



V-Series Modules

4BB Polycrystalline Solar Modules

Peak Power:335-350Wp

High Quality

- Powered by TSEC premium grade solar cells.
- PID free by adopting TSEC PID free solar cells plus PID resistant materials.

High Reliability

- Snow and wind pressure(Mechanical loading) up to 5,400 pa
- PID resistance up to 1000hrs by TÜV Rheinland.
- Salt mist corrosion testing up to 56 days by ITRI, follow severity 6 in IEC 60068-2-52 standard.

Strict Quality Control

- Current sorting for hot spot protection.
- 3-stage EL tests at pre-lamination, before framing and before delivery.

Module Characteristics

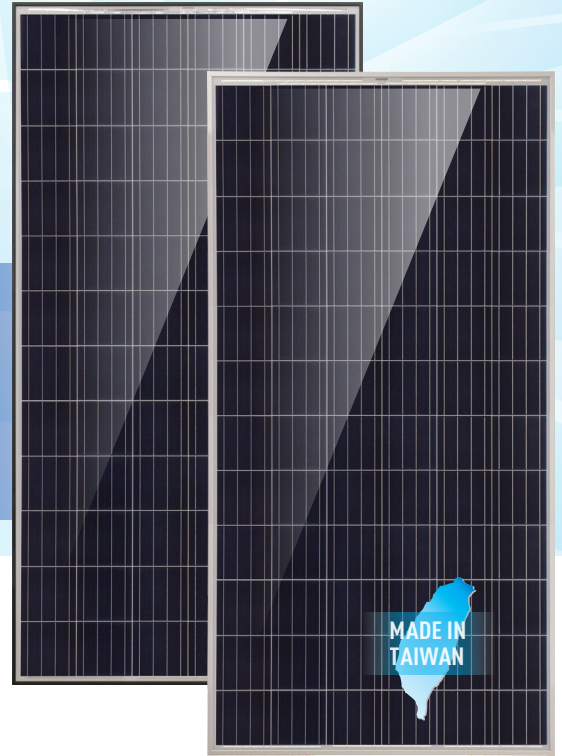
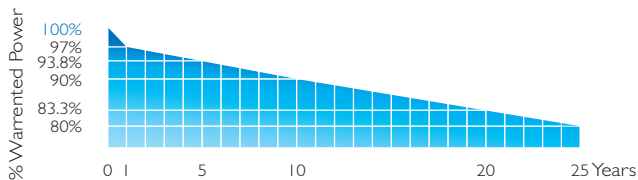
Dimension	1,968 × 992 × 40 mm
Weight	21.5 Kg

Certifications

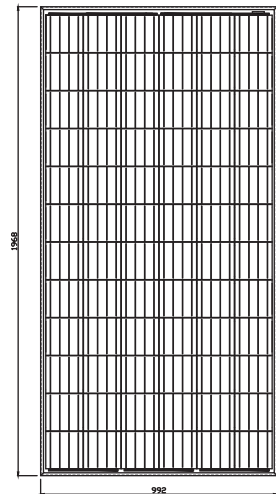
- TÜV Rheinland IEC 61215:2016、IEC 61730-1:2016&IEC 61730-2:2016
- CE
- ISO 9001:2008 Quality management system
- ISO 14001:2015 Standards for environmental management system
- ISO 50001:2011 Energy management system
- OHSAS 18001:2007 International standards for occupational health and safety

Warranty

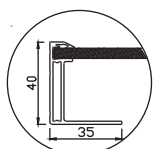
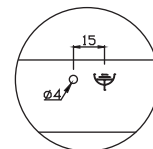
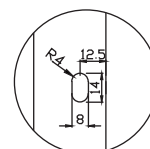
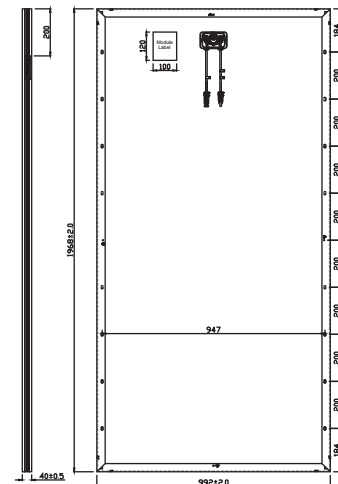
- 10-year materials and workmanship warranty.
- 25-year linear power warranty.



Module Front Side



Module Rear Side



V-Series 350W

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Performance Under Standard Test Conditions

Model Name			TS72-6P3-335	TS72-6P3-340	TS72-6P3-345	TS72-6P3-350
Max. power at STC	P_{max}	W	335	340	345	350
Max. power voltage	V_{mp}	V	37.52	37.70	37.83	38.13
Max. power current	I_{mp}	A	8.93	9.02	9.12	9.18
Open circuit voltage	V_{oc}	V	46.78	46.88	46.99	47.10
Short circuit current	I_{sc}	A	9.61	9.72	9.80	9.85
F.F. (%)		%	74.53%	74.63%	74.92%	75.45%
Module Conversion Eff.		%	17.16%	17.42%	17.67%	17.93%
Module Effective Conversion Eff.		%	18.94%	19.22%	19.50%	19.78%

* Standard Test Condition(1,000W/m²,25°C,AM 1.5)

* Module Conversion Eff. (%) = [Max power at STC(w) / (Solar Module Area(m²) × 1000 (w/m²))] × 100%

* Module Effective Conversion Eff. (%) = [Max power at STC(w) / (Solar Cell Total Area(m²) × 1000 (w/m²))] × 100%

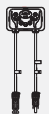
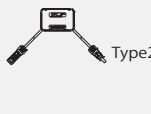
Thermal Characteristics

Normal Operating cell temperature	NMOT	°C	45±2
TC I _{sc}	$\alpha_{I_{sc}}$	%/°C	+0.06
TC V _{oc}	$\beta_{V_{oc}}$	%/°C	- 0.31
TC P _{max}	δ	%/°C	- 0.41

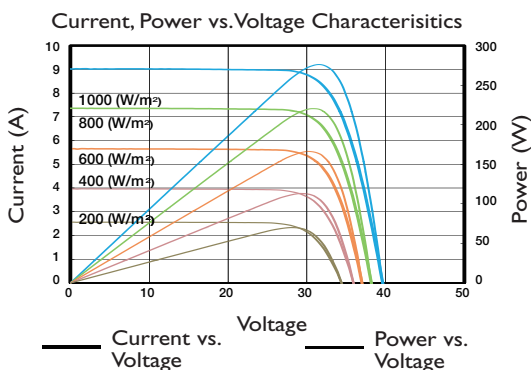
System Integration Parameters

Max. system voltage	1000V
Module fire resistance class	Class C
Application class (Safety class II)	Class A
series fuse rating	15 A
Number of bypass diodes	3
Max. mechanical load	5,400Pa
Temperature range	-40 to +85°C

Component Material

Cell type	Polycrystalline / 156.75 x156.75mm
Cell per module	4BB / 72 pcs
Front	Low-iron glass / Tempered
Encapsulant Flim	Ethylene Vinyl Acetate(EVA)
Rear	Backsheet
Frame	6063T5 Anodized aluminum (silver/black)
Junction Box	IP68 Type1  Type2 
Connector	MC4 Compatible
Cable	1200mm / 12 AWG / 4mm ²

IV Curve



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* The information in this document is subject to change without notice.

* TSEC reserves the rights of final interpretation and revision of datasheet.

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