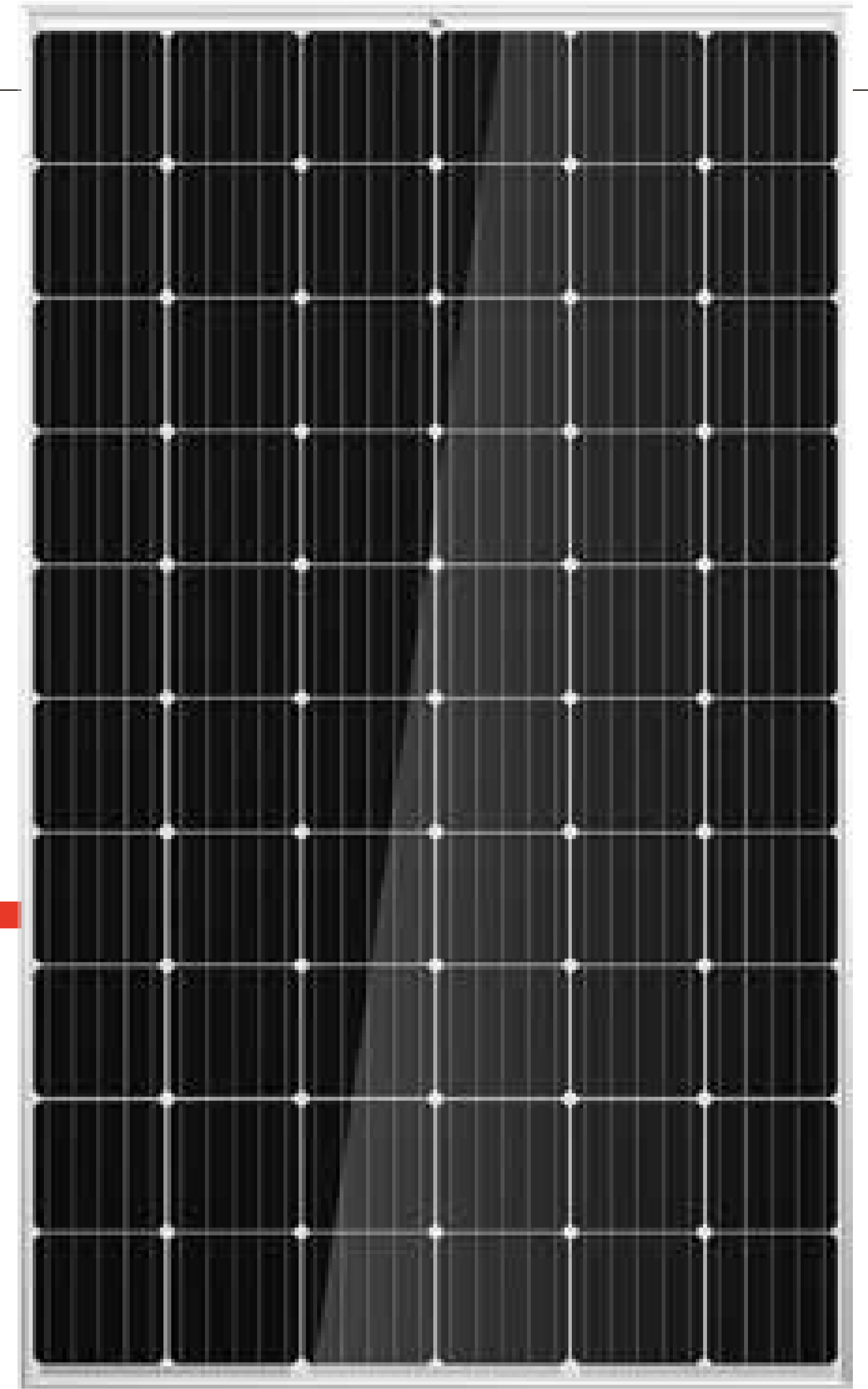


THE  
**Honey<sup>M</sup> PLUS<sup>+</sup>**  
 FRAMED 60-CELL MODULE



**60 CELL**  
 MONOCRYSTALLINE MODULE

**275-315W**  
 POWER OUTPUT RANGE

