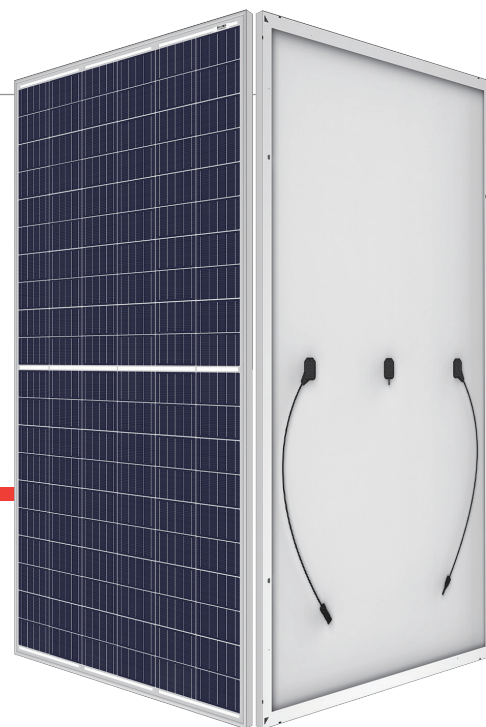


SPLITMAX

THE FRAMED 120-CELL MODULE (1500V)

TSM-PE05H



120 CELL
MULTICRYSTALLINE MODULE

280-290W
POWER OUTPUT RANGE

17.5%
MAXIMUM EFFICIENCY

0/+5W
POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy. We believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina Solar is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina Solar as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

Comprehensive Product And System Certificates

IEC61215/IEC61730/UL1703/IEC61701/IEC62716
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gas Emissions Verification
 OHSAS 18001: Occupational Health and Safety Management System



Ideal for large scale installations

- Anti-shading design
- Reduce BOS cost by connecting more modules in a string
- 1500V IEC certified



Half-cell design brings higher efficiency

- Half-Cell layout (120 multicrystalline)
- LRF integrated to gain more power, need avoid light sensitive case
- Low thermal coefficients for greater energy production at high operating temperatures



Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- PID resistant
- 100 % EL double inspection

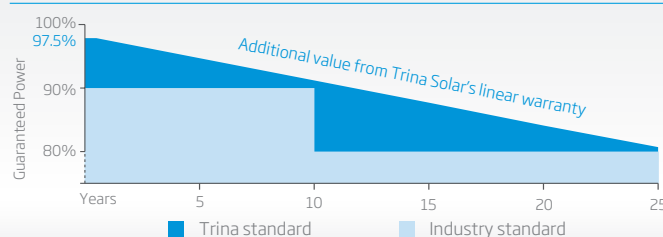


Certified to withstand challenging environmental conditions

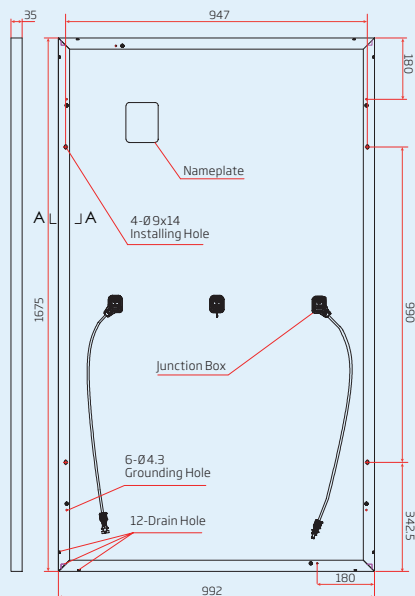
- 2400 Pa wind load
- 5400 Pa snow load

LINEAR PERFORMANCE WARRANTY

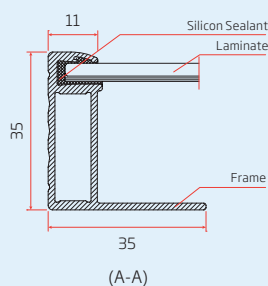
10 Year Product Warranty · 25 Year Linear Power Warranty



DIMENSIONS OF PV MODULE
TSM-PE05H
(unit: mm)

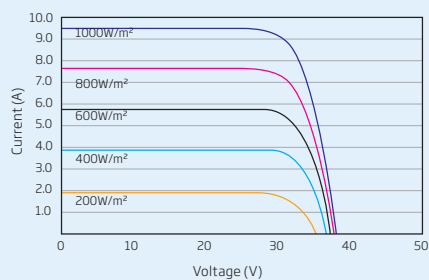


Back View

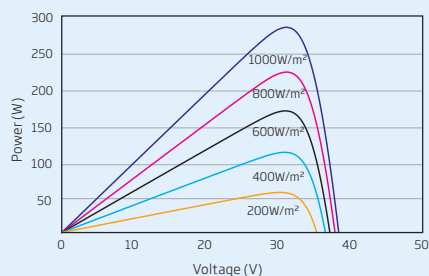


(A-A)

I-V CURVES OF PV MODULE (285W)



P-V CURVES OF PV MODULE (285W)



ELECTRICAL DATA @ STC

| ELECTRICAL DATA @ STC | TSM-280 PE05H | TSM-285 PE05H | TSM-290 PE05H |
|---|------------------|------------------|------------------|
| Peak Power Watts-P _{MAX} (Wp)* | 280 | 285 | 290 |
| Power Output Tolerance-P _{MAX} (W) | 0/+5 | 0/+5 | 0/+5 |
| Maximum Power Voltage-V _{MPP} (V) | 31.3 | 31.4 | 31.5 |
| Maximum Power Current-I _{MPP} (A) | 8.95 | 9.08 | 9.20 |
| Open Circuit Voltage-V _{OC} (V) | 38.7 | 38.8 | 39.0 |
| Short Circuit Current-I _{SC} (A) | 9.40 | 9.45 | 9.50 |
| Module Efficiency η _m (%) | 16.9 | 17.2 | 17.5 |

STC: Irradiance 1000 W/m², Cell Temperature 25 °C, Air Mass AM1.5

* Measuring tolerance: $\pm 3\%$

ELECTRICAL DATA @ NOCT

| ELECTRICAL DATA @ NOCT | TSM-280 PE05H | TSM-285 PE05H | TSM-290 PE05H |
|--------------------------------------|------------------|------------------|------------------|
| Maximum Power- P_{MAX} (Wp) | 207 | 211 | 215 |
| Maximum Power Voltage- U_{MPP} (V) | 29.1 | 29.4 | 29.7 |
| Maximum Power Current- I_{MPP} (A) | 7.11 | 7.18 | 7.24 |
| Open Circuit Voltage- U_{OC} (V) | 35.8 | 35.9 | 36.1 |
| Short Circuit Current- I_{SC} (A) | 7.59 | 7.63 | 7.67 |

NOCT: Irradiance at 800 W/m², Ambient Temperature 20 °C, Wind Speed 1 m/s.

MECHANICAL DATA

| | |
|-------------------|--|
| Solar Cells | Multicrystalline 156.75 × 78.375 mm |
| Cell Orientation | 120 cells (12 × 10) |
| Module Dimensions | 1675 × 992 × 35 mm |
| Weight | 18.8 kg |
| Glass | 3.2 mm, high transparency, AR coated and heat tempered solar glass |
| Backsheet | White |
| Frame | Silver Anodized Aluminium Alloy |
| J-Box | IP 67 or IP 68 rated |
| Cables | Photovoltaic Technology Cable 4.0mm², Portrait: N 140mm/P 285mm, Landscape: N 1200 mm/P 1200 mm |
| Connector | MC4 EV02/UTX/TS4 |

TEMPERATURE RATINGS

| | |
|---|------------|
| Nominal Operating Cell Temperature (NOCT) | 44°C (±2K) |
| Temperature Coefficient of P _{MAX} | - 0.41%/K |
| Temperature Coefficient of V _{OC} | - 0.32%/K |
| Temperature Coefficient of I _{SC} | 0.05%/K |

MAXIMUM RATINGS

| | |
|-------------------------|----------------|
| Operational Temperature | -40 to +85°C |
| Maximum System Voltage | 1500V DC (IEC) |
| Max Series Fuse Rating* | 15 A |
| Mechanical Load | 5400 Pa |
| Wind Load | 2400 Pa |

* DO NOT connect fuse in combiner box with two or more strings in parallel connection

WARRANTY

| |
|--------------------------------------|
| 10 year Product Workmanship Warranty |
| 25 year Linear Performance Warranty |

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

| | |
|----------------------------|------------|
| Modules per box: | 30 pieces |
| Modules per 40' container: | 780 pieces |



TSM_EN_2017_B