shneider Electric	Conext CL20000E	20 kW	All - Residential, Commercial and Industrial Environment
	Conext CL60E	Conext CL60E – 60 kW	Residential, commercial and light Industrial Environment
	Conext CL36	36 kW	Residential, commercial and light Industrial Environment
	Conext CL25000E	25 kW	All - Residential, Commercial and Industrial Environment
SMA	STP 15000TL-30	15 kW	All - Residential, Commercial and Industrial Environment
	STP 20000TL-30	20 kW	All - Residential, Commercial and Industrial Environment
	STP 25000TL-30	25 kW	All - Residential, Commercial and Industrial Environment
	STP50-40	50 kW	All - Residential, Commercial and Industrial Environment
	MLX / STP 60	60 kW	All - Residential, Commercial and Industrial Environment
	SB3.0-1AV-40	3 kW	All - Residential, Commercial and Industrial Environment
	SB3.6-1AV-40	3.68 kW	All - Residential, Commercial and Industrial Environment
	SB4.0-1AV-40	4 kW	All - Residential, Commercial and Industrial Environment
	SB5.0-1AV-40	5 kW	All - Residential, Commercial and Industrial Environment
Sungrow Power Supply Co., Ltd	SG36KTL-M	36 kW	All - Resential, Commercial and Industrial Environment
	SG110CX	110kVA@45C - 100 kVA@50C	All-Residential, Commercial and industrial Environment
	SG60KTL	60 kW	All - Residential, Commercial and Industrial Environment
Shanghai Trannergy Power Electronics Co.,Ltd	SGN1300 TL	1000W	All -Residential, commercial and light environment
	SGN1800 TL	1500W	All -Residential, commercial and light environment
	SGN2300 TL	2000W	All -Residential, commercial and light environment
	SGN2700 TL	2500W	All -Residential, commercial and light environment
	SGN3000 TL	3000W	All -Residential, commercial and light environment
	SGN3400 TL	3000W	All -Residential, commercial and light environment

PV INVERTERS			
Manufacturer name	Product ID	Description	Usage Category
Shanghai Trannergy Power Electronics Co.,Ltd	SGN4000 TL	4000W	All -Residential, commercial and light environment
	SGN4600 TL	4600W	All -Residential, commercial and light environment
	SGN5400 TL	5000W	All -Residential, commercial and light environment
	SGN6600TL	6000W	All -Residential, commercial and light environment
SIEL S.p.a	SOLEIL DSPX 80 TRH 400	80 kW	All -Residential, commercial and light environment
REFU Elektronik GmbH	REFUsol 08K	8.25KW	All -Residential, commercial and light environment
	REFUsol 10K	10KW	All -Residential, commercial and light environment
	REFUsol 13K	13KW	All -Residential, commercial and light environment
	REFUsol 17K	17KW	All -Residential, commercial and light environment
	REFUsol 20K	20KW	All -Residential, commercial and light environment
	REFUsol 40k (840P040)	40KW	Industrial Enveronment
	REFUsol 46k (840P046)	46KW	Industrial Enveronment
	REFUsol 40k (842P040)	40KW	All-Residential, Commercial and industrial Environment
Shenzhen Growatt New Energy Technology Co., Ltd	Growatt 30000TL3-S	30000	All -Residential, commercial and light environment
	Growatt 33000TL3-S	33000	All -Residential, commercial and light environment
	Growatt 40000TL3-NS	40000	All -Residential, commercial and light environment
Petra Solar Inc.	SWM 2.1	0.24	All -Residential, commercial and light environment
WeCo Srl Italia	SDX-3-xxxTL	5 kW, 6kW, 8kW, 10kW, 12kW, 15kW, 17kW, 20kW, 33kW	Industrial Environment
	SDX-3-xxxTL	5 kW, 6kW, 8kW, 10kW, 12kW, 15kW, 17kW, 20kW, 33kW	Industrial Environment

INTERFACE PROTECTIONS		
Manufacturer name	Product ID	Description
ABB	UFDM34M (to be installed with communication unit "RTU560")	
ZIEHL*	SPI1021	
Lovato Electric S.p.A. *	PMVF60	

* Approved under temporary derogation, and for power plant < 200Kw.



Product Service

CERTIFICATE

No. Z2 078488 0089 Rev. 01

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.
No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Mono-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061707018-02

Valid until: 2023-10-14

Date, 2018-10-29

(Zhulin Zhang)

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Product Service

CERTIFICATE

No. Z2 078488 0089 Rev. 01

Model(s):

TP672M-xxx, xxx= 275 to 390 in step of 5
 TP660M-xxx, xxx= 230 to 325 in step of 5
 TP654M-xxx, xxx= 205 to 280 in step of 5
 TP648M-xxx, xxx= 185 to 250 in step of 5
 TP6H72M-xxx, xxx= 335 to 390 in step of 5
 TP6H60M-xxx, xxx= 280 to 325 in step of 5
 TP672M(H)-xxx, xxx= 300 to 390 in step of 5
 TP660M(H)-xxx, xxx= 250 to 325 in step of 5
 TP654M(H)-xxx, xxx= 225 to 280 in step of 5
 TP648M(H)-xxx, xxx= 200 to 250 in step of 5
 TP6H72M(H)-xxx, xxx= 335 to 390 in step of 5
 TP6H60M(H)-xxx, xxx= 280 to 325 in step of 5

xxx is standing for rated output power at STC

Parameters:

Model (1000VDC system voltage normal modules)	Rated Output Power at STC
TP672M-xxx, xxx= 275 to 390 in step of 5	275W,280W,285W,290W,295W,300W,305W, 310W,315W,320W,325W,330W,335W,340W, 345W,350W,355W,360W,365W,370W,375W, 380W,385W,390W
TP660M-xxx, xxx= 230 to 325 in step of 5	230W,235W,240W,245W,250W,255W,260W, 265W,270W,275W,280W,285W,290W,295W, 300W,305W,310W,315W,320W,325W
TP654M-xxx, xxx= 205 to 280 in step of 5	205W,210W,215W,220W,225W,230W,235W, 240W,245W,250W,255W,260W,265W,270W, 275W,280W
TP648M-xxx, xxx= 185 to 250 in step of 5	185W,190W,195W,200W,205W,210W,215W, 220W,225W,230W,235W,240W,245W,250W
TP6H72M-xxx, xxx= 335 to 390 in step of 5	335W,340W,345W,350W,355W,360W,365W, 370W,375W,380W,385W,390W
TP6H60M-xxx, xxx= 280 to 325 in step of 5	280W,285W,290W,295W,300W,305W,310W, 315W,320W,325W
Model (1500VDC system voltage normal modules)	Rated Output Power at STC
TP672M(H)-xxx, xxx= 300 to 390 in step of 5	300W,305W,310W,315W,320W,325W, 330W 335W,340W,345W,350W,355W,360W,365W, 370W,375W,380W,385W,390W
TP660M(H)-xxx, xxx= 250 to 325 in step of 5	250W,255W,260W,265W,270W,275W,280W, 285W,290W,295W,300W,305W,310W,315W, 320W,325W
TP654M(H)-xxx, xxx= 225 to 280 in step of 5	225W, 230W, 235W, 240W, 245W,250W, 255W,260W,265W,270W,275W, 280W
TP648M(H)-xxx, xxx= 200 to 250 in step of 5	200W,205W,210W,215W,220W,225W,230W, 235W,240W,245W, 250W
TP6H72M(H)-xxx, xxx= 335 to 390 in step of 5	335W,340W,345W,350W,355W,360W,365W, 370W,375W,380W,385W,390W
TP6H60M(H)-xxx, xxx= 280 to 325 in step of 5	280W,285W,290W,295W,300W,305W,310W, 315W,320W,325W



Product Service

CERTIFICATE

No. Z2 078488 0089 Rev. 01

Parameters:

Construction:	Framed, with Junction box, Cable and Connectors.
Application Class :	Class A
Maximum System Voltage:	1500 V DC or 1000 V DC
Safety Class:	Class C
Dust and Sand Test Method:	LC2
Dust/sand type:	95% SiO ₂
Dust/sand concentration:	5g/m ³
Testing Air Velocity:	20m/s
Test Duration:	4h/each side

Tested according to:

IEC 61215(ed.2)
IEC 61730-1(ed.1);am1;am2
IEC 61730-2(ed.1);am1
PPP 59022A:2013

Production Facility(ies): 001453, 078488, 096715, 003671,
087702, 090968, 101042



Product Service

CERTIFICATE

No. Z2 078488 0090 Rev. 01

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.

No. 1 Talesun Road
Changkun Industrial Park
Shajiang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:

**Product:**

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Poly-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061707019-02

Valid until: 2023-10-14

Date, 2018-10-29

(Zhulin Zhang)

g) 



Product Service

CERTIFICATE

No. Z2 078488 0090 Rev. 01

Model(s):

TP672P-xxx, xxx= 285 to 360 in step of 5
 TP660P-xxx, xxx= 240 to 300 in step of 5
 TP654P-xxx, xxx= 215 to 255 in step of 5
 TP648P-xxx, xxx= 190 to 230 in step of 5
 TP636P-xxx, xxx= 130 to 150 in step of 5
 TP6H72P-xxx, xxx= 300 to 360 in step of 5
 TP6H60P-xxx, xxx= 250 to 300 in step of 5
 TP672P(H)-xxx, xxx= 285 to 360 in step of 5
 TP660P(H)-xxx, xxx= 235 to 300 in step of 5
 TP654P(H)-xxx, xxx= 210 to 255 in step of 5
 TP648P(H)-xxx, xxx= 190 to 230 in step of 5
 TP6H72P(H)-xxx, xxx= 300 to 360 in step of 5
 TP6H60P(H)-xxx, xxx= 250 to 300 in step of 5
 xxx is standing for rated output power at STC

Parameters:

Model (1000VDC system voltage normal modules)	Rated Output Power at STC
TP672P-xxx, xxx= 285 to 360 in step of 5	285W, 290W, 295W, 300W, 305W, 310W, 315W, 320W, 325W, 330W, 335W, 340W, 345W, 350W, 355W, 360W
TP660P-xxx, xxx= 240 to 300 in step of 5	240W, 245W, 250W, 255W, 260W, 265W, 270W, 275W, 280W, 285W, 290W, 295W, 300W
TP654P-xxx, xxx= 215 to 255 in step of 5	215W, 220W, 225W, 230W, 235W, 240W, 245W, 250W, 255W
TP648P-xxx, xxx= 190 to 230 in step of 5	190W, 195W, 200W, 205W, 210W, 215W, 220W, 225W, 230W
TP636P-xxx, xxx= 130 to 150 in step of 5	130W, 135W, 140W, 145W, 150W
TP6H72P-xxx, xxx= 300 to 360 in step of 5	300W, 305W, 310W, 315W, 320W, 325W, 330W, 335W, 340W, 345W, 350W, 355W, 360W
TP6H60P-xxx, xxx= 250 to 300 in step of 5	250W, 255W, 260W, 265W, 270W, 275W, 280W, 285W, 290W, 295W, 300W
Model (1500VDC system voltage normal modules)	Rated Output Power at STC
TP672P(H)-xxx, xxx= 285 to 360 in step of 5	285W, 290W, 295W, 300W, 305W, 310W, 315W, 320W, 325W, 330W, 335W, 340W, 345W, 350W, 355W, 360W
TP660P(H)-xxx, xxx= 235 to 300 in step of 5	235W, 240W, 245W, 250W, 255W, 260W, 265W, 270W, 275W, 280W, 285W, 290W, 295W, 300W
TP654P(H)-xxx, xxx= 210 to 255 in step of 5	210W, 215W, 220W, 225W, 230W, 235W, 240W, 245W, 250W, 255W
TP648P(H)-xxx, xxx= 190 to 230 in step of 5	190W, 195W, 200W, 205W, 210W, 215W, 220W, 225W, 230W
TP6H72P(H)-xxx, xxx= 300 to 360 in step of 5	300W, 305W, 310W, 315W, 320W, 325W, 330W, 335W, 340W, 345W, 350W, 355W, 360W
TP6H60P(H)-xxx, xxx= 250 to 300 in step of 5	250W, 255W, 260W, 265W, 270W, 275W, 280W, 285W, 290W, 295W, 300W



Product Service

CERTIFICATE

No. Z2 078488 0090 Rev. 01

Parameters:

Construction:	Framed, with Junction box, Cable and Connectors.
Application Class :	Class A
Maximum System Voltage:	1500 V DC or 1000 V DC
Safety Class:	Class C
Dust and Sand Test Method:	LC2
Dust/sand type:	95% SiO ₂
Dust/sand concentration:	5g/m ³
Testing Air Velocity:	20m/s
Test Duration:	4h/each side

Tested according to:

IEC 61215(ed.2)
IEC 61730-1(ed.1);am1;am2
IEC 61730-2(ed.1);am1
PPP 59022A:2013

Production Facility(ies):

001453, 003671, 078488, 087702,
090968, 096715, 101042



Test Report number: 9713211067/1

Inspection certificate number 9713211067 has been canceled, it took her place.

1. Order Information:

Customer's Name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Customer's address: No. 151, Hengtong Road, Shanghai 200070, P.R.China

Date of order: 08.05.2017

The sample was taken by a representative of the customer

2. Test of:

Photovoltaic module

Model : TP660M-XXX

Manufacturer : Suzhou Talesun Solar Technologies Co., Ltd.

Country of manufacture : CHINA

Module type : Mono-crystalline

Num. of cells in module : 60

Overall dimensions : 1640mm X 990 mm X 35/40mm, 1650mm X 992 mm X 35 mm

3. Nature of Testing:

Compliance of the model with the requirements of the International Standards:

IEC 61730 - Photovoltaic (PV) module safety qualification

Part 1: clauses 3,4,5,6,7,8,9,10,11,12

Part 2: clauses 3,6,9,10,11

SI 61215 - Crystalline silicon terrestrial photovoltaic (PV) modules :

clause 10.17 (Hail test) Design qualification and type approval.

4. Conclusion:

The module complies with the requirements of the clauses to which they were tested.

Notes: This example is representative for sample modules: TP660M-XXX
(XXX = 215-315)

This document alone is not
used to release goods from
customs.

This report refers only to the
sample tested and does not refer to
other samples of the same product.

This document contains 7
pages, and may be used
only in full.

Eng. Ido Cohen

Senior Engineer

סיידו כהן
מהנדס בודק
המעבדה למכניקה והידרוליקה
מכון התקנים הישראלי

Mr. Yehuda Shemesh

Head of Energy Systems Section

ישראל
המעבדה למכניקה והידרוליקה
מכון התקנים הישראלי

Test completion Date: 13.07.2017

**Test Report number: 9713211067/1**

Inspection certificate number 9713211067 has been canceled, it took her place.

Tests Results:**Standard IEC 617301 Part 1**

No.	Subject	Results and details of nonconformance	Verdict
3	Application classes		P
4	Construction requirements		P
5	Polymeric material		P
6	Internal wiring and current – carrying parts		P
7	Connections		P
8	Bonding and grounding		P
9	Creepage and clearance distances		P
10	Field wiring compartments with covers		P
11	Marking		P
12	Requirements for supplied documents		P

Test completion Date: 13.07.2017



Test Report number: 9713211067/1

Inspection certificate number 9713211067 has been canceled, it took her place.

Standard IEC 617301 Part 2

No.	Subject and details of nonconformance		Results	Verdict
6	Sampling			P
9	Pass criteria			P
10				P
	Test procedures	+ Tested in practice	MST 01	P
			MST 11	P
			MST 12	P
		Double insulation	MST 13	P
			MST 14	P
			MST 15	P
		Tested in practice >100 MΩ, 6 kV DC	MST 16	P
			MST 17	P
			MST 21	P
			MST 23	P
			MST 26	P
			MST 32	P
11				P
	Component tests		MST 15	P
			MST 33	P
			MST 44	P

Standard IEC 61215

4.1	Hail test	This paragraph is tested in accordance with the method defined in UL Standard 1703 .	P
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Test completion Date: 13.07.2017



Test Report number: 9713211067/1

Inspection certificate number 9713211067 has been canceled, it took her place.

Appendix 1

Photo Documentation

TALESUN

PHOTOVOLTAIC MODULE

Type: TP660M-285

Maximum Power (P _{max})	285W
Power Tolerance	+3%
Open Circuit Voltage (V _{oc})	39.1V
Short Circuit Current (I _{sc})	9.41A
Operating Voltage (V _{mpp})	32.1V
Operating Current (I _{mp})	8.88A
Maximum Series Fuse	15A
Maximum System Voltage	1000VDC
Nominal Operating Cell Temperature (NOCT)	45±2 °C
Module Weight	18.5kg
Module Dimensions	1640X990X35mm
Application Class	Class A
STC 1000 W/m ² AM1.5, 25 °C	

WARNING

ONLY qualified personnel should install or perform maintenance work on these modules.
BE AWARE of dangerous high voltage when connecting modules.
DO NOT damage or scratch the front surface of the module.

CE

Shanghai Talesun Solar Technologies Co., Ltd.

1001 Talesun Road, Shanghai, China

86-400 885 1098

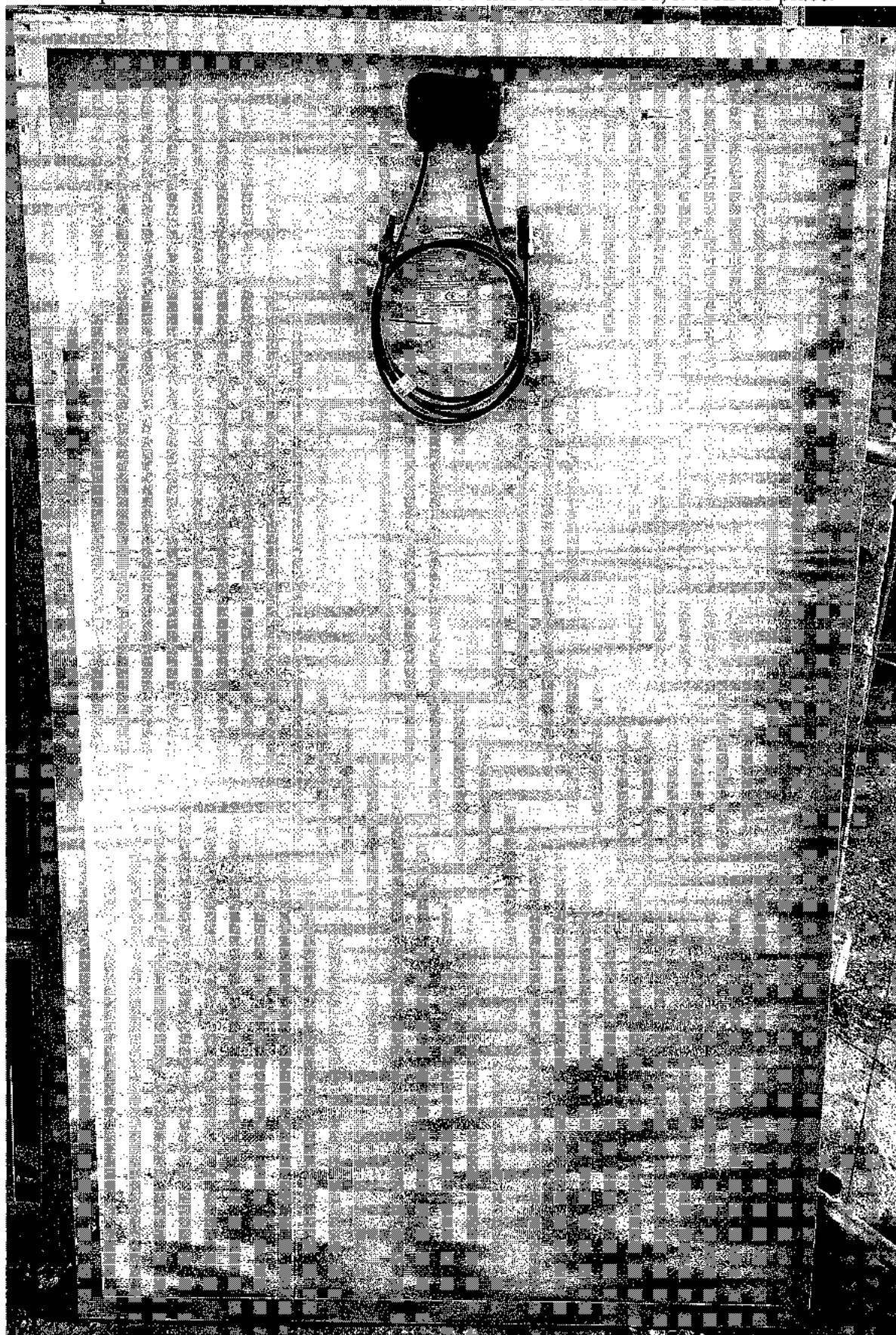
www.talesun.com

Test completion Date: 13.07.2017



Test Report number: 9713211067/1

Inspection certificate number 9713211067 has been canceled, it took her place.



Test completion Date: 13.07.2017

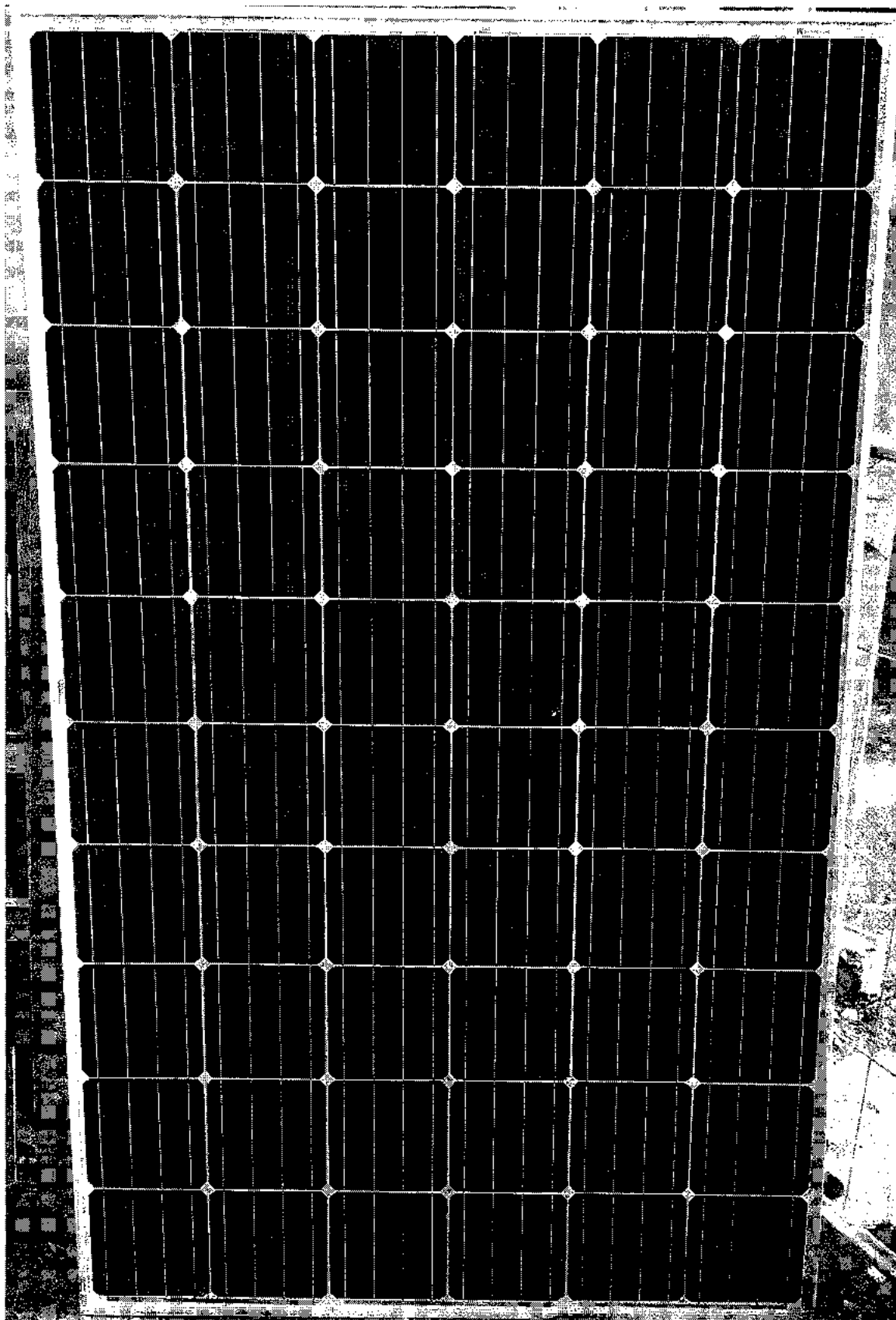


THE STANDARDS INSTITUTION OF ISRAEL

Mechanical & Hydraulics Lab.

Test Report number: 9713211067/1

Inspection certificate number 9713211067 has been canceled, it took her place.



Test completion Date: 13.07.2017

42 Chaim Levanon St. Tel-Aviv 69977 Israel www.sii.org.il
Tel: 972-3-6465250 Fax: 972-3-6427654 Hydraulics Tel: 972-2-6465150/176 Fax: 972-3-6465007

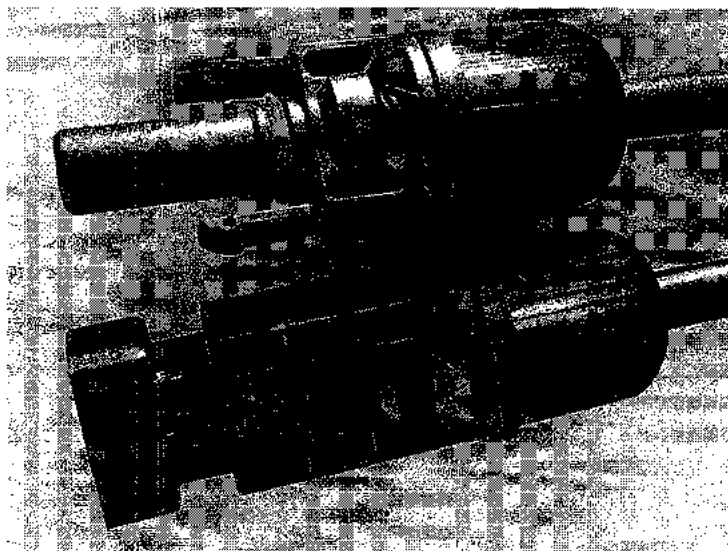
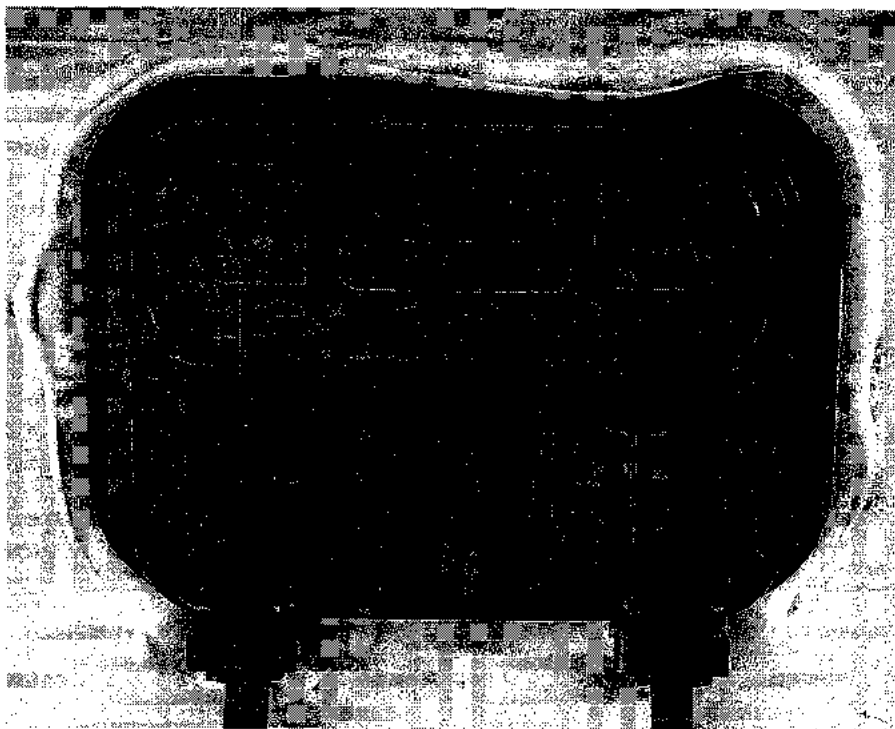


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Mechanical & Hydraulics Lab.

Test Report number: 9713211067/1

Inspection certificate number 9713211067 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Test Report number: 9713211069/1

Inspection certificate number 9713211069 has been canceled, it took her place.

1. Order Information:

Customer's Name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Customer's address: No. 151, Hengtong Road, Shanghai 200070, P.R.China

Date of order: 08.05.2017

The sample was taken by a representative of the customer

2. Test of:

Photovoltaic module

Model : TP660P-XXX

Manufacturer : Suzhou Talesun Solar Technologies Co., Ltd.

Country of manufacture : CHINA

Module type : Poly-crystalline

Num. of cells in module : 60

Overall dimensions : 1640mm X 990mm X 35/40mm, 1650mm X 992mm X 35mm

3. Nature of Testing:

Compliance of the model with the requirements of the International Standards:

IEC 61730 - Photovoltaic (PV) module safety qualification

Part 1: clauses 3,4,5,6,7,8,9,10,11,12

Part 2: clauses 3,6,9,10,11

SI 61215 - Crystalline silicon terrestrial photovoltaic (PV) modules :

clause 10.17 (Hail test) Design qualification and type approval.

4. Conclusion:

The module complies with the requirements of the clauses to which they were tested.

Notes: This example is representative for sample modules: TP660P-XXX

(XXX = 240-285)

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only in full.

Eng. Ido Cohen

Senior Engineer

עידו כהן
מהנדס בודק סוג
המעבדה למכניקה והידרוליקה
מכון התקנים בישראל

Mr. Yehuda Shemesh

Head of Energy Systems Section

יהודה שמעון
ראש סעיף מערכות אנרגיה
מכון התקנים בישראל

Test completion Date: 13.07.2017

**Test Report number: 9713211069/1**

Inspection certificate number 9713211069 has been canceled, it took her place.

Tests Results:**Standard IEC 617301 Part 1**

No.	Subject	Results and details of nonconformance	Verdict
3	Application classes		P
4	Construction requirements		P
5	Polymeric material		P
6	Internal wiring and current – carrying parts		P
7	Connections		P
8	Bonding and grounding		P
9	Creepage and clearance distances		P
10	Field wiring compartments with covers		P
11	Marking		P
12	Requirements for supplied documents		P

Test completion Date: 13.07.2017



Test Report number: 9713211069/1

Inspection certificate number 9713211069 has been canceled, it took her place.

Standard IEC 617301 Part 2

No.	Subject and details of nonconformance		Results	Verdict
6	Sampling			P
9	Pass criteria			P
10				P
	Test procedures	+ Tested in practice	MST 01	P
			MST 11	P
			MST 12	P
		Double insulation	MST 13	P
			MST 14	P
			MST 15	P
		Tested in practice >100 MΩ, 6 kV DC	MST 16	P
			MST 17	P
			MST 21	P
			MST 23	P
			MST 26	P
			MST 32	P
11				P
	Component tests		MST 15	P
			MST 33	P
			MST 44	P

Standard IEC 61215

4.1	Hail test	This paragraph is tested in accordance with the method defined in UL Standard 1703 .	P
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Test completion Date: 13.07.2017

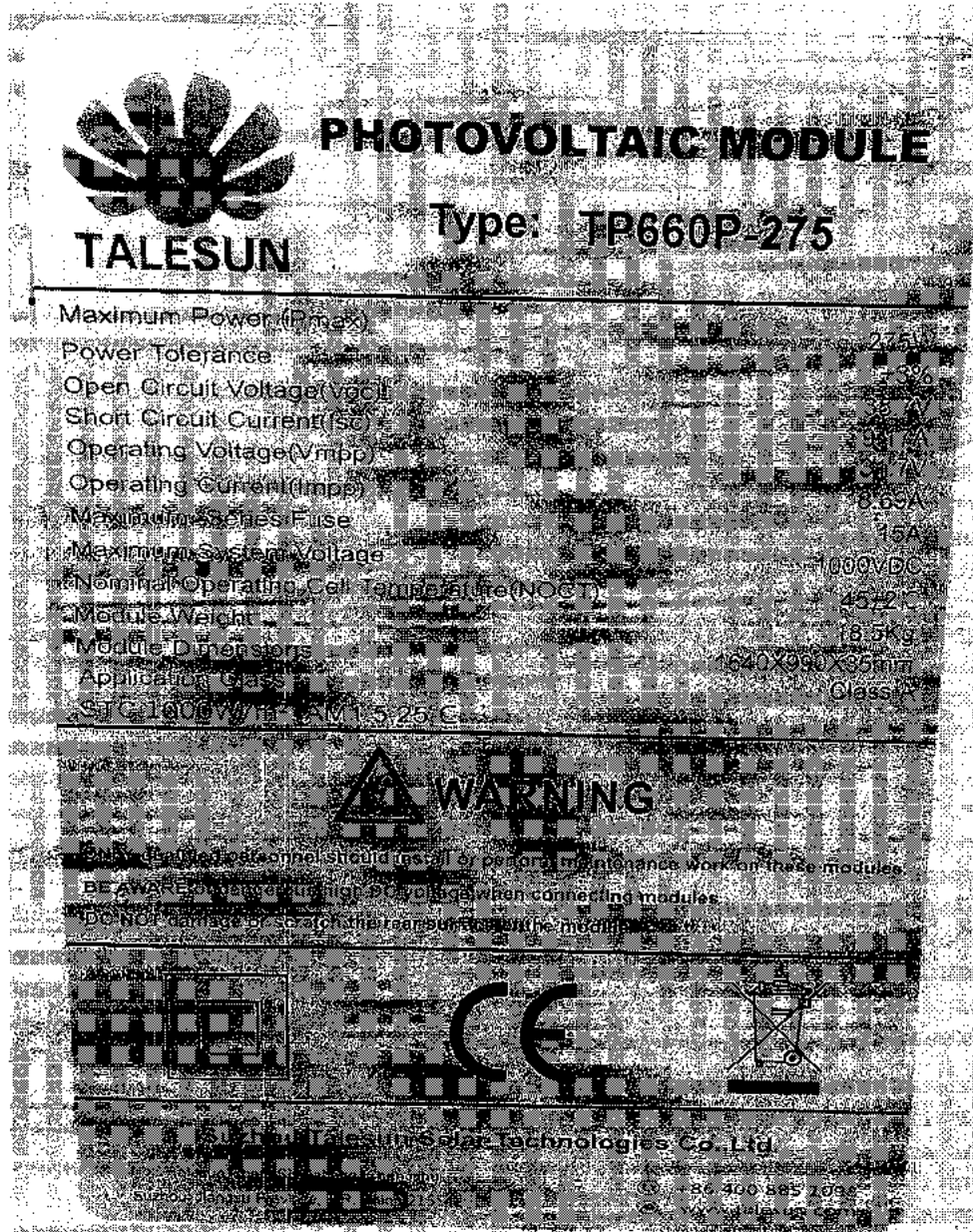


Test Report number: 9713211069/1

Inspection certificate number 9713211069 has been canceled, it took her place.

Appendix 1

Photo Documentation



Test completion Date: 13.07.2017

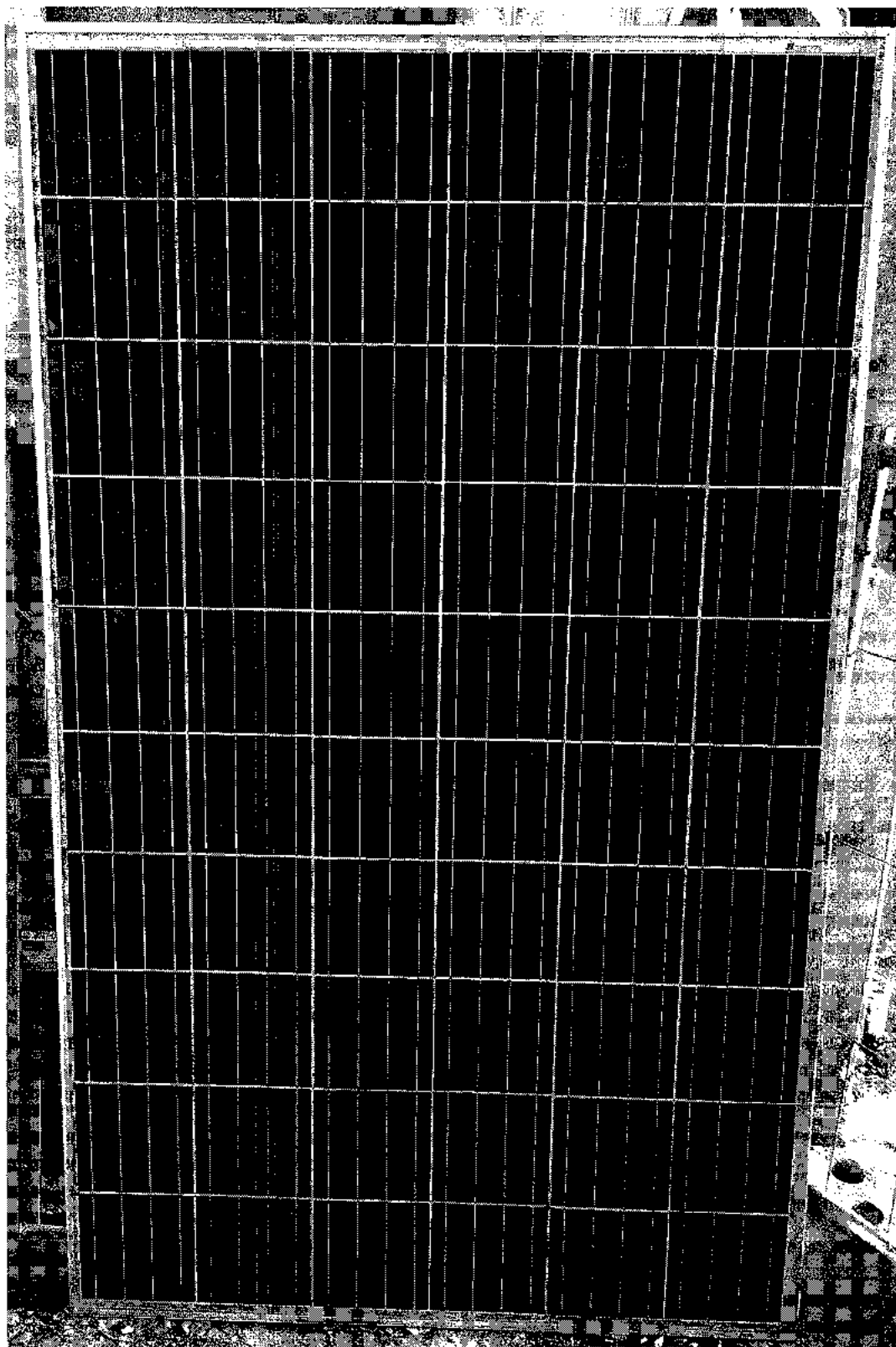


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Test Report number: 9713211069/1

Inspection certificate number 9713211069 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Tel: 972-3-6465250 Fax: 972-3-6427654 Hydraulics Tel: 972-2-6465150/176 Fax: 972-3-6465007

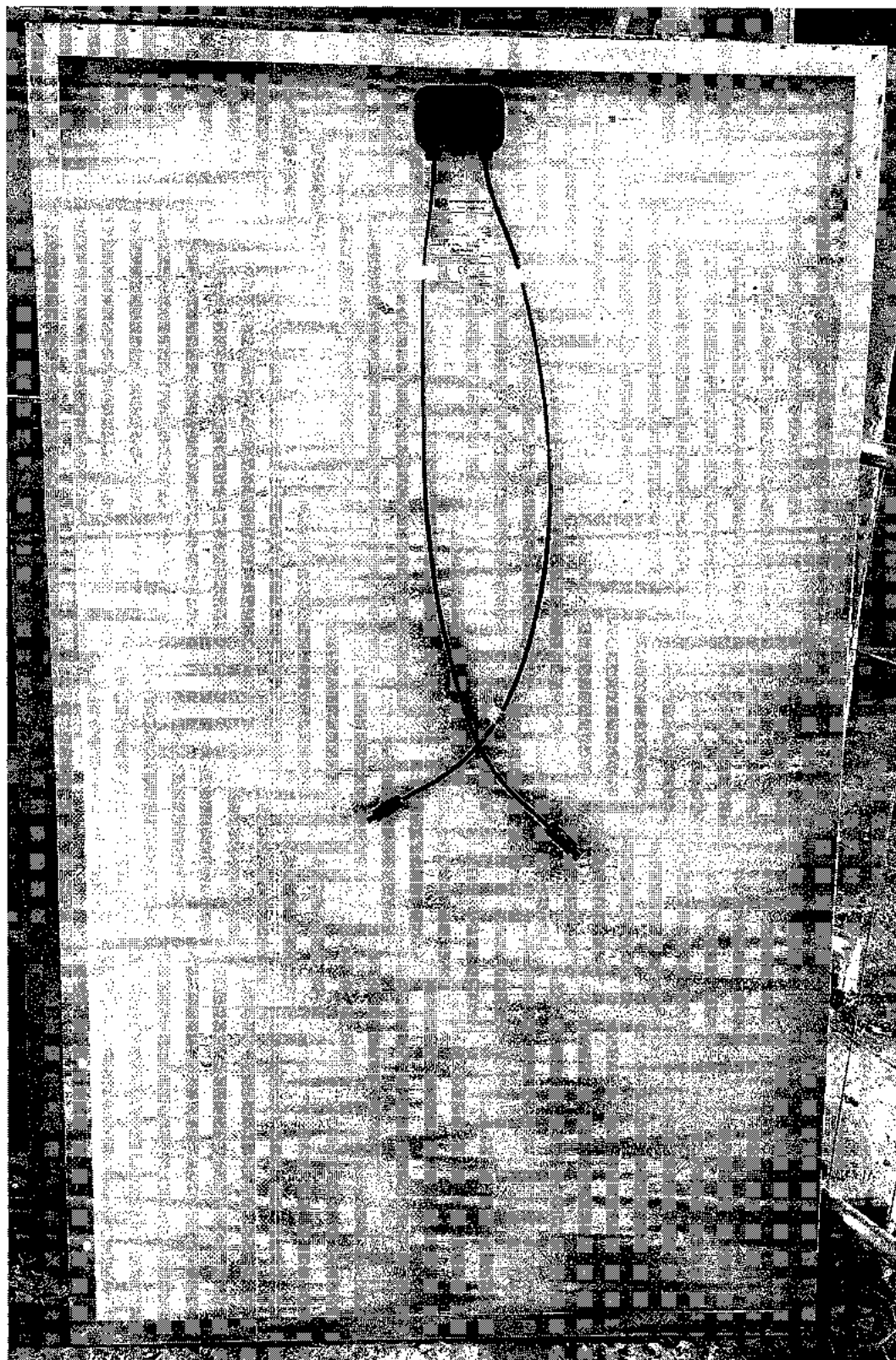


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Test Report number: 9713211069/1

Inspection certificate number 9713211069 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Tel: 972-3-6465250 Fax: 972-3-6427654 Hydraulics Tel: 972-2-6465150/176 Fax: 972-3-6465007

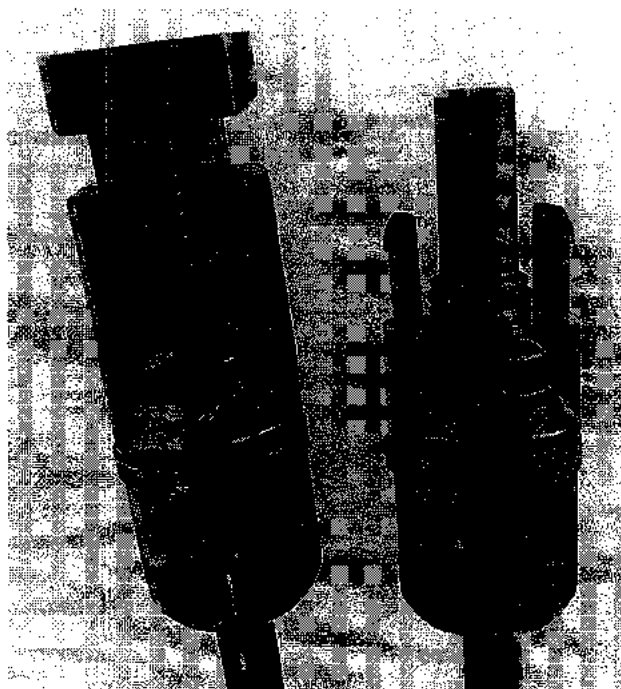
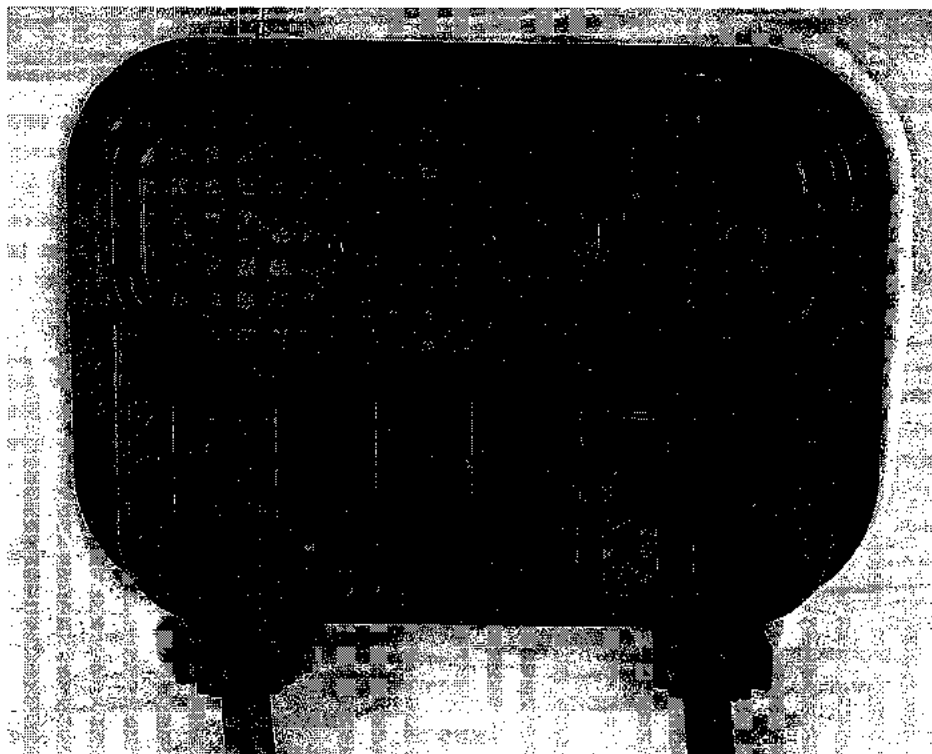


THE STANDARDS INSTITUTION OF ISRAEL

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Test Report number: 9713211069/1

Inspection certificate number 9713211069 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Tel: 972-3-6465250 Fax: 972-3-6427654 Hydraulics Tel: 972-2-6465150/176 Fax: 972-3-6465007



Test Report number: 9713211065/1

Inspection certificate number 9713211065 has been canceled, it took her place.

1. Order Information:

Customer's Name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Customer's address: No. 151, Hengtong Road, Shanghai 200070, P.R.China

Date of order: 18.05.2017

The sample was taken by a representative of the customer

2. Test of:

Photovoltaic module

Model : TP672M-XXX

Manufacturer : Suzhou Talesun Solar Technologies Co., Ltd.

Country of manufacture : CHINA

Module type : Mono-crystalline

Num. of cells in module : 72

Overall dimensions : 1960 X 992 X 40mm, 1960 X 990 X 40/50mm

3. Nature of Testing:

Compliance of the model with the requirements of the International Standards:

IEC 61730 - Photovoltaic (PV) module safety qualification

Part 1: clauses 3,4,5,6,7,8,9,10,11,12

Part 2: clauses 3,6,9,10,11

SI 61215 - Crystalline silicon terrestrial photovoltaic (PV) modules :

clause 10.17 (Hail test) Design qualification and type approval.

4. Conclusion:

The module complies with the requirements of the clauses to which they were tested.

Notes: This example is representative for sample modules: TP672M-XXX
(XXX = 300-375)

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only in full.

Eng. Ido Cohen

Senior Engineer

עידו כהן
מהנדס בודק
המעבדה למכניקה והידרוליקה
מלגותחקנים הישראלי

Mr. Yehuda Shemesh

Head of Energy Systems Section

יחידת מערכות אנרגיה
ראש מדור מערכות אנרגיה
המעבדה למכניקה והידרוליקה
הישראלי

Test completion Date: 13.07.2017

**Test Report number: 9713211065/1**

Inspection certificate number 9713211065 has been canceled, it took her place.

Tests Results:**Standard IEC 617301 Part 1**

No.	Subject	Results and details of nonconformance	Verdict
3	Application classes		P
4	Construction requirements		P
5	Polymeric material		P
6	Internal wiring and current – carrying parts		P
7	Connections		P
8	Bonding and grounding		P
9	Creepage and clearance distances		P
10	Field wiring compartments with covers		P
11	Marking		P
12	Requirements for supplied documents		P

Test completion Date: 13.07.2017



Test Report number: 9713211065/1

Inspection certificate number 9713211065 has been canceled, it took her place.

Standard IEC 617301 Part 2

No.	Subject and details of nonconformance		Results	Verdict
6	Sampling			P
9	Pass criteria			P
10				P
	Test procedures	+ Tested in practice	MST 01	P
			MST 11	P
			MST 12	P
		Double insulation	MST 13	P
			MST 14	P
			MST 15	P
		Tested in practice >100 MΩ, 6 kV DC	MST 16	P
			MST 17	P
			MST 21	P
			MST 23	P
			MST 26	P
			MST 32	P
11				P
	Component tests		MST 15	P
			MST 33	P
			MST 44	P

Standard IEC 61215

4.1	Hail test	This paragraph is tested in accordance with the method defined in UL Standard 1703 .	P
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Test completion Date: 13.07.2017

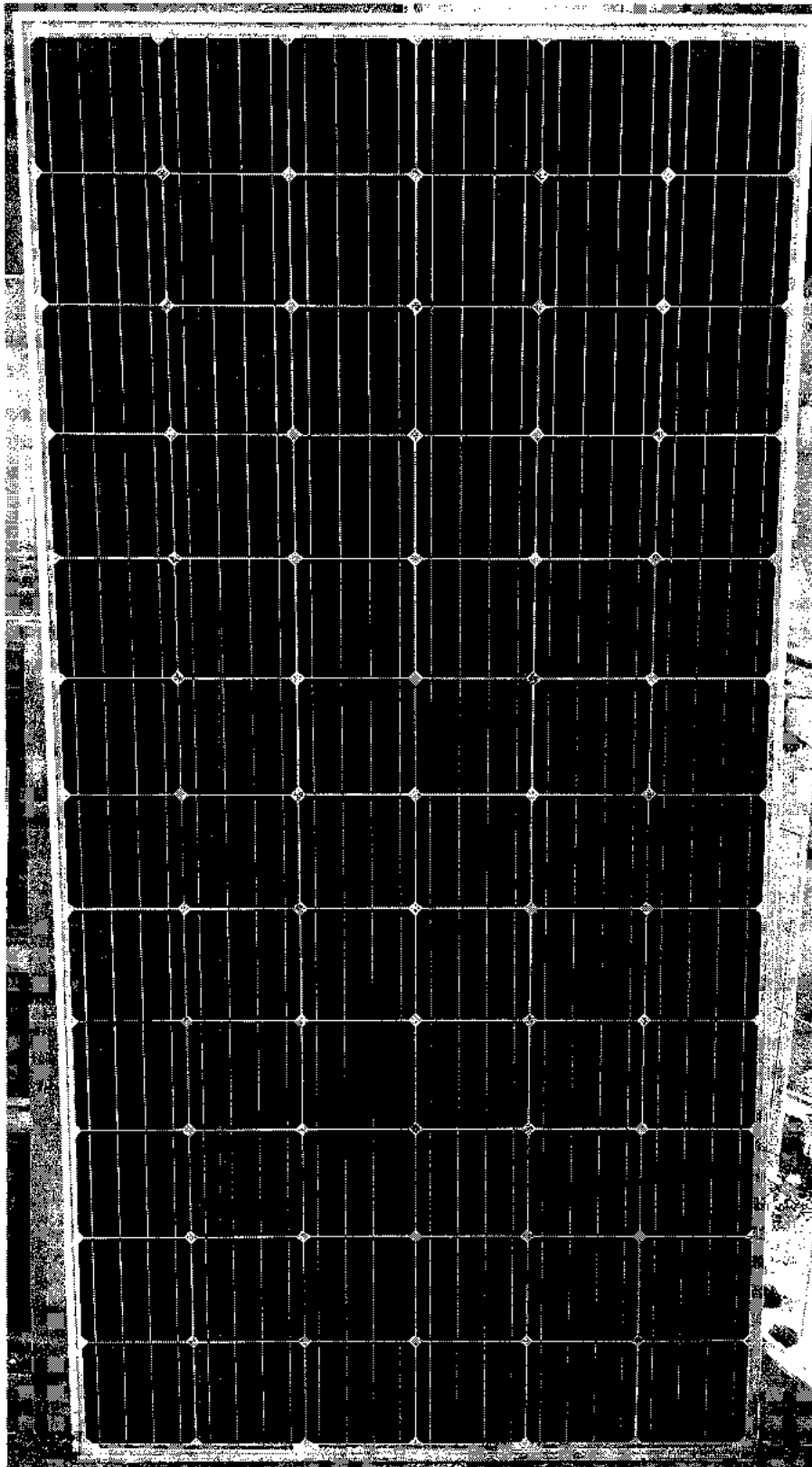


Test Report number: 9713211065/1

Inspection certificate number 9713211065 has been canceled, it took her place.

Appendix 1

Photo Documentation



Test completion Date: 13.07.2017

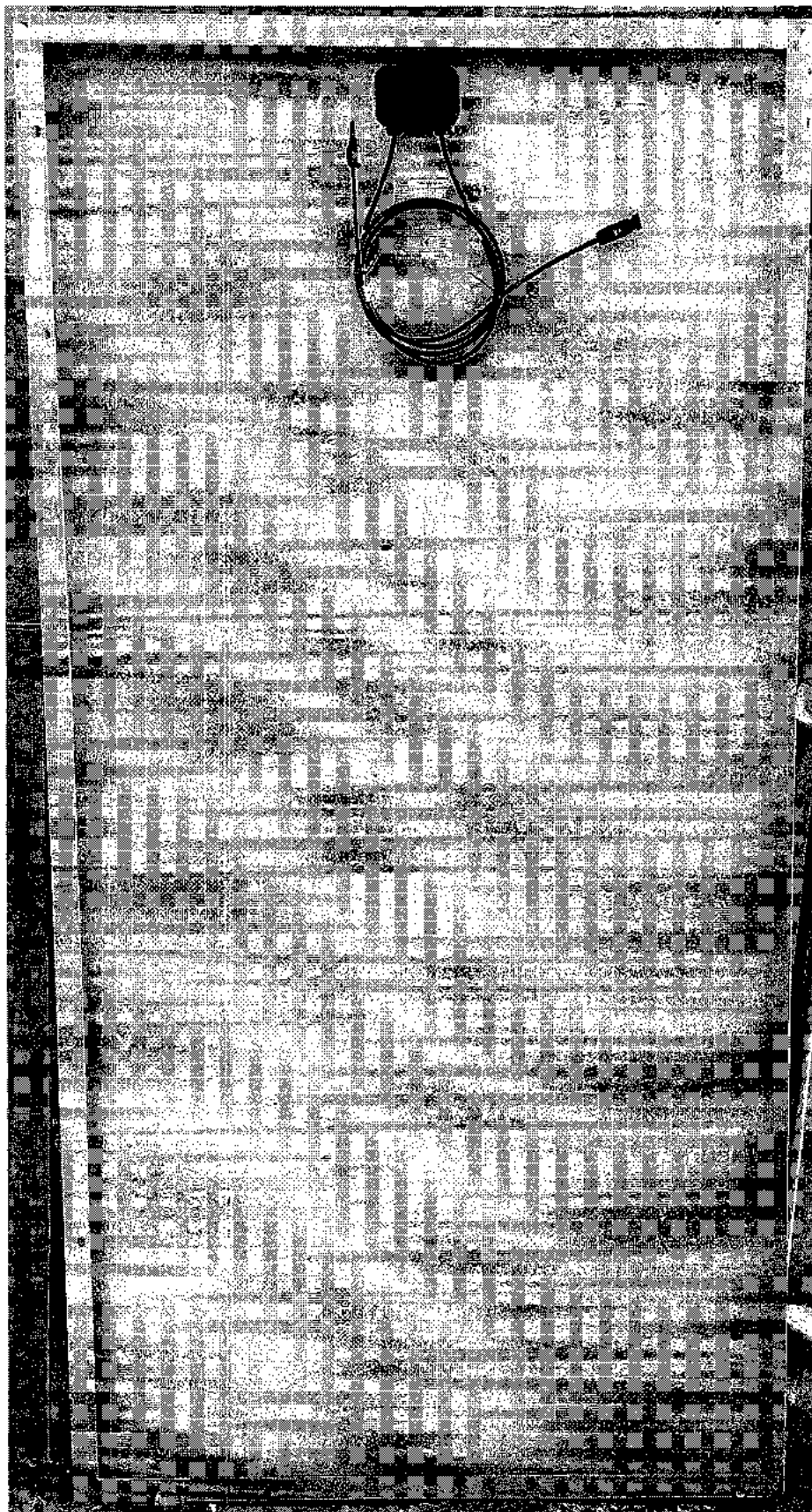


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Test Report number: 9713211065/1

Inspection certificate number 9713211065 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Test Report number: 9713211065/1

Inspection certificate number 9713211065 has been canceled, it took her place.



PHOTOVOLTAIC MODULE

Type: TP672M-335

Maximum Power (Pmax)	335W
Power Tolerance	+3%
Open Circuit Voltage (Voc)	46.7V
Short Circuit Current (Isc)	9.30A
Operating Voltage (Vmpp)	38.2V
Operating Current (Impp)	8.77A
Maximum Series Fuse	15A
Maximum System Voltage	1000VDC
Nominal Operating Cell Temperature (NOCT)	45±2 °C
Module Weight	22Kg
Module Dimensions	1960X990X40mm
Application Class	Class A
STC: 1000W/m ² , AM1.5, 25°C	



WARNING

ONLY qualified personnel should install or perform maintenance work on these modules.
BE AWARE of dangerous high DC voltage when connecting modules.
DO NOT damage or scratch the rear surface of the module.



Suzhou Talesun Solar Technologies Co., Ltd.

No. 1, Jiesha Road, Changshu, Jiangsu

Province, China 215124

Phone: 86-512-5111000

www.talesun.com

Test completion Date: 13.07.2017

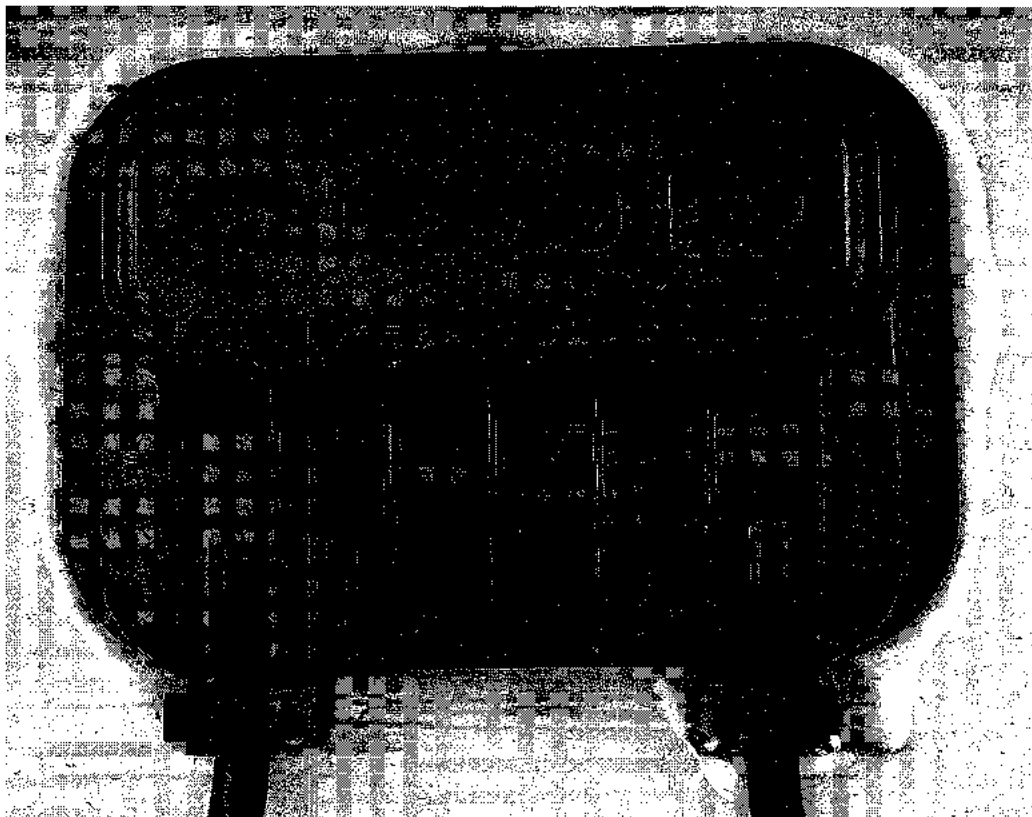


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Test Report number: 9713211065/1

Inspection certificate number 9713211065 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Test Report number: 9713211068/1

Inspection certificate number 9713211068 has been canceled, it took her place.

1. Order Information:

Customer's Name: **TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch**

Customer's address: **No. 151, Hengtong Road, Shanghai 200070, P.R.China**

Date of order: **18.04.2017**

The sample was taken by a representative of the customer

2. Test of:

Photovoltaic module

Model : **TP672P-XXX**

Manufacturer : **Suzhou Talesun Solar Technologies Co., Ltd.**

Country of manufacture : **CHINA**

Module type : **Poly-crystalline**

Num. of cells in module : **72**

Overall dimensions : **1960X992X40mm, 1960X990X40/50mm**

3. Nature of Testing:

Compliance of the model with the requirements of the International Standards:

IEC 61730 - Photovoltaic (PV) module safety qualification

Part 1: clauses 3,4,5,6,7,8,9,10,11,12

Part 2: clauses 3,6,9,10,11

SI 61215 - Crystalline silicon terrestrial photovoltaic (PV) modules :

clause 10.17 (Hail test) Design qualification and type approval.

4. Conclusion:

The module complies with the requirements of the clauses to which they were tested.

Notes: This example is representative for sample modules: **TP672P-XXX**

(XXX = 285-345)

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This report refers only to the sample tested and does not refer to other samples of the same product.

This document contains 7 pages, and may be used only in full.

Eng. Ido Cohen

Senior Engineer

עידן כהן
מהנדס בודק
המעבדה למכניקה והידרוליקה
מכון התקנים הישראלי

Mr. Yehuda Shemesh

Head of Energy Systems Section

ראש מדור מערכות אנרגיה (מח)
המעבדה למכניקה והידרוליקה
מכון התקנים הישראלי

Test completion Date: 13.07.2017

**Test Report number: 9713211068/1**

Inspection certificate number 9713211068 has been canceled, it took her place.

Tests Results:**Standard IEC 617301 Part 1**

No.	Subject	Results and details of nonconformance	Verdict
3	Application classes		P
4	Construction requirements		P
5	Polymeric material		P
6	Internal wiring and current – carrying parts		P
7	Connections		P
8	Bonding and grounding		P
9	Creepage and clearance distances		P
10	Field wiring compartments with covers		P
11	Marking		P
12	Requirements for supplied documents		P

Test completion Date: 13.07.2017



Test Report number: 9713211068/1

Inspection certificate number 9713211068 has been canceled, it took her place.

Standard IEC 617301 Part 2

No.	Subject and details of nonconformance		Results	Verdict
6	Sampling			P
9	Pass criteria			P
10				P
	Test procedures	+ Tested in practice	MST 01	P
			MST 11	P
			MST 12	P
		Double insulation	MST 13	P
			MST 14	P
			MST 15	P
		Tested in practice >100 MΩ, 6 kV DC	MST 16	P
			MST 17	P
			MST 21	P
			MST 23	P
			MST 26	P
			MST 32	P
11				P
	Component tests		MST 15	P
			MST 33	P
			MST 44	P

Standard IEC 61215

4.1	Hail test	This paragraph is tested in accordance with the method defined in UL Standard 1703 .	P
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Test completion Date: 13.07.2017



Test Report number: 9713211068/1

Inspection certificate number 9713211068 has been canceled, it took her place.

Appendix 1

Photo Documentation

PHOTOVOLTAIC MODULE

TALESUN

Type: TP672P-320

Maximum Power (P _{max})	320W
Power Tolerance	+3%
Open Circuit Voltage(V _{oc})	45.5V
Short Circuit Current(I _{sc})	9.15A
Operating Voltage(V _{mpp})	37.1V
Operating Current(I _{mpp})	8.63A
Maximum Series Fuse	15A
Maximum System Voltage	1000VDC
Nominal Operating Cell Temperature(NOC _T)	52°C
Module Weight	21.5kg
Module Dimensions	1658x989x45mm
Application Class	Class A
STC 1000W/m ² , AM1.5, 25°C	

WARNING

ONLY qualified personnel should install or perform maintenance work on these modules.

BE AWARE of dangerous high DC voltage when connecting modules.

DO NOT damage or scratch the front surface of the module.

CE

Suzhou Talesun Solar Technologies Co., Ltd.

No. 10, Jintan Road, Jintan, Jiangsu, China

Suzhou Jintan, China

Test completion Date: 13.07.2017

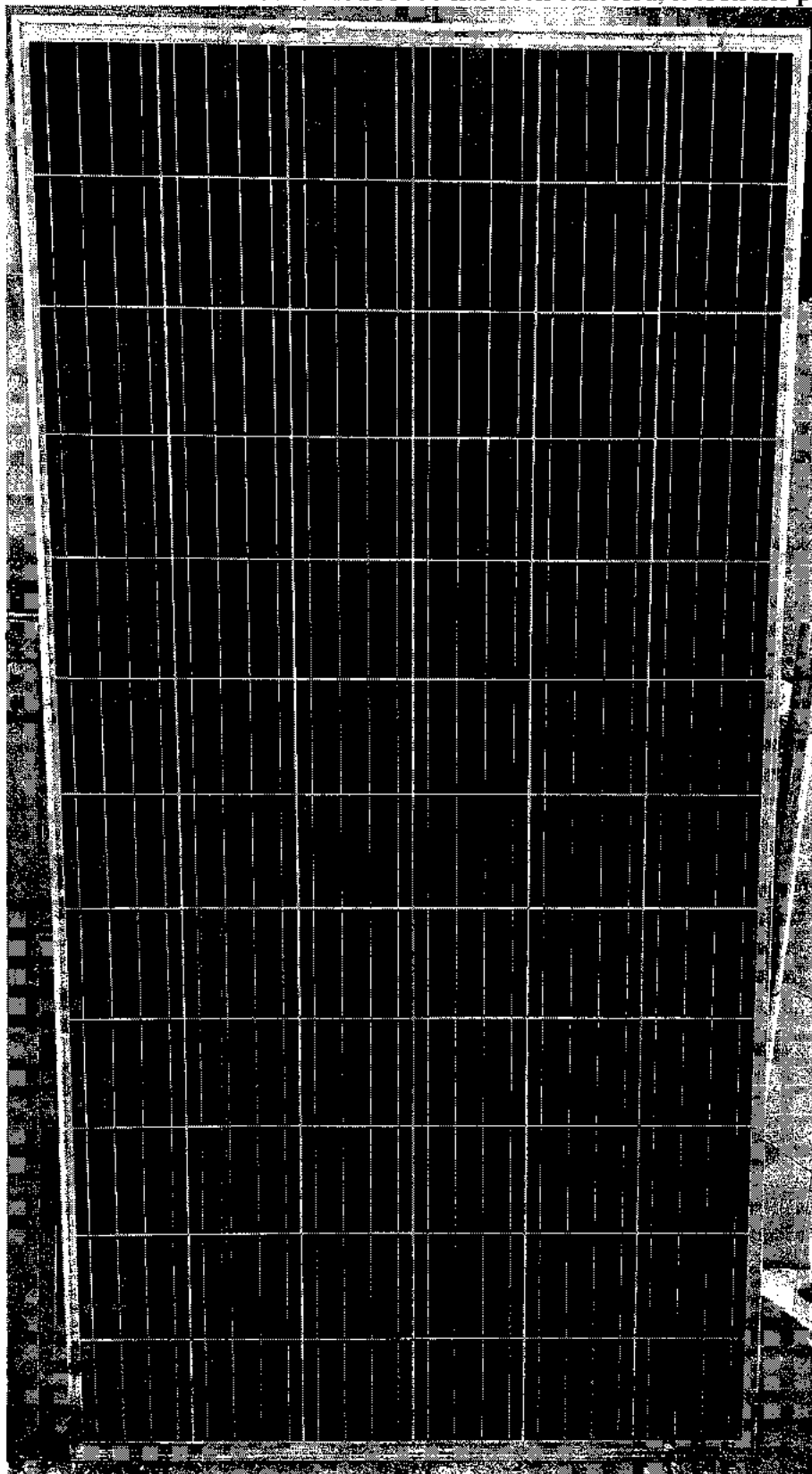


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Test Report number: 9713211068/1

Inspection certificate number 9713211068 has been canceled, it took her place.



Test completion Date: 13.07.2017

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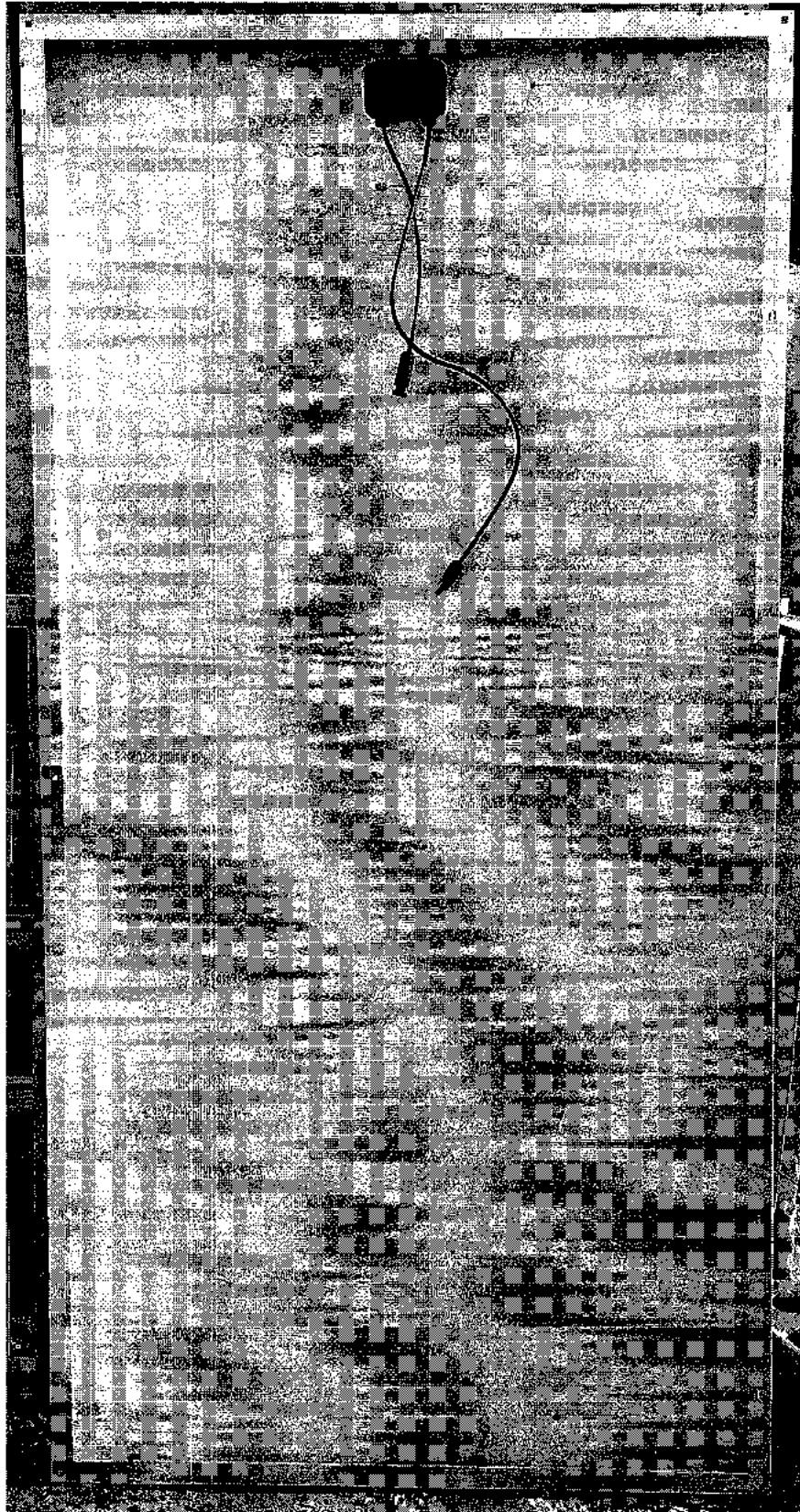


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Test Report number: 9713211068/1

Inspection certificate number 9713211068 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Tel: 972-3-6465250 Fax: 972-3-6427654 Hydraulics Tel: 972-2-6465150/176 Fax: 972-3-6465007

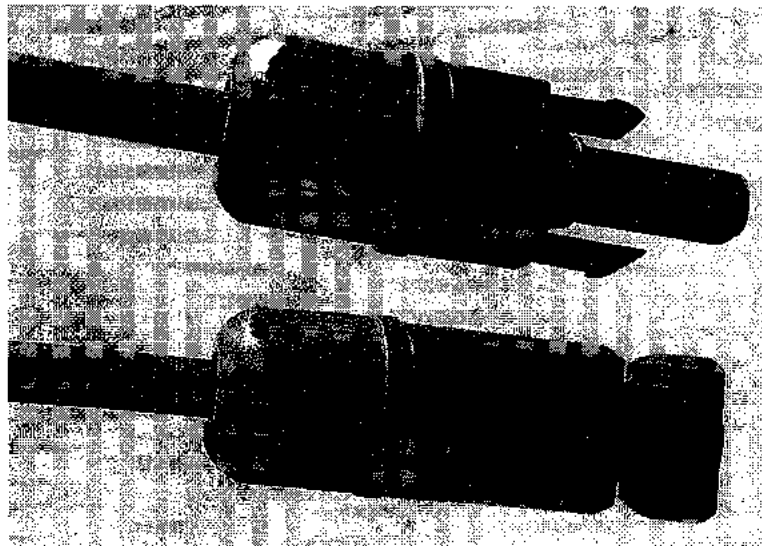
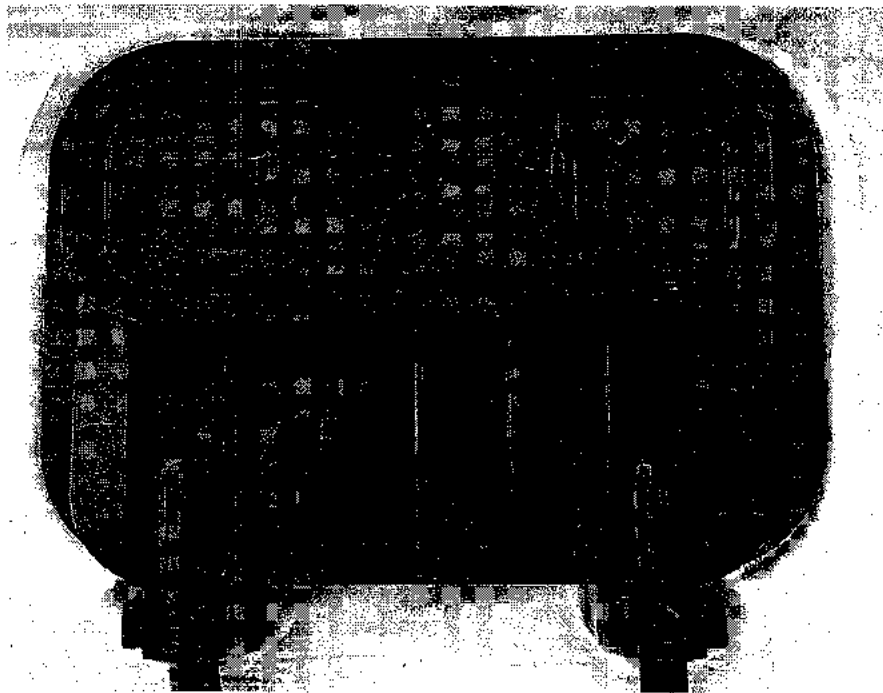


THE STANDARDS INSTITUTION OF ISRAEL

Mechanical & Hydraulics Lab.

Test Report number: 9713211068/1

Inspection certificate number 9713211068 has been canceled, it took her place.



Test completion Date: 13.07.2017

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Tel: 972-3-6465250 Fax: 972-3-6427654 Hydraulics Tel: 972-2-6465150/176 Fax: 972-3-6465007



Test Report number: 9213204536/2

Inspection certificate number 9213204536,9213204536/1 has been canceled, it took her place.

1. Order Information:

Customer's Name: **TALESUN SOLAR CO.LTD.**

Customer's address: **No. 26 Nanxin Road, Shajiabang Town, Changshu, Suzhou, Jiangsu, Province**
P.R.China.

Date of order: **12.03.2012**

The sample was taken by a representative of the customer

2. Test of:

Photovoltaic module

Model : **TP572M-185**

Manufacturer : **TALESUN SOLAR**

Country of manufacture : **CHINA**

Module type : **Mono-crystalline**

Num. of cells in module : **72**

Overall dimensions : **1580 mm X 808 mm X 40 mm**

3. Nature of Testing:

Compliance of the model with the requirements of the International Standards:

IEC 61730 - Photovoltaic (PV) module safety qualification

Part 1: clauses 3,4,5,6,7,8,9,10,11,12

Part 2: clauses 3,6,9,10,11

SI 61215 - Crystalline silicon terrestrial photovoltaic (PV) modules :

clause 10.17 (Hail test) Design qualification and type approval.

4. Conclusion:

The module complies with the requirements of the clauses to which they were tested.

Notes: This example is representative for sample modules: **TP572M-XXX**
(XXX = 170,175,180,185,190,195,200,205), 72 cells.

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only in full.

Yehuda Shemesh

Head, Energy Systems Department

Ido Cohen
Testing Engineer

Test completion Date: 20.03.2012

**Test Report number: 9213204536/2**

Inspection certificate number 9213204536,9213204536/1 has been canceled, it took her place.

5. Tests Results:**Standard IEC 617301 Part 1**

No.	Subject	Results and details of nonconformance	Verdict
3	Application classes		P
4	Construction requirements		P
5	Polymeric material		P
6	Internal wiring and current – carrying parts		P
7	Connections		P
8	Bonding and grounding		P
9	Creepage and clearance distances		P
10	Field wiring compartments with covers		P
11	Marking		P
12	Requirements for supplied documents		P

Test completion Date: 20.03.2012

**Test Report number: 9213204536/2**

Inspection certificate number 9213204536,9213204536/1 has been canceled, it took her place.

Standard IEC 617301 Part 2

No.	Subject and details of nonconformance		Results	Verdict
6	Sampling			P
9	Pass criteria			P
10				P
	Test procedures	+ Tested in practice	MST 01	
			MST 11	
			MST 12	
		Double insulation	MST 13	
			MST 14	
			MST 15	
		Tested in practice >100 MΩ, 6 kV DC	MST 16	
			MST 17	
			MST 21	
			MST 23	
			MST 26	
			MST 32	
11				P
	Component tests		MST 15	
			MST 33	
			MST 44	

Standard IEC 61215

4.1	Hail test	This paragraph is tested in accordance with the method defined in UL Standard 1703 .	P
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Test completion Date: 20.03.2012



Test Report number: 9213204536/2

Inspection certificate number 9213204536, 9213204536/1 has been canceled, it took her place.

Appendix 1

Photo Documentation



Test completion Date: 20.03.2012



Test Report number: 9213204536/2

Inspection certificate number 9213204536, 9213204536/1 has been canceled, it took her place.



Photovoltaic Module Type TP572M-185

Maximum Power (Pmax)	185W
Open Circuit Voltage (Voc)	44.8V
Short Circuit Current (Isc)	5.48A
Operating Voltage (Vmpp)	35.8V
Operating Current (Impp)	5.17A
Maximum Series Fuse:	10A
Module Application Class	A
Module Weight	15Kg
Module Dimensions	1580X808X40mm

All electrical data at Standard Test Conditions (STC):
E=1000W/m², AM=1.5, Tc=25°C

Produced in accordance with
IEC61215/ IEC61730
MAX System Voltage: 1000Vd.c.

CE

WARNING



Hazardous Electricity
Can Shock, Burn or
Cause Death. Do
not touch terminals
for field connections, use 12AWG
wire insulated for minimum of 90°C

Talesun Solar

www.talesun.com +86 800 828 0156

Passed
MADE IN CHINA

Test completion Date: 20.03.2012



Test Report number: 9213204536/2

Inspection certificate number 9213204536, 9213204536/1 has been canceled, it took her place.



Test completion Date: 20.03.2012



Test Report number: 9213204536/2

Inspection certificate number 9213204536, 9213204536/1 has been canceled, it took her place.



Test completion Date: 20.03.2012



Test Report number: 9213204536/2

Inspection certificate number 9213204536, 9213204536/1 has been canceled, it took her place.

Test completion Date: 20.03.2012



Test Report number: 9213204534

1. Order Information:

Customer's Name: **TALESUN SOLAR CO.LTD.**

Customer's address: **No. 26 Nanxin Road, Shajiabang Town, Changshu, Suzhou, Jiangsu, Province P.R.China.**

Date of order: **12.03.2012**

The sample was taken by a representative of the customer

2. Test of:

Photovoltaic module

Model : **TP660M-235**

Manufacturer : **TALESUN SOLAR**

Country of manufacture : **CHINA**

Module type : **Mono-crystalline**

Num. of cells in module : **60**

Overall dimensions : **1640 mm X 990 mm X 40 mm**

3. Nature of Testing:

Compliance of the model with the requirements of the International Standards:

IEC 61730 - Photovoltaic (PV) module safety qualification

Part 1: clauses 3,4,5,6,7,8,9,10,11,12

Part 2: clauses 3,6,9,10,11

SI 61215 - Crystalline silicon terrestrial photovoltaic (PV) modules :

clause 10.17 (Hail test) Design qualification and type approval.

4. Conclusion:

The module complies with the requirements of the clauses to which they were tested.

Notes: This example is representative for sample modules: **TP660M-XXX**

(XXX = 210,215,220,225,230,235,240,245,250,255,260), 60 cells.

**This document alone is not
used to release goods from
customs.**

**This report refers only to the
sample tested and does not refer to
other samples of the same product.**

**This document contains 7
pages, and may be used
only in full.**

Yehuda Shemesh

Head, Energy Systems Department

Ido COhen

Testing Engineer

Test completion Date: 20.03.2012



Test Report number: 9213204534

5. Tests Results:

Standard IEC 617301 Part 1

No.	Subject	Results and details of nonconformance	Verdict
3	Application classes		P
4	Construction requirements		P
5	Polymeric material		P
6	Internal wiring and current – carrying parts		P
7	Connections		P
8	Bonding and grounding		P
9	Creepage and clearance distances		P
10	Field wiring compartments with covers		P
11	Marking		P
12	Requirements for supplied documents		P

Test completion Date: 20.03.2012



Test Report number: 9213204534

Standard IEC 617301 Part 2

No.	Subject and details of nonconformance		Results	Verdict
6	Sampling			P
9	Pass criteria			P
10				P
	Test procedures	+ Tested in practice	MST 01	
			MST 11	
			MST 12	
		Double insulation	MST 13	
			MST 14	
			MST 15	
		Tested in practice >100 MΩ, 6 kV DC	MST 16	
			MST 17	
			MST 21	
			MST 23	
			MST 26	
			MST 32	
11				P
	Component tests		MST 15	
			MST 33	
			MST 44	

Standard IEC 61215

4.1	Hail test	This paragraph is tested in accordance with the method defined in UL Standard 1703 .	P
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Test completion Date: 20.03.2012

Test Report number: 9213204534

Appendix 1
Photo Documentation



Test completion Date: 20.03.2012

Test Report number: 9213204534



Test completion Date: 20.03.2012

Test Report number: 9213204534



Test completion Date: 20.03.2012



Test Report number: 9213204534



Test completion Date: 20.03.2012



Test Report number: 9213204537

1. Order Information:

Customer's Name: **TALESUN SOLAR CO.LTD.**

Customer's address: **No. 26 Nanxin Road, Shajiabang Town, Changshu, Suzhou, Jiangsu, Province**
P.R.China.

Date of order: **12.03.2012**

The sample was taken by a representative of the customer

2. Test of:

Photovoltaic module

Model : **TP660P-230**

Manufacturer : **TALESUN SOLAR**

Country of manufacture : **CHINA**

Module type : **Poly-crystalline**

Num. of cells in module : **60**

Overall dimensions : **1640 mm X 990 mm X 40 mm**

3. Nature of Testing:

Compliance of the model with the requirements of the International Standards:

IEC 61730 - Photovoltaic (PV) module safety qualification

Part 1: clauses 3,4,5,6,7,8,9,10,11,12

Part 2: clauses 3,6,9,10,11

SI 61215 - Crystalline silicon terrestrial photovoltaic (PV) modules :

clause 10.17 (Hail test) Design qualification and type approval.

4. Conclusion:

The module complies with the requirements of the clauses to which they were tested.

Notes: This example is representative for sample modules: **TP660P-XXX**

(XXX = 215,220,225,230,235,240,245,250,255), 60 cells.

**This document alone is not
used to release goods from
customs.**

**This report refers only to the
sample tested and does not refer to
other samples of the same product.**

**This document contains 7
pages, and may be used
only in full.**

Yehuda Shemesh

Head, Energy Systems Department

Ido Cohen

Testing Engineer

Test completion Date: 20.03.2012

**Test Report number: 9213204537****5. Tests Results:****Standard IEC 617301 Part 1**

No.	Subject	Results and details of nonconformance	Verdict
3	Application classes		P
4	Construction requirements		P
5	Polymeric material		P
6	Internal wiring and current – carrying parts		P
7	Connections		P
8	Bonding and grounding		P
9	Creepage and clearance distances		P
10	Field wiring compartments with covers		P
11	Marking		P
12	Requirements for supplied documents		P

Test completion Date: 20.03.2012



Test Report number: 9213204537

Standard IEC 617301 Part 2

No.	Subject and details of nonconformance		Results	Verdict
6	Sampling			P
9	Pass criteria			P
10				P
	Test procedures	+ Tested in practice	MST 01	
			MST 11	
			MST 12	
		Double insulation	MST 13	
			MST 14	
			MST 15	
		Tested in practice >100 MΩ, 6 kV DC	MST 16	
			MST 17	
			MST 21	
			MST 23	
			MST 26	
			MST 32	
11				P
	Component tests		MST 15	
			MST 33	
			MST 44	

Standard IEC 61215

4.1	Hail test	This paragraph is tested in accordance with the method defined in UL Standard 1703 .	P
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Test completion Date: 20.03.2012



Test Report number: 9213204537

Appendix 1
Photo Documentation



Test completion Date: 20.03.2012

Test Report number: 9213204537



Photovoltaic Module Type		TP660P-230
Maximum Power (Pmax)		230W
Open Circuit Voltage (Voc)		36.7V
Short Circuit Current (Isc)		8.52A
Operating Voltage (Vmpp)		29.4V
Operating Current (Impp)		7.83A
Maximum Series Fuse:		15A
Module Application Class		A
Module Weight		20Kg
Module Dimensions		1640X990X40mm

Pmax, Vmpp, Voc and Isc are the values at STC
STC: E=1000W/m², AM=1.5, Tc=25°C

Produced in accordance with
IEC61215/ IEC61730
MAX System Voltage: 1000Vd.c.




WARNING



Hazardous Electricity
Can Shock, Burn or
Cause Death. Do
not touch terminals
for field connections, use 12AWG
wire insulated for minimum of 90°C

Talesun Solar

www.talesun.com +86 400 885 1098



MADE IN CHINA

Test completion Date: 20.03.2012

Test Report number: 9213204537



Test completion Date: 20.03.2012



Test Report number: 9213204537



Test completion Date: 20.03.2012

Poly-crystalline,60 cells	9413224063	03.02.2018	03.02.2015	220-275W	CS6P-XXXXP	CHINA	CANADIAN SOLAR	CANADIAN SOLAR
Poly-crystalline,72 cells	9513202023	02.02.2018	02.02.2015	260-315W	CJ156PB-XXX	CHINA	Sunligh-PV	הבית הירוק לעתיד ורוד
Poly-crystalline,72 cells	9513202027	03.02.2018	03.02.2015	245-320W	CHSM6612P-XXX	CHINA	ASTRONERGY	אנג'יס מסחר ופיתוח
Poly-crystalline,72 cells	9513202266	03.02.2018	03.02.2015	280-340W	TSM-XXXXPEG14	CHINA	TRINA SOLAR	TUV RHEINLAND TAIWAN
Poly-crystalline,60 cells	9513202267	03.02.2018	03.02.2015	230-290W	TSM-XXXXPDG5	CHINA	TRINA SOLAR	TUV RHEINLAND TAIWAN
Poly-crystalline,60 cells	9513209463	26.05.2018	26.05.2015	210-280W	JKMXXXPP-60	CHINA	JINKO SOLAR	JINKO SOLAR
Poly-crystalline,72 cells	9513209464	26.05.2018	26.05.2015	310-340W	JKMXXXPP-72	CHINA	JINKO SOLAR	JINKO SOLAR
Mono-crystalline,72 cells	9713202111	30.01.2020	30.01.2017	225-335W	JKMXXXM-72	CHINA	JINKO SOLAR	JINKO SOLAR
Poly-crystalline,72 cells	9713202112	30.01.2020	30.01.2017	250-340W	JKMXXXPP-72-V	CHINA	JINKO SOLAR	JINKO SOLAR
Poly-crystalline,60 cells	9413219795	19.11.2017	19.11.2014	225-265W	BYD250P6C-30-DG	CHINA	SOLATICS	אמ,בי,ד,ר,נ בע"מ
Poly-crystalline,72 cells	9613200994	31.01.2019	31.01.2016	290-310W	RCM-XXX-6PA	ITALY	RECOM	RECOM
Mono-crystalline,72 cells	9613205838	21.03.2019	21.03.2016	290-330W	RCM-XXX-6MA	GERMANY	RECOM	RECOM
Poly-crystalline, 72 cells	9613204221	28.02.2019	28.02.2016	300 W	JCXXXM-24/Ab	CHINA	RENESOLA	אוריאל ואנה
Poly-crystalline, 72 cells	9713201564	02.03.2020	02.03.2017	245-335W	SRP-XXX-6PA	CHINA	Seraphim Solar	TUV SUD CERTIFICATIO N AND

								TESTING (CHINA) CO. LTD
Poly-crystalline, 60 cells	9713201563	02.03.2020	02.03.2017	205-275W	SRP-XXX-6PB	CHINA	Seraphim Solar	TUV SUD CERTIFICATIO N AND TESTING (CHINA) CO. LTD
Mono-crystalline, 72 cells	9713201561	02.03.2020	02.03.2017	270-370W	SRP-XXX-6MA	CHINA	Seraphim Solar	TUV SUD CERTIFICATIO N AND TESTING (CHINA) CO. LTD
Mono-crystalline, 60 cells	9713201543	02.03.2020	02.03.2017	225-305W	SRP-XXX-6MB	CHINA	Seraphim Solar	TUV SUD CERTIFICATIO N AND TESTING (CHINA) CO. LTD
Mono-crystalline, 72 cells	9713209557	24.04.2020	24.04.2017	300-375W	TP672M-xxx	CHINA	Suzhou Talesun Solar	TUV SUD CERTIFICATIO N AND TESTING (CHINA) CO. LTD
Mono-crystalline, 60 cells	9713209555	24.04.2020	24.04.2017	215-315W	TP660M-xxx	CHINA	Suzhou Talesun Solar	TUV SUD CERTIFICATIO N AND TESTING (CHINA) CO. LTD
Poly-crystalline, 72 cells	9713209552	24.04.2020	24.04.2017	285-345W	TP672P-xxx	CHINA	Suzhou Talesun Solar	TUV SUD CERTIFICATIO N AND TESTING (CHINA) CO. LTD

Poly-crystalline, 60 cells	9713209553	24.04.2020	24.04.2017	240-285W	TP660P-xxx	CHINA	Suzhou Talesun Solar	TUV SUD CERTIFICATIO N AND TESTING (CHINA) CO. LTD
מיועד לעבודה עם אור שמש מרוכז CPV		28.6.2013	28.6.2010	2000W	Z20	ישראל	זניט סולאר בע"מ	
עם קירור מים מאולץ PVT		20.07.2013	20.07.2010	W195-340	MILPVT		מילניום אלקטריק בע"מ	
72 תאים מונו		17.08.2013	17.08.2010	W160-190	PS***M-24/F		Phono Solar	
72 תאים פולי		17.08.2013	17.08.2010	W160-190	PS***P24/F		Phono Solar	
60 תאים מונו		17.08.2013	17.08.2010	W195-240	PS***M-20/U		Phono Solar	
60 תאים פולי		17.08.2013	17.08.2010	W200-240	PS***P-20/U		Phono Solar	
שכבה דקה		1.09.2013	1.09.2010	W90	ASF90		Hangzhou Apmlesun Solar Technology	
שכבה דקה		1.09.2013	1.09.2010	W100	ASF100		Hangzhou Apmlesun Solar Technology	
Monocrystalline		21.09.2013	21.09.2010	W165-190	GESOLAR GES-Mxxx		Jiangsu Sainty	
Multicrystalline		21.09.2013	21.09.2010	W182-209	HISxxxSF		HYUNDAI	



Talesun Energy Solutions s.r.l.
a Socio Unico



SPETTABILE CSI S.p.A.
Laboratorio del Fuoco
Viale Lombardia, 20
20021 BOLLATE (MI)

MODELLO B

Il sottoscritto (1).BOGGIONI ALESSANDRO residente in MILANO via RIPAMONTI 211 Documento di identità AS6203646 rilasciato da COMUNE DI MILANO, nella sua qualità di (*) **LEGALE RAPPRESENTANTE** della Ditta TALESUN ENERGY SOLUTIONS SRL sita in MILANO via ALBERICO ALBRICCI 7 chiede a codesto Laboratorio di disporre prove di reazione al fuoco per la classificazione dei materiali ai fini della **certificazione ai sensi del art. 10** del D.M. del 26/06/84 (S.O. alla G.U. n 234 del 25/08/84) modificato con decreto del Ministro dell'Interno del 03 settembre 2001 (G.U. n. 242 del 17 ottobre 2001) e successivi, su:

TP660M - XXX
per impiego: PANNELLO FOTOVOLTAICO

Queste prove avverranno con pagamento a carico della ditta scrivente, in base alle tariffe praticate da codesto laboratorio, di cui ho preso conoscenza.

Il sottoscritto dichiara che il servizio di cui sopra viene eseguito a proprio rischio e pericolo e quindi esonera CSI S.p.A. da ogni qualsiasi responsabilità per eventuali incidenti e danneggiamenti a persone o a cose che dovessero verificarsi durante o in occasione del servizio stesso.

Fa riserva di produrre il documento comprovante l'avvenuto versamento per il rilascio del certificato di prova.

Si dichiara che la presente richiesta non è stata presentata al C.S.E. o ad altro laboratorio autorizzato dal Ministero dell'Interno ai sensi del D.M. 26/03/1985.

Si allegano: Scheda tecnica.
Attestato di versamento.

DATA: 18/10/2019

(*) le voci ammesse sono:
AMMINISTRATORE UNICO
LEGALE RAPPRESENTANTE

TALESUN ENERGY SOLUTIONS S.R.L.

Via Alberico Albricci 7 - 20122 Milano
P.IVA: 09293100963



Talesun Energy Solutions s.r.l.
a Socio Unico

MOD. D 13

DICHIARAZIONE

Il sottoscritto (1) BOGGIONI ALESSANDRO residente in MILANO via RIPAMONTI 211 Documento di identità AS6203646 rilasciato da COMUNE DI MILANO in qualità di Rappresentante Legale della ditta (2) TALESUN ENERGY SOLUTIONS SRL

dichiara

sotto la propria responsabilità civile e penale, che per l'intera realizzazione di una delle superfici del materiale denominato (3) TP660M, è utilizzato il seguente componente (4) VETRO TEMPERATO 3.2mm +/- 0,2 mm Che (5) rientra nell'elenco dei materiali di cui all'art 1 del DM 14.01.1985 (G.U. n. 16 del 19.01.1985)

Data, 18/10/2019.....

Firma del Legale Rappresentante

- 1) richiedente la certificazione
- 2) la ditta intestataria della certificazione
- 3) il materiale per il quale si richiede la certificazione
- 4) riportare la descrizione del componente così come indicata nella scheda tecnica del materiale
- 5) riportare la dicitura d'interesse:
 - a) rientra nell'elenco dei materiali di cui all'art 1 del DM 14.01.1985 (G.U. n. 16 del 19.01.1985)
 - b) risulta essere di classe 0 (zero) come da atto di omologazione (riportare gli estremi dell'atto: produttore, numero di codice, data di emissione).



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Si dichiara sotto la propria responsabilità civile e penale che la campionatura di prova sarà prelevata dal materiale denominato **TP660M-XXX** di uso specifico

Si dichiara che i pannelli fotovoltaici sotto indicati

1. TP672P-XXX
2. TP672M-XXX
3. TP660P-XXX
4. TP6H60P-XXX
5. TP6H72P-XXX
6. TP6H72M-XXX
7. TP6H60M-XXX
8. TP678M-XXX

sono realizzati con i medesimi componenti, E DANNO luogo alla medesima campionatura di prova e differiscono tra loro unicamente per forma e/o dimensione e/o colore, ad eccezione della differenza di peso tra le famiglie a 60 e 72 celle.

data 18/10/2019

Firma del Legale Rappresentante



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP672P**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1.960 x 992 x 35 mm

1.979 x 1002 x 35 mm

1.960 x 992 x 40 mm

1.979 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP672M**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1.960 x 992 x 35 mm

1.979 x 1002 x 35 mm

1.960 x 992 x 40 mm

1.979 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP660P**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1.650 x 992 x 35 mm

1.665 x 1002 x 35 mm

1.650 x 992 x 40 mm

1.665 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP660M**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zheijiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1.650 x 992 x 35 mm

1.665 x 1002 x 35 mm

1.650 x 992 x 40 mm

1.665 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP6H72P**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

2.000 x 992 x 35 mm

2.008 x 1002 x 35 mm

2.000 x 992 x 40 mm

2.008 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP6H72M**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zheijiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

2.000 x 992 x 35 mm

2.008 x 1002 x 35 mm

2.000 x 992 x 40 mm

2.008 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP6H60P**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1.675 x 992 x 35 mm

1.684 x 1002 x 35 mm

1.675 x 992 x 40 mm

1.684 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP6H60M**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1.675 x 992 x 35 mm

1.684 x 1002 x 35 mm

1.675 x 992 x 40 mm

1.684 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



Talesun Energy Solutions s.r.l.
a Socio Unico

scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: **TP678M**

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO : vetro temperato a basso contenuto di ferro (spessore 3.2 mm) Prodotto da Xinyi PV Products (ANHUI) Holdings Ltd.

2° STRATO : EVA (spessore 0.5 mm)

3° STRATO : celle monocristalline (spessore 0.2 mm)

4° STRATO : EVA (spessore 0.5 mm)

5° STRATO : Polimero fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co. Ltd. / Polimero fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co. Ltd. (spessore complessivo 0.29 mm)

C.2) Formato: (lunghezza, larghezza, spessore):

2.140 x 1002 x 35 mm

2.140 x 1002 x 40 mm

C.3) Pesì:

1° STRATO : 8 kg/m²

2° STRATO : 0.42 kg/m²

3° STRATO : 0.46 kg/m²

4° STRATO : 0.38 kg/m²

5° STRATO : 0.41 kg/m²

PESO TOTALE: 9.67 kg/m² .

C.4) Lavorazione: LAMINAZIONE.....

Il materiale è ANISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE.....**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 18/10/2019.....

Firma (il Legale Rappresentante)



LAPI LABORATORIO PREVENZIONE INCENDI S.p.A.

Sede Primaria: I-59100 PRATO - Via della Quercia, 11

Telefono +39 0574.575.320 - Telefax +39 0574.575.323

Sede Secondaria: I-50041 CALENZANO (FI) - Via Petrarca, 48

e-mail: lapi@laboratoriolapi.it

web site: www.laboratoriolapi.it

CERTIFICATO DI PROVA N. 7236/A

Emesso ai sensi dell'art. 10 del decreto del Ministero dell'interno del 26 giugno 1984 concernente "Classificazione di reazione al fuoco ed omologazione dei materiali ai fini della prevenzione incendi" modificato con decreto del Ministero dell'interno del 03 settembre 2001 (G.U. n° 242 del 17 ottobre 2001).

Visto l'esito degli accertamenti effettuati si certifica che alla
INSTALLAZIONE TECNICA (Allegato A.2.1\)

Prodotto da: **TALESUN ENERGY SOLUTIONS SRL**

Denominato: **TP660P**

Codice di identificazione: **L/7236/A/2017**

Impiegato come: **PANNELLO FOTOVOLTAICO**

è attribuita in conformità alla UNI 9177 la **CLASSE DI REAZIONE AL FUOCO: 1**

Il presente Certificato è valido unicamente per la campionatura sottoposta a prova.

Costituiscono parte integrante del presente Certificato n.12 (DODICI) allegati.

Prato, 27/06/2017

Il Direttore del Laboratorio
Dr. Luca Ermini



Rapporto di prova n° **L 7236/A/1****UNI 8457 (1987) - UNI 8457/A1 (1996)**Allegato al certificato n° **L 7236/A**Materiale: **Isotropo**Posa in opera: **non in aderenza a supporto incombustibile**

Provetta n°	Tempo di post-combustione [s]	Tempo di post-incandescenza [s]	Zona danneggiata [mm]	Gocciolamento
1	0	0	25	assente
2	0	0	30	assente
3	0	0	30	assente
4	0	0	35	assente
5	0	0	25	assente
6	0	0	20	assente
7	0	0	25	assente
8	0	0	30	assente
9	0	0	30	assente
10	0	0	35	assente

Metodo di preparazione UNI 9176 (1998): **D**

	Valore medio	Livello	CATEGORIA I
Tempo di post-combustione [s]	0	1	
Tempo di post-incandescenza [s]	0	1	
Zona danneggiata [mm]	28,5	1	
Gocciolamento	assente	1	

Note:

- LATO ESPOSTO: BACKSHEET -


LABORATORIO PREVENZIONE INCENDI
 Legalmente riconosciuto - Autorizzato dal Ministero dell'Interno

Data prova

27/06/2017

L'Operatore



METODO DI PROVA																	
Rapporto di prova n° L 7236/A/2										UNI 9174 (1987) - UNI 9174/A1 (1996)							
Allegato al Certificato n° L 7236/A																	
Materiale: isotropo																	
			100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Tempo (in secondi) per raggiungere la distanza di mm	Provetta n°	1	137	261	353	512											
		2	141	274	347	522											
		3	130	255	361	531											
Velocità media di propagazione della fiamma in mm/s	Provetta n°	1	//														
		2	//														
		3	//														
		Velocità di propagazione [mm/min]		Zona danneggiata [mm]		Tempo di post-incandescenza [s]											
		valore	livello	valore	livello	valore	livello	valore	livello	valore	livello	valore	livello	valore	livello	valore	livello
Provetta n°	1	<30	2	250	1	N.D.	1	gocce spente	1								
	2	<30	2	250	1	N.D.	1	gocce spente	1								
	3	<30	2	250	1	N.D.	1	gocce spente	1								
Metodo di preparazione UNI 9176 (1998): D										CATEGORIA I							
Posizione: Parete																	
Posa in opera: non in aderenza a supporto incombustibile																	
Note:																	
- LATO ESPOSTO: BACKSHEET -																	
Legenda - N.D.: Non Determinabile - La velocità di propagazione della fiamma è <u>non determinabile</u> quando la fiamma non raggiunge i 150 mm - Il tempo di post-incandescenza è <u>non determinabile</u> quando la fiamma non raggiunge i 300 mm																	
 LABORATORIO PREVENZIONE INCENDI Legalmente riconosciuto - Autorizzato dal Ministero dell'Interno										Data prova 27/06/2017		L'Operatore					



Talesun Energy Solutions S.r.l.

a Socio Unico

Scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: TP660P

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO: vetro temperato (spessore 3.2 mm), Prodotto dalla Fint Solar Glass Group Co., Ltd

2° STRATO : EVA (spessore 0.5mm)

3° STRATO: celle policristalline (156x156 mm, spessore 0.2mm)

4° STRATO: EVA (spessore 0.5mm)

5° STRATO: Polimero Fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co.,Ltd. / Polimero Fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. (spessore complessivo 0.3mm)

C.2) Formato:

1634x 984x 4.5mm

1640x 990x 35 mm (PANNELLO con CORNICE)

C.3) Pesì:

1° STRATO: 8kg/m² 2° STRATO: 0.42 Kg/m²

3° STRATO: 0.46Kg/m²

4° STRATO: 0.38 Kg/m²

5°STRATO: 0.41Kg/m²

PESO TOTALE: 9.67 kg/m².



C.4) Lavorazione: LAMINAZIONE

Il materiale è ISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE**

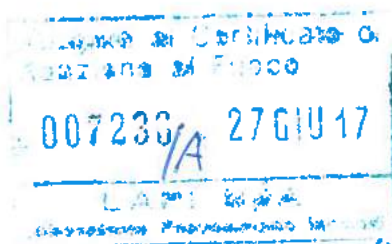
E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 05/06/2017

Firma (il Legale Rappresentante)





Talesun Energy Solutions S.r.l.

a Socio Unico

MOD. D 13

DICHIARAZIONE



Il sottoscritto (1) **BOGGIONI ALESSANDRO** residente in **MILANO** via **RIPAMONTI 211** Documento di identità **AS6203646** rilasciato da **COMUNE DI MILANO** in qualità di Rappresentante Legale della ditta (2) **TALESUN ENERGY SOLUTIONS SRL**

Dichiara

a) Sotto la propria responsabilità civile e penale, che per l'intera realizzazione di una delle superfici del materiale denominato (3), **TP660 P** è utilizzato il seguente componente (4) **VETRO TEMPERATO, 3.2 mm +/- 0,2mm** Che (5) rientra nell'elenco dei materiali di cui all'art 1 del DM 14.01.1985 (G.U. n. 16 del 19.01.1985)

Data, 05/06/2017

Firma del Legale Rappresentante

- 2) richiedente la certificazione
- 3) la ditta intestataria della certificazione
- 4) il materiale per il quale si richiede la certificazione
- 5) riportare la descrizione del componente così come indicata nella scheda tecnica del materiale
- 6) riportare la dicitura d'interesse:
 - a) rientra nell'elenco dei materiali di cui all'art 1 del DM 14.01.1985 (G.U. n. 16 del 19.01.1985)
 - b) risulta essere di classe 0 (zero) come da atto di omologazione (riportare gli estremi dell'atto: produttore, numero di codice, data di emissione).



Talesun Energy Solutions S.r.l.
a Socio Unico

Si dichiara sotto la propria responsabilità civile e penale che la campionatura di prova sarà prelevata dal materiale denominato **TP660P-XXX** di uso specifico

Si dichiara che i pannelli fotovoltaici sotto indicati

1. TP672P-XXX
2. TP672M-XXX
3. TP660M-XXX

sono realizzati con i medesimi componenti, E DANNO luogo alla medesima campionatura di prova e differiscono tra loro unicamente per forma e/o dimensione e/o colore, ad eccezione della differenza di peso tra le famiglie a 60 e 72 celle.

data

05/06/2017

Firma del Legale Rappresentante
(su ciascun foglio)





Talesun Energy Solutions S.r.l.

a Socio Unico

Scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: TP672P

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

(PER CIASCUNO DEGLI STRATI DEL MODULO VANNO INDICATI NOME COMMERCIALE DEL MATERIALE UTILIZZATO E SPESSORE E DIMENSIONE)

C.1) Natura dei componenti:

1° STRATO: vetro temperato (spessore 3.2 mm), Prodotto dalla Fint Solar Glass Group Co., Ltd

2° STRATO : EVA (spessore 0.5mm)

3° STRATO: celle policristalline (156x156 mm, spessore 0.2mm)

4° STRATO: EVA (spessore 0.5mm)

5° STRATO: Polimero Fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co.,Ltd. / Polimero Fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. (spessore complessivo 0.3mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1954x 984x 4.5mm (FORMATO DEL PANNELLO ESCLUSA LA CORNICE)

1960x 990x 40 mm (PANNELLO con CORNICE)

C.3) Pesì:

1° STRATO: 8kg/m²

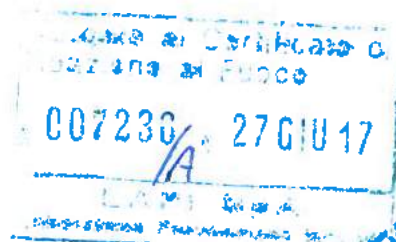
2° STRATO: 0.42 Kg/m²

3° STRATO: 0.46Kg/m²

4° STRATO: 0.38 Kg/m²

5°STRATO: 0.41Kg/m²

PESO TOTALE: **9.67** kg/m².



Talesun Energy Solutions S.r.l
P.IVA 09293100963
Sede legale: Galleria San Babila 4/b
20122 Milano

Handwritten signature or mark in blue ink.

C.4) Lavorazione: LAMINAZIONE

Il materiale è ISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: LAMINAZIONE

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: PANNELLO FOTOVOLTAICO

G) MANUTENZIONE: metodo D UNI 9176/98

Data,

05/06/2017

Firma (il Legale Rappresentante)





Talesun Energy Solutions S.r.l.

a Socio Unico

Scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: TP672M

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

(PER CIASCUNO DEGLI STRATI DEL MODULO VANNO INDICATI NOME COMMERCIALE DEL MATERIALE UTILIZZATO E SPESSORE E DIMENSIONE)

C.1) Natura dei componenti:

1° STRATO: vetro temperato (spessore 3.2 mm), Prodotto dalla Fint Solar Glass Group Co., Ltd

2° STRATO : EVA (spessore 0.5mm)

3° STRATO: celle monocristalline (156x156 mm, spessore 0.2mm)

4° STRATO: EVA (spessore 0.5mm)

5° STRATO: Polimero Fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. / PET (250 micron) NYS20 prodotto dalla Zheijiang Nanyang Technology Co.,Ltd. / Polimero Fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. (spessore complessivo 0.3mm)

C.2) Formato: (lunghezza, larghezza, spessore):

1954x 984x 4.5mm (FORMATO DEL PANNELLO ESCLUSA LA CORNICE)

1960x 990x 40 mm (PANNELLO con CORNICE)

C.3) Pesì:

1° STRATO: 8kg/m²

2° STRATO: 0.42 Kg/m²

3° STRATO: 0.46Kg/m²

4° STRATO: 0.38 Kg/m²

5°STRATO: 0.41Kg/m²

PESO TOTALE: **9.67** kg/m².



C.4) Lavorazione: LAMINAZIONE

Il materiale è ISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE**

E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 05/06/2017

Firma (il Legale Rappresentante)





Talesun Energy Solutions S.r.l.

a Socio Unico

Scheda tecnica

A) AZIENDA RIVENDITRICE: TALESUN ENERGY SOLUTIONS SRL

B) DENOMINAZIONE COMMERCIALE DEL MATERIALE: TP660M

C) DESCRIZIONE DEL MATERIALE: PANNELLO FOTOVOLTAICO

C.1) Natura dei componenti:

1° STRATO: vetro temperato (spessore 3.2 mm), Prodotto dalla Fint Solar Glass Group Co., Ltd

2° STRATO : EVA (spessore 0.5mm)

3° STRATO: celle monocristalline (156x156 mm, spessore 0.2mm)

4° STRATO: EVA (spessore 0.5mm)

5° STRATO: Polimero Fluorurato (25 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. / PET (250 micron) NYS20 prodotto dalla Zhejiang Nanyang Technology Co.,Ltd. / Polimero Fluorurato (15 micron) FFC, prodotto dalla Jolywood (Suzhou) Sunwatt Co., Ltd. (spessore complessivo 0.3mm)

C.2) Formato:

1634x 984x 4.5mm

1640x 990x 35 mm (PANNELLO con CORNICE)

C.3) Pesì:

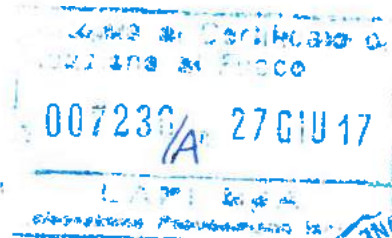
1° STRATO: 8kg/m² 2° STRATO: 0.42 Kg/m²

3° STRATO: 0.46Kg/m²

4° STRATO: 0.38 Kg/m²

5°STRATO: 0.41Kg/m²

PESO TOTALE: 9.67 kg/m².



C.4) Lavorazione: LAMINAZIONE

Il materiale è ISOTROPO A FACCE DIVERSE

D) ASSIEMAGGIO DEI DIVERSI COMPONENTI: **LAMINAZIONE**

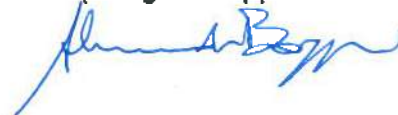
E) POSA IN OPERA: NON IN ADERENZA A SUPPORTO INCOMBUSTIBILE

F) IMPIEGO: **PANNELLO FOTOVOLTAICO**

G) MANUTENZIONE: metodo D UNI 9176/98

Data, 05/06/2017

Firma (il Legale Rappresentante)



Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
PV 50470244

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*
Q.G.

Unser Zeichen *Our Reference*
01-VZJ-60379169 001

Ausstellungsdatum *Date of Issue*
04.06.2020 (day/mo/yr)

Genehmigungsinhaber *License Holder*

Suzhou Talesun Solar Technologies
Co., Ltd.
No.1 Talesun Road, Shajiabang,
Changshu, Suzhou,
215542 Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*

Refer to latest revision
of the annex list of factories

Prüfzeichen *Test Mark*



PID Resistance
Regular
Production
Surveillance

www.tuv.com
ID 1111224693

Geprüft nach *Tested acc. to*
2 Pfg 2387/01.18

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

PV Module

Type Designation:

Max. System Voltage: up to 1500 VDC (Voc at STC):

With 1/2 cut of bifacial mono c-Si cells:

TD6G72M-xxx (xxx = 395-410, in steps of 5, 144 cells)

TD6G60M-xxx (xxx = 330-340, in steps of 5, 120 cells)

5

Remarks:

- Valid in conjunction with TÜV Rheinland certificate PV 50469118 Page 1 and only for the material combination as listed in the above mentioned test report.
- Test condition also fulfill the specification listed in IEC TS 62804-1:2015.

Conditions:

The product test is voluntarily according to technical regulations. Any change of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval.

The certificate is valid until 26 May 2025.

5

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com

Fax: +49 221 806-3935 http://www.tuv.com/safety

Zertifizierungsstelle



Dipl.-Ing. (FH) Tim Kirschner

**Anlage Fertigungsstättenliste
/Attachment List of Factories**



PV 50470244 0001

1 Suzhou Talesun Solar Technologies
Co., Ltd.
No.1 Talesun Road, Shajiabang,
Changshu, Suzhou,
215542 Jiangsu
P.R. China

2 Talesun Technologies (Thailand)
Co., Ltd.
7/473 Moo.6 Mabyangporn,
Pluakdaeng,
Rayong 21140
Thailand



TÜVRheinland®

Dieser Anhang ersetzt den Vorgänger vom/
This annex replaces the previous annex dated

Datum / Date 04.06.2020

Zertifizierungsstelle
/ Certification Body



Dipl.-Ing. (FH) Tim Kirschner

Suzhou Talesun Solar Technologies
Co., Ltd.
Queeny Gong

Date : 04.06.2020
Our ref. : VZJ 01
Your ref.: Q.G.

No.1 Talesun Road, Shajiabang,
Changshu, Suzhou,
215542 Jiangsu
P.R. China

Ref : PV Photovoltaic Modules

Type of Equipment : PV Module
Model Designation : See Certificate
Certificate No. : PV 50470244 0001
Report No. : 60379169 001

Dear Queeny Gong,

Thank you very much for your interest in our services.

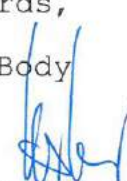
Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services.

Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body


Dipl.-Ing. (FH) Tim Kirschner

cc: Suzhou Talesun Solar Technologies

Enclosure

证书的详细资料请登陆www.tuvdotcom.com查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询



MEMBERSHIP CERTIFICATE

This is to certify that

Talesun Solar Germany GmbH

is a registered member of ERP UK Ltd
WEEE Producer Compliance Scheme (WEE/XP3338PD/SCH) for 2020
with the following WEEE Producer Registration Number:

WEE/MM3170AA

December 2019

Date

John Redmayne
General Manager, ERP UK Ltd.



Certificat 2020*

PV CYCLE France SAS
Certifie que la société

Talesun Solar Germany

est adhérente de PV CYCLE France SAS, éco-organisme sans but lucratif agréé par les pouvoirs publics
pour la collecte et le recyclage des panneaux photovoltaïques usagés en France

www.pvcycle.fr

Jan Clyncke
Président p.p.

Paris
02/01/2020

* La validité de ce certificat peut être vérifiée à l'adresse <http://extranet.pvcycle.org/> à l'aide du numéro de certificat e4334493

PV CYCLE France SAS au capital variable de 54 000 €, 13 Rue du Quatre-Septembre, 75002 Paris, RCS Paris 800 547 499



Certificaat 2020*

PV CYCLE Netherlands B.V.

bevestigt hierbij dat op basis van de huidige verplichtingen

Talesun Solar Germany

lid is van PV CYCLE Netherlands B.V., een vereniging die de terugname en recyclage van afgedankte
fotovoltaïsche zonnepanelen organiseert in Nederland

www.pvcycle.org

Jan Clyncke
Algemeen Directeur

Zoetermeer
15/01/2020

* De geldigheid van dit certificaat kan enkel worden bevestigd op <http://extranet.pvcycle.org/> met het
validatienummer 618161e9



Product Service

CERTIFICATE

No. Z2 078488 0091 Rev. 00

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.

No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Mono-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061617103-02

Valid until: 2023-08-28

Date, 2018-09-06

(Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 078488 0091 Rev. 00

Model(s):

1000 VDC system voltage modules:

TP672M-xxx, xxx= 275 to 390 in step of 5

TP660M-xxx, xxx= 230 to 325 in step of 5

TP654M-xxx, xxx= 205 to 280 in step of 5

TP648M-xxx, xxx= 185 to 250 in step of 5

TP6H72M-xxx, xxx= 335 to 390 in step of 5

TP6H60M-xxx, xxx= 280 to 325 in step of 5

1500 VDC system voltage modules:

TP672M(H)-xxx, xxx= 300 to 390 in step of 5

TP660M(H)-xxx, xxx= 250 to 325 in step of 5

TP654M(H)-xxx, xxx= 225 to 280 in step of 5

TP648M(H)-xxx, xxx= 200 to 250 in step of 5

TP6H72M(H)-xxx, xxx= 335 to 390 in step of 5

TP6H60M(H)-xxx, xxx= 280 to 325 in step of 5

xxx is standing for rated output power at STC

Parameters:

Rated Output Power at STC:

See the table below

Construction:

Framed, with Junction box,
Cable and Connectors.

Application Class :

Class A

Maximum System Voltage:

1500 V DC or 1000 V DC

Fire Safety Class:

Class C

Severity of salt mist
test:

Level 6

No. Z2 078488 0091 Rev. 00

Tested according to:	IEC 61215(ed.2)
	IEC 61701(ed.2)
	IEC 61730-1(ed.1);am1;am2
	IEC 61730-2(ed.1);am1

Production Facility(ies):

001453, 003671, 078488, 087702, 090968, 096715, 101042

gati

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT



Product Service

CERTIFICATE

No. Z2 078488 0093 Rev. 00

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.
No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Poly-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061617104-02

Valid until: 2023-08-30

Date, 2018-09-06

(Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 078488 0093 Rev. 00

Model(s):

1000 VDC system voltage modules:

TP672P-xxx, xxx= 285 to 360 in step of 5

TP660P-xxx, xxx= 230 to 300 in step of 5

TP654P-xxx, xxx= 205 to 255 in step of 5

TP648P-xxx, xxx= 180 to 230 in step of 5

TP636P-xxx, xxx= 130 to 150 in step of 5

TP6H72P-xxx, xxx= 300 to 360 in step of 5

TP6H60P-xxx, xxx= 250 to 300 in step of 5

1500 VDC system voltage modules:

TP672P(H)-xxx, xxx= 285 to 360 in step of 5

TP660P(H)-xxx, xxx= 235 to 300 in step of 5

TP654P(H)-xxx, xxx= 210 to 255 in step of 5

TP648P(H)-xxx, xxx= 190 to 230 in step of 5

TP6H72P(H)-xxx, xxx= 300 to 360 in step of 5

TP6H72P(H)-xxx, xxx= 250 to 300 in step of 5

xxx is standing for rated output power at STC

Parameters:

Rated Output Power at STC:

See the table below

Construction:

Framed, with Junction box,
Cable and Connectors.

Application Class :

Class A

Maximum System Voltage:

1500 V DC or 1000 V DC

Fire Safety Class:

Class C

Severity of salt mist
test:

Level 6



Product Service

CERTIFICATE

No. Z2 078488 0093 Rev. 00

Model (1000VDC system voltage normal modules)	Rated Output Power at STC
TP672P-xxx, xxx= 285 to 360 in step of 5	285W,290W,295W,300W,305W,310W,315W, 320W,325W,330W,335W,340W,345W,350W, 355W,360W
TP660P-xxx, xxx= 230 to 300 in step of 5	230W,235W,240W,245W,250W,255W,260W, 265W,270W,275W,280W,285W,290W,295W, 300W
TP654P-xxx, xxx= 205 to 255 in step of 5	205W,210W,215W,220W,225W,230W,235W, 240W,245W,250W,255W
TP648P-xxx, xxx= 180 to 230 in step of 5	180W,185W,190W,195W,200W,205W,210W, 215W,220W,225W,230W
TP636P-xxx, xxx= 130 to 150 in step of 5	130W,135W,140W,145W,150W
TP6H72P-xxx, xxx= 300 to 360 in step of 5	300W,305W,310W,315W,320W,325W,330W, 335W,340W,345W,350W,355W,360W
TP6H60P-xxx, xxx= 250 to 300 in step of 5	250W,255W,260W,265W,270W, 275W,280W, 285W,290W,295W,300W
Model (1500VDC system voltage normal modules)	Rated Output Power at STC
TP672P(H)-xxx, xxx= 285 to 360 in step of 5	285W,290W,295W,300W,305W 310W,315W, 320W,325W,330W,335W,340W,345W,350W, 355W,360W
TP660P(H)-xxx,xxx=235 to 300 in step of 5	235W,240W,245W,250W,255W,260W,265W, 270W,275W,280W,285W,290W,295W,300W
TP654P(H)-xxx,xxx=210 to 255 in step of 5	210W,215W,220W,225W,230W,235W,240W, 245W,250W,255W
TP648P(H)-xxx,xxx=190 to 230 in step of 5	190W,195W,200W,205W,210W,215W,220W, 225W,230W
TP6H72P(H)-xxx,xxx=300 to 360 in step of 5	300W,305W,310W,315W,320W,325W,330W, 335W,340W,345W,350W,355W,360W
TP6H72P(H)-xxx,xxx=250 to 300 in step of 5	250W,255W,260W,265W,270W,275W,280W, 285W,290W,295W,300W

**Tested
according to:**

IEC 61215(ed.2)
IEC 61701(ed.2)
IEC 61730-1(ed.1);am1;am2
IEC 61730-2(ed.1);am1

**Production
Facility(ies):**

001453, 003671, 078488, 087702, 090968, 096715, 101042

Test Report

REPORT No.: SHE20-03744

ATTENTION: Ming HOU DATE RECEIVED: 2020/04/30

CUSTOMER: Suzhou Talesun Solar Technologies Co., Ltd. DATE REPORTED: 2020/05/15

No.1 Talesun Road, Changkun Industrial Park, Shajiabang Town, Changshu, 215542 Suzhou SAMPLE (S): Other (Solid) (1)

REFERENCE: -

REMARKS

1.The results apply to the sample(s) as received

Edited by: 
Min ZHOU

Reviewed by: 
Jun MENG

Approved by: 
Liqiong TANG



声明

Statement

1. 检测报告无本实验室检验检测专用章无效。

The test report is invalid without the official seal of the laboratory.

2. 未经本公司书面许可，不得复制 (全文复制除外) 检测报告。

This test report cannot be reproduced in any way, except in full content, without prior approval in writing by the laboratory.

3. 检测报告无编制、审核、批准人签字无效。

The test report is invalid without the signature of the compiler, the checker and the approver

4. 检测报告涂改无效。

The test report is invalid if altered.

5. 本检测报告以中文为准，英文文本 (如有) 仅为译文，两者发生冲突时，应以中文文本为准。

The test report has been drafted in Chinese and translated into English (if applicable) for convenience only. In the event of discrepancy, the Chinese version shall prevail.

6. 如对本检测报告有异议，请在收到报告10天之内与本公司联系。

Should you have any queries or objection to the test report, please contact us within 10 days after receiving the report.

符号表/Legend

NA 样品未测试该参数/The sample was not analysed for this analyte

↑ 提高检出限/Detection limit raised

↓ 降低检出限/Detection limit lowered

ND 未检出/Not Detected



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3rd Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233 t (86-21) 61072828 f (86-21) 61152164 www.sgs.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t (86-21) 61072828 f (86-21) 61152164 e sgs.china@sgs.com

INORGANIC & ORGANIC ANALYSIS

Report No.: SHE20-03744

Customer Reference: -

INORGANIC & ORGANIC ANALYSIS		Lab ID		Limit	SHE20-03744.001
		Customer ID			TD6G72M
		Date Received			2020/04/30
ITEM	METHOD	LOR	UNIT		Other (Solid)
Arsenic (As)	USEPA 200.8-1994	0.050	mg/L	≤5	<0.050
Barium (Ba)	USEPA 200.8-1994	0.010	mg/L	≤100	<0.010
Cadmium (Cd)	USEPA 200.8-1994	0.001	mg/L	≤1	<0.001
Chromium (Cr)	USEPA 200.8-1994	0.010	mg/L	≤5	<0.010
Lead (Pb)	USEPA 200.8-1994	0.010	mg/L	≤5	14.2
Selenium (Se)	USEPA 200.8-1994	0.050	mg/L	≤1	<0.050
Silver (Ag)	USEPA 200.8-1994	0.010	mg/L	≤5	<0.010
Mercury (Hg)	USEPA 7473-2007	0.005	mg/L	≤0.2	<0.005
2,4-D	USEPA 8151A-1996	0.0005	mg/L	≤10	<0.0005
2,4,5-TP (Silvex, Fenopop)	USEPA 8151A-1996	0.0005	mg/L	≤1	<0.0005
Benzene	USEPA 8260D-2018	0.0005	mg/L	≤0.5	<0.0005
Carbon tetrachloride	USEPA 8260D-2018	0.0005	mg/L	≤0.5	<0.0005
Chlorobenzene	USEPA 8260D-2018	0.0005	mg/L	≤100	<0.0005
Chloroform	USEPA 8260D-2018	0.0005	mg/L	≤6	<0.0005
1,4-Dichlorobenzene	USEPA 8260D-2018	0.0005	mg/L	≤7.5	<0.0005
1,2-Dichloroethane	USEPA 8260D-2018	0.0005	mg/L	≤0.5	<0.0005
1,1-Dichloroethene	USEPA 8260D-2018	0.0005	mg/L	≤0.7	<0.0005
2-butanone(MEK)	USEPA 8260D-2018	0.020	mg/L	≤200	<0.020
Tetrachloroethene	USEPA 8260D-2018	0.0005	mg/L	≤0.7	<0.0005
Trichloroethene	USEPA 8260D-2018	0.0005	mg/L	≤0.5	<0.0005
Vinyl chloride	USEPA 8260D-2018	0.0005	mg/L	≤0.2	<0.0005
2,4-Dinitrotoluene	USEPA 8270E-2018	0.0005	mg/L	≤0.13	<0.0005
Hexachlorobenzene	USEPA 8270E-2018	0.0005	mg/L	≤0.13	<0.0005
Hexachlorobutadiene	USEPA 8270E-2018	0.0005	mg/L	≤0.5	<0.0005



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Testing Center - China

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t (86-21) 61072828 f (86-21) 61152164

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sgs.china@sgs.com

INORGANIC & ORGANIC ANALYSIS

Report No.: SHE20-03744

Customer Reference: -

INORGANIC & ORGANIC ANALYSIS		Lab ID		Limit	SHE20-03744.001
		Customer ID			TD6G72M
		Date Received			2020/04/30
Report No.: SHE20-03744					
Customer Reference: -					
ITEM	METHOD	LOR	UNIT		Other (Solid)
Hexachloroethane	USEPA 8270E-2018	0.0005	mg/L	≤3	<0.0005
Nitrobenzene	USEPA 8270E-2018	0.0005	mg/L	≤2	<0.0005
Pentachlorophenol	USEPA 8270E-2018	0.0025	mg/L	≤100	<0.0025
Pyridine	USEPA 8270E-2018	0.002	mg/L	≤5.0	<0.002
2,4,5-Trichlorophenol	USEPA 8270E-2018	0.0005	mg/L	≤400	<0.0005
2,4,6-Trichlorophenol	USEPA 8270E-2018	0.0005	mg/L	≤2	<0.0005
Methylphenol	USEPA 8270E-2018	0.001	mg/L	≤200	<0.001
2-Methylphenol	USEPA 8270E-2018	0.0005	mg/L	≤200	<0.0005
3&4-Methylphenol	USEPA 8270E-2018	0.0005	mg/L	≤200	<0.0005
Endrin	USEPA 8270E-2018	0.0005	mg/L	≤0.02	<0.0005
γ-BHC	USEPA 8270E-2018	0.0005	mg/L	≤0.4	<0.0005
Toxaphene	USEPA 8270E-2018	0.050	mg/L	≤0.5	<0.05
Methoxychlor	USEPA 8270E-2018	0.0005	mg/L	≤10	<0.0005
Heptachlor	USEPA 8270E-2018	0.0005	mg/L	≤0.008	<0.0005
Chlordane(Total)	USEPA 8270E-2018	0.001	mg/L	≤0.03	<0.001

Remark:

Preparative method:USEPA1311-1992(Toxicity Characteristic Leaching Procedure)

The Limits comes from CFR(code of federal regulations) title 40 part 261.24.

The test report shall only be used for client scientific research, teaching, internal quality control, product research and development, etc... and just for client internal reference.



Method List

USEPA 200.8-1994 Metals ICP-MS
 USEPA 7473-2007 Metals-Hg
 USEPA 8151A-1996 Acid Herbicides in Water by GC-MS
 USEPA 8260D-2018 VOCs
 USEPA 8270E-2018 SVOCs

Equipment information

Method:USEPA 200.8-1994

Equipment Name	Model	Equipment Number	Serial Number
ICP-MS	Agilent 7900	CHEM-998	JP 16311502

Method:USEPA 7473-2007

Equipment Name	Model	Equipment Number	Serial Number
Hg analyzer	Milestone DMA-80	CHEM-958	16041979

Method:USEPA 8151A-1996

Equipment Name	Model	Equipment Number	Serial Number
GC-MS	Agilent 7890A/5975C	CHEM-ENV085	CN12371032/US12362A17

Method:USEPA 8260D-2018

Equipment Name	Model	Equipment Number	Serial Number
PT-GC-MS	Agilent 4660/7890B/5977A	CHEM-ENV091/092	H205466317P/CN13313013/US1330M207

Method:USEPA 8270E-2018

Equipment Name	Model	Equipment Number	Serial Number
GC-MS	Agilent 7890B/5977B	CHEM-1013	CN16433131/US1643M01

Method:USEPA 8270E-2018

Equipment Name	Model	Equipment Number	Serial Number
GC-MS	Agilent 7890B/5977B	CHEM-1013	CN16433131/US1643M01



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Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

3rd Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233 t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn
 中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t (86-21) 61072828 f (86-21) 61152164 e sgs.china@sgs.com

APPENDIX 1

Report No.:SHE20-03744

Customer Reference: -



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Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

3rd Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233 t (86-21) 61072828 f (86-21) 61152164 www.sgs.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t (86-21) 61072828 f (86-21) 61152164 e sgs.china@sgs.com

APPENDIX 2

Report No.:SHE20-03744

Customer Reference: -



End of report

Page 7 of 7



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Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

3rd Building, No.889 Yishan Road, Xuhui District, Shanghai, China 200233 t (86-21) 61072828 f (86-21) 61152164 www.sgsgroup.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t (86-21) 61072828 f (86-21) 61152164 e sgs.china@sgs.com

Member of the SGS Group (SGS SA)

Certificate



Certificate No.: 6080539.02DS.001

Report No.: 6080539 051A 001; 6080539 051B 001
Licensee: Suzhou Talesun Solar Technologies Co., Ltd.
Address of Licensee: No.1 Talesun Road, Shajiabang, Changshu, Suzhou, 215542, Jiangsu, P. R. China
Production Plant(s): see annex 1 for details
The scope of this certificate includes the following products: Mono Crystalline Silicon PV Modules
Type(s): see annex 1 for details
Parameters: Maximum System Voltage: 1000/1500 V; Protection Class: Class II; Pollution Degree: 1; Fire Rating: Class C

According to the results of the type examination and annual quality controls of the production processes carried out by the seal awarding body

DEKRA Testing and Certification (Shanghai) Ltd.
3F #250 Jiangchangsan Road Building 16 Headquarter Economy Park Shibe Hi-Tech Park,
Jing'an District Shanghai 200436 China

compliance with the requirements specified in Standards

- IEC 61215-1: 2016
- IEC 61215-1-1: 2016
- IEC 61215-2: 2016
- IEC 61730-1: 2016
- IEC 61730-2: 2016

are ensured.

Shanghai, 18 September 2020

It expires at the latest on: 18 September 2025

Cliff Lin
Certification Body, Company

Crystalline Silicon
PV Modules
Type Testing

- ▶ IEC 61215-1: 2016
- ▶ IEC 61215-1-1: 2016
- ▶ IEC 61215-2: 2016
- ▶ IEC 61730-1: 2016
- ▶ IEC 61730-2: 2016
- ▶ Periodically Factory Inspection as per CIG 021-024

www.dekra-seal.com



Certificate



Annex 1 of 6080539.02DS.001

Type(s):

PV module with mono c-Si cells:

For 1000V system voltage:

TP678M-xxx (xxx=400-415, in steps of 5, 78 cells)
TP672M-xxx (xxx=325-395, in steps of 5, 72 cells)
TP660M-xxx (xxx=270-330, in steps of 5, 60 cells)
TP6H72M-xxx (xxx=365-415, in steps of 5, 144 cells)
TP6F72M-xxx (xxx=385-415, in steps of 5, 144 cells)
TP6G72M-xxx (xxx=390-405, in steps of 5, 144 cells)
TP6L72M-xxx (xxx=435-445, in steps of 5, 144 cells)
TP6H60M-xxx (xxx=305-345, in steps of 5, 120cells)
TP6F60M-xxx (xxx=320-345, in steps of 5, 120cells)
TP6G60M-xxx (xxx=325-335, in steps of 5, 120cells)
TP6L60M-xxx (xxx=360-370, in steps of 5, 120cells)

For 1500V system voltage:

TP678M(H)-xxx (xxx=400-415, in steps of 5, 78 cells)
TP672M(H)-xxx (xxx=325-395, in steps of 5, 72 cells)
TP660M(H)-xxx (xxx=270-330, in steps of 5, 60 cells)
TP6H72M(H)-xxx (xxx=365-415, in steps of 5, 144 cells)
TP6F72M(H)-xxx (xxx=385-415, in steps of 5, 144 cells)
TP6G72M(H)-xxx (xxx=390-405, in steps of 5, 144 cells)
TP6L72M(H)-xxx (xxx=435-445, in steps of 5, 144 cells)
TP6H60M(H)-xxx (xxx=305-345, in steps of 5, 120cells)
TP6F60M(H)-xxx (xxx=320-345, in steps of 5, 120cells)
TP6G60M(H)-xxx (xxx=325-335, in steps of 5, 120cells)
TP6L60M(H)-xxx (xxx=360-370, in steps of 5, 120cells)

Production Plant A:
Address of
Production Plant A:

Suzhou Talesun Solar Technologies Co., Ltd.
No.1 Talesun Road, Shajiang, Changshu, Suzhou, 215542, Jiangsu, P. R.
China

Production Plant B:
Address of
Production Plant B:

Talesun Technologies (Thailand)Co., Ltd.
7/473 Moo.6 Mabyangporn, Pluakdaeng, Rayong, Thailand, 21140

Certificate



Production Plant C:	VESOLAR COMPANY LIMITED
Address of Production Plant C:	Lot CN 2-7, Que Vo 3 Industrial Zone, Viet Hung Commune, Que Vo District, Bac Ninh Province, Vietnam
Production Plant D:	GREEN WING SOLAR TECHNOLOGY COMPANY LIMITED
Address of Production Plant D:	Lot D1-1, Dai Dong – Hoan Son Industrial Zone, Hoan Son Commune, Tien Du District, Bac Ninh Province, Vietnam
Production Plant E:	VIETNAM SUNERGY JOINT STOCK COMPANY
Address of Production Plant E:	Lot III – Dong Vang, Dinh Tram Industrial Park, Hoang Ninh Commune, Viet Yen District, Bac Giang Province, Vietnam
Production Plant F:	DEHUI SOLAR POWER (VIETNAM) CO., LTD
Address of Production Plant F:	Lot C8-5, C8-6, C8-7&C8-8 Dai Dong-Hoan Son Industrial Park, Bac Ninh Province, Vietnam

End of Annex

CERTIFICATE

Issued to:

Applicant:

Suzhou Talesun Solar Technologies Co., Ltd.

No.1 Talesun Road, Shajiabang, Changshu,

Suzhou, 215542, Jiangsu, P. R. China

Product : Monocrystalline/Polycrystalline Silicon PV Modules

Trade name(s) : Talesun

Type(s)/model(s) : See Annex

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard IEC 61215-1:2016; EN 61215-1:2016; IEC 61215-1-1:2016; EN 61215-1-1:2016; IEC 61215-2:2016; EN 61215-2:2017; IEC 61730-1:2016; EN IEC 61730-1:2018; IEC 61730-2:2016; EN IEC 61730-2:2018
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 3119024

DEKRA hereby grants the right to use the DEKRA seal certification mark.

The DEKRA seal certification mark may be applied to the product as specified in this certificate for the duration of the DEKRA seal certification agreement and under the conditions of the DEKRA seal certification agreement.

This certificate is issued on 26 October 2020 and expires at the latest on: 16 June 2025.

Certificate number: 6080539.01DS

DEKRA Testing and Certification (Shanghai) Ltd.

C.Lin
Certification Manager

© Integral publication of this certificate is allowed

DEKRA Testing and Certification (Shanghai) Ltd.

3F #250 Jiangchangsan Road Building 16 Headquarter Economy Park Shibeil Hi-Tech Park, Jing'an District, Shanghai 200436 China

T +86 21 6056 7600 F +86 21 6056 7555 www.dekra-seal.com

Crystalline Silicon
PV Modules
Type Testing

- IEC 61215-1: 2016
- IEC 61215-1-1: 2016
- IEC 61215-2: 2016
- IEC 61730-1: 2016
- IEC 61730-2: 2016
- EN 61215-1: 2016
- EN 61215-1-1: 2016
- EN 61215-2: 2017
- EN IEC 61730-1: 2018
- EN IEC 61730-2: 2018
- Periodically Factory Inspection as per CIG 021-024

www.dekra-seal.com



SPECIFICATION OF THE CERTIFIED PRODUCT**Product data**

Product	: Monocrystalline/Polycrystalline Silicon PV Modules
Trade name(s)	: Talesun
Type(s)/model(s)	: PV Module with Monocrystalline Cells: TD6G72M-xxx (xxx=395-425, in steps of 5, 144 cells) TD6G60M-xxx (xxx=330-355, in steps of 5, 120 cells) TD6I72M-xxx (xxx=435-455, in steps of 5, 144 cells) TD6I60M-xxx (xxx=365-380, in steps of 5, 120 cells)
Maximum System Voltage	: 1500V
Protection Class	: Class II
Pollution Degree	: 1
Fire Rating	: Class C

TESTS**Test requirements**

IEC 61215-1:2016;
EN 61215-1:2016;
IEC 61215-1-1:2016;
EN 61215-1-1:2016;
IEC 61215-2:2016;
EN 61215-2:2017;
IEC 61730-1:2016;
EN IEC 61730-1:2018;
IEC 61730-2:2016;
EN IEC 61730-2:2018.

Test result

The test results are laid down in DEKRA test file 608053900.

Additional information

The list of components is laid down at test report 6080539 50A and 6080539 50B.

Conclusion

The examination proved that all requirements were met.

Factory location

Production Plant A:	Suzhou Talesun Solar Technologies Co., Ltd.
Address of	No.1 Talesun Road, Shajiabang, Changshu, Suzhou, 215542, Jiangsu, P. R.
Production Plant A:	China
Production Plant B:	Talesun Technologies (Thailand)Co., Ltd.
Address of	
Production Plant B:	7/473 Moo.6 Mabyangporn, Pluakdaeng, Rayong, Thailand, 21140



Product Service

CERTIFICATE

No. Z2 078488 0087 Rev. 03

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.

No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product:	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules Mono-Crystalline Silicon Photovoltaic Module
-----------------	---

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061617101-05

Valid until: 2024-07-14

Date, 2019-07-15 (Zhulin Zhang)

gati



Product Service

CERTIFICATE

No. Z2 078488 0087 Rev. 03

Model(s):

Frameless and Framed modules with system voltage 1000VDC:

TD672M-xxx, xxx = 290 to 390 in step of 5

TD660M-xxx, xxx = 250 to 325 in step of 5

TD654M-xxx, xxx = 220 to 265 in step of 5

Frameless and Framed modules with system voltage 1500VDC

TD672M(H)-xxx, xxx = 290 to 390 in step of 5

TD660M(H)-xxx, xxx = 250 to 325 in step of 5

TD654M(H)-xxx, xxx = 220 to 265 in step of 5

TD6E72M-xxx, xxx = 330 to 390 in step of 5

TD6E60M-xxx, xxx = 275 to 325 in step of 5

TD6H72M-xxx, xxx = 335 to 400 in step of 5

TD6H60M-xxx, xxx = 280 to 330 in step of 5

xxx is standing for rated output power at STC

Parameters:

Construction: Frameless and Framed, with Junction box, Cable and Connectors.

Test Laboratory: Yangzhou Opto-Electrical Products Testing Institute;
No. 10 West Kaifa Road, Yangzhou,
225009 Jiangsu, P. R. China

Application Class: Class A

Maximum System Voltage: 1000 V DC or 1500 V DC

Fire Safety Class: Class A or Class C

Tested according to:

IEC 61215(ed.2)

IEC 61730-1(ed.1);am1;am2

IEC 61730-2(ed.1);am1

Production Facility(ies):

003671, 078488, 090968, 096715, 101042



Product Service

CERTIFICATE

No. Z2 078488 0083 Rev. 04

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.

No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product:

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Poly-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061707022-04

Valid until: 2024-12-30

Date, 2020-01-02

(Zhulin Zhang)

ZERTIFIKAT • CERTIFICATE • 認證證書 • CERTIFICADO • CERTIFICAT



Product Service

CERTIFICATE

No. Z2 078488 0083 Rev. 04

Model(s):

1000 VDC system voltage normal modules:

TP672P-xxx,xxx=315-355 in step of 5;

TP6H72P-xxx,xxx=325-350 in step of 5;

TP660P-xxx,xxx=255-295 in step of 5;

TP6H60P-xxx,xxx=270-290 in step of 5;

1500 VDC system voltage normal modules:

TP672P(H)-xxx,xxx=315-355 in step of 5;

TP6H72P(H)-xxx,xxx=325-350 in step of 5;

TP660P(H)-xxx,xxx=255-295 in step of 5;

TP6H60P(H)-xxx,xxx=270-290 in step of 5

xxx is standing for rated output power at STC

Parameters:

Construction:

Framed, with Junction box, Cable and Connectors.

Safety Class:

Class II

Maximum System Voltage:

1000 V DC or 1500 V DC

Fire Safety Class:

Class C according to UL790

Test Laboratory:

Yangzhou Opto-Electrical Products Testing Institute,
No. 10 West Kaifa Road, Yangzhou,
225009 Jiangsu, P. R. China.

Tested according to:

IEC 61215-1:2016

IEC 61215-1-1:2016

IEC 61215-2:2016

IEC 61730-1:2016

IEC 61730-2:2016

EN 61215-1:2016

EN 61215-1-1:2016

EN IEC 61730-1:2018

EN IEC 61730-1:2018/AC:2018-06

EN IEC 61730-2:2018

EN IEC 61730-2:2018/AC:2018-06

EN 61215-2:2017

Production Facility(ies):

096715, 078488

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
PV 50469118

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*
Q.G.

Unser Zeichen *Our Reference*
01-VZJ-60376958 001

Ausstellungsdatum *Date of Issue*
27.05.2020 (day/mo/yr)

Genehmigungsinhaber *License Holder*
Suzhou Talesun Solar Technologies
Co., Ltd.
No.1 Talesun Road, Shajiang,
Changshu, Suzhou,
215542 Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*
Refer to latest revision
of the annex list of factories

Prüfzeichen *Test Mark*



IEC 61215
IEC 61730
Regular Production
Surveillance
www.tuv.com
ID 1111224332

Geprüft nach *Tested acc. to*

IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016
EN 61215-1:2016
EN 61215-1-1:2016
EN 61215-2:2017
EN IEC 61730-1:2018
EN IEC 61730-2:2018

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

PV Module

Type Designation:
Max. System Voltage: up to 1500 VDC (Voc at STC):
With 1/2 cut of bifacial mono c-Si cells:
TD6G72M-xxx (xxx = 395-410, in steps of 5, 144 cells)
TD6G60M-xxx (xxx = 330-340, in steps of 5, 120 cells)

10

Remarks:

Class II acc. to IEC 61140
Fire Rating: Class C (according to UL 790)
Design Load/ Safety Factors: 3600 Pa / 1.5 (downward)
1600 Pa / 1.5 (upward)

Conditions:

The product test is voluntarily according to technical regulations. Any change of the design, materials, components or processing may require the repetition of some of the qualification tests in order to retain type approval.

The certificate is valid until 26 May 2025.

10

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 <http://www.tuv.com/safety>



Dipl.-Ing. (FH) Tim Kirschner

Anlage Fertigungsstättenliste
/Attachment List of Factories



PV 50469118 0001

1 Suzhou Talesun Solar Technologies
Co., Ltd.
No.1 Talesun Road, Shajiabang,
Changshu, Suzhou,
215542 Jiangsu
P.R. China

2 Talesun Technologies (Thailand)
Co., Ltd.
7/473 Moo.6 Mabyangporn,
Pluakdaeng,
Rayong 21140
Thailand



TÜVRheinland

Dieser Anhang ersetzt den Vorgänger vom/
This annex replaces the previous annex dated

Datum / Date 27.05.2020

Zertifizierungsstelle
/ Certification Body



Dipl.-Ing. (FH) Tim Kirschner

Suzhou Talesun Solar Technologies
Co., Ltd.
Queeny Gong

Date : 27.05.2020
Our ref. : VZJ 01
Your ref.: Q.G.

No.1 Talesun Road, Shajiabang,
Changshu, Suzhou,
215542 Jiangsu
P.R. China

Ref : PV Photovoltaic Modules

Type of Equipment : PV Module
Model Designation : See Certificate
Certificate No. : PV 50469118 0001
Report No. : 60376958 001

Dear Queeny Gong,

Thank you very much for your interest in our services.

Please find enclosed your certification documents.

We appreciate your support and would like to offer our assistance in the approval of your future products through our extensive range of technical services.

Please feel free to contact us whatever your requirements may be.

With kind regards,

Certification Body


Dipl.-Ing. (FH) Tim Kirschner

cc: Suzhou Talesun Solar Technologies

Enclosure

证书的详细资料请登陆www.tuvdotcom.com查阅,或拨打我司客服热线800 999 3668 / 400 883 1300咨询



Product Service

CERTIFICATE

No. Z2 078488 0088 Rev. 02

Holder of Certificate: Suzhou Talesun Solar Technologies Co., Ltd.

No. 1 Talesun Road
Changkun Industrial Park
Shajiabang Town, Changshu
215542 Suzhou, Jiangsu Province
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product:	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules Poly-Crystalline Silicon Photovoltaic Module
-----------------	---

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 704061509302-07

Valid until: 2024-03-31

Date, 2019-05-10

(Zhulin Zhang)

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Product Service

CERTIFICATE

No. Z2 078488 0088 Rev. 02

Model(s):

Frameless and Framed modules with system voltage 1000VDC:
TD672P-xxx,xxx= 280 to 355 in step of 5
TD660P-xxx,xxx= 240 to 295 in step of 5
TD654P-xxx,xxx= 215 to 255 in step of 5
Frameless and Framed modules with system voltage 1500VDC:
TD672P(H)-xxx,xxx= 280 to 355 in step of 5
TD660P(H)-xxx,xxx=240 to 295 in step of 5
TD654P(H)-xxx,xxx=215 to 255 in step of 5
xxx is standing for rated output power at STC

Parameters:

Construction:	Frameless or Framed, with Junction box, Cable and Connectors.
Test Laboratory:	Yangzhou Opto-Electrical Products Testing Institute; No. 10 West Kaifa Road, Yangzhou, 225009 Jiangsu, P. R. China
Application Class:	Class A
Maximum System Voltage:	1000 V DC or 1500 V DC
Fire Safety Class:	Class A or Class C

Tested according to:

IEC 61215(ed.2)
IEC 61730-1(ed.1);am1;am2
IEC 61730-2(ed.1);am1

Production Facility(ies):

003671, 078488, 090968, 096715, 101042



Certificate of Factory Production Control

This certificate has been issued to

Suzhou Talesun Solar Technologies Co., Ltd.

of

No.1 Talesun Road
Shajiabang
Changshu
Suzhou
Jiangsu Province
215542
People's Republic of China

whose production management system has been assessed and found to comply with the Factory Production Control Requirements of the MCS Product Certification Scheme in respect of:

Production of Photovoltaic Solar Panels

at the address(s) listed on the Annex of this certificate

and includes the ranges of
Photovoltaic Solar Panels
as detailed
on the attached annex to this certificate

Signed:

on behalf of TUV SUD BABT UNLIMITED

Certificate Number: BABT 8783 R0
Valid from: 14 December 2020

This Certificate expires on: 13 December 2023



The holder of this certificate is authorised to use the MCS Approved Product Mark. This certificate has been issued in accordance with the Testing and Certification Regulations of TÜV SÜD. Conditions of validity of this certificate, if any, are listed in the Annex. This certificate constitutes page 1 of the combined Certificate and Annex.

For further details related to this certification please contact BABT@tuv-sud.co.uk

Annex to Factory Production Control Requirement Microgeneration Certification Scheme



1 Manufacturing Location

Facility 1
Suzhou Talesun Solar Technologies Co., Ltd. No.1 Talesun Road Shajiabang Changshu Suzhou Jiangsu Province 215542 P.R.China

2 Established Conformity

2.1 Product Certification Scheme Requirements

Microgeneration Certification Scheme	Revision	Applicability
MCS 005 – Solar Photovoltaic Modules	Issue 3.1	☒
MCS 010 – Factory Production Control Requirements	Issue 2.0	☒
MCS 012 – Pitched Roof Installation Kits	Issue N/A	☐
MCS 017 – Bespoke Building Integrated Photovoltaic Products	Issue N/A	☐

2.2 Assessment Report

Assessment Report Number	Issue Number	Issue Date
BABT 8783 R0	1	02-12-2020

3 Technical Documentation

3.1 User Guide

Installation Manual (Bifacial module) for European TS-ET-131 Rev. A1	Modified	21/10/2020
Installation Manual for European TS-ET-115 Rev. A1	Modified	22/10/2020
Installation Manual for crystalline solar photovoltaic modules (Half Cell) Rev. A0	Modified	01/07/2020

3.2 Test Reports

704061707022-00	Issued	22/02/2018
704061707022-01	Issued	12/11/2018
704061707022-02	Issued	28/02/2019
704061707022-03	Issued	24/09/2019
704061707022-04	Issued	15/12/2019
704061707023-00	Issued	22/02/2018
704061707023-01	Issued	12/11/2018
704061707023-02	Issued	28/02/2019
704061707023-03	Issued	10/06/2019
704061707023-04	Issued	24/09/2019
704061707023-05	Issued	15/12/2019

Annex to Factory Production Control Requirement Microgeneration Certification Scheme



704061707023-06
704061707023-07
704061707023-08

Issued 22/04/2020
Issued 10/07/2020
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4 Products Within Scope of Certification

4.1 MCS 005: Solar Photovoltaic Modules

Product Type	Product Name ^{Note 1}	Power Range (W)	Certification Number
Monocrystalline	TP678M-xxx	400 to 415 in steps of 5	BABT8783-001
Monocrystalline	TP672M-xxx	325 to 395 in steps of 5	BABT8783-002
Monocrystalline	TP6H72M-xxx	365 to 415 in steps of 5	BABT8783-003
Monocrystalline	TP6F72M-xxx	385 to 415 in steps of 5	BABT8783-004
Monocrystalline	TP6G72M-xxx	390 to 420 in steps of 5	BABT8783-005
Monocrystalline	TP6L72M-xxx	435 to 455 in steps of 5	BABT8783-006
Monocrystalline	TP660M-xxx	270 to 330 in steps of 5	BABT8783-007
Monocrystalline	TP6H60M-xxx	305 to 345 in steps of 5	BABT8783-008
Monocrystalline	TP6F60M-xxx	320 to 345 in steps of 5	BABT8783-009
Monocrystalline	TP6G60M-xxx	325 to 350 in steps of 5	BABT8783-010
Monocrystalline	TP6L60M-xxx	360 to 380 in steps of 5	BABT8783-011
Monocrystalline	TP678M(H)-xxx	400 to 415 in steps of 5	BABT8783-012
Monocrystalline	TP672M(H)-xxx	325 to 395 in steps of 5	BABT8783-013
Monocrystalline	TP6H72M(H)-xxx	365 to 415 in steps of 5	BABT8783-014
Monocrystalline	TP6F72M(H)-xxx	385 to 415 in steps of 5	BABT8783-015
Monocrystalline	TP6G72M(H)-xxx	390 to 420 in steps of 5	BABT8783-016
Monocrystalline	TP6L72M(H)-xxx	435 to 455 in steps of 5	BABT8783-017
Monocrystalline	TP660M(H)-xxx	270 to 330 in steps of 5	BABT8783-018
Monocrystalline	TP6H60M(H)-xxx	305 to 345 in steps of 5	BABT8783-019
Monocrystalline	TP6F60M(H)-xxx	320 to 345 in steps of 5	BABT8783-020
Monocrystalline	TP6G60M(H)-xxx	325 to 350 in steps of 5	BABT8783-021
Monocrystalline	TP6L60M(H)-xxx	360 to 380 in steps of 5	BABT8783-022
Polycrystalline	TP672P-xxx	315 to 355 in steps of 5	BABT8783-023
Polycrystalline	TP6H72P-xxx	325 to 350 in steps of 5	BABT8783-024
Polycrystalline	TP660P-xxx	255 to 295 in steps of 5	BABT8783-025
Polycrystalline	TP6H60P-xxx	270 to 290 in steps of 5	BABT8783-026
Polycrystalline	TP672P(H)-xxx	315 to 355 in steps of 5	BABT8783-027
Polycrystalline	TP6H72P(H)-xxx	325 to 350 in steps of 5	BABT8783-028
Polycrystalline	TP660P(H)-xxx	255 to 295 in steps of 5	BABT8783-029
Polycrystalline	TP6H60P(H)-xxx	270 to 290 in steps of 5	BABT8783-030

Note 1: where xxx = power rating in W

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5 Additional Information

All products within the scope of this certification shall be listed on the MCS Installations Database for the duration of this certificates validity. The database shall contain an entry for each individual power rating for the certified product, where the power rating shall be suffixed to the certificate number as listed on this certificate.

6 Conditions of Validity

This certificate authorizes the manufacturer or their authorized representative to apply the MCS Approved Product Mark to the range of products listed within this certification in accordance with the MCS Manufacturers / Distributors agreement dated **25th November 2020**.

This certificate ceases to be valid if the manufacturer makes any changes or modifications to the approved equipment or the approved quality system, which have not been notified to, and agreed with TUV SUD BABT UNLIMITED or a person appointed by TUV SUD BABT UNLIMITED to perform that role.

The manufacturer must immediately cease affixing the MCS Approved Product Mark on any product subject to expiry, withdrawal or suspension of this certification.

Signature: _____

Date: _____ 2020-12-14

Print Name: Stephen Milliken

On behalf of TUV SUD BABT UNLIMITED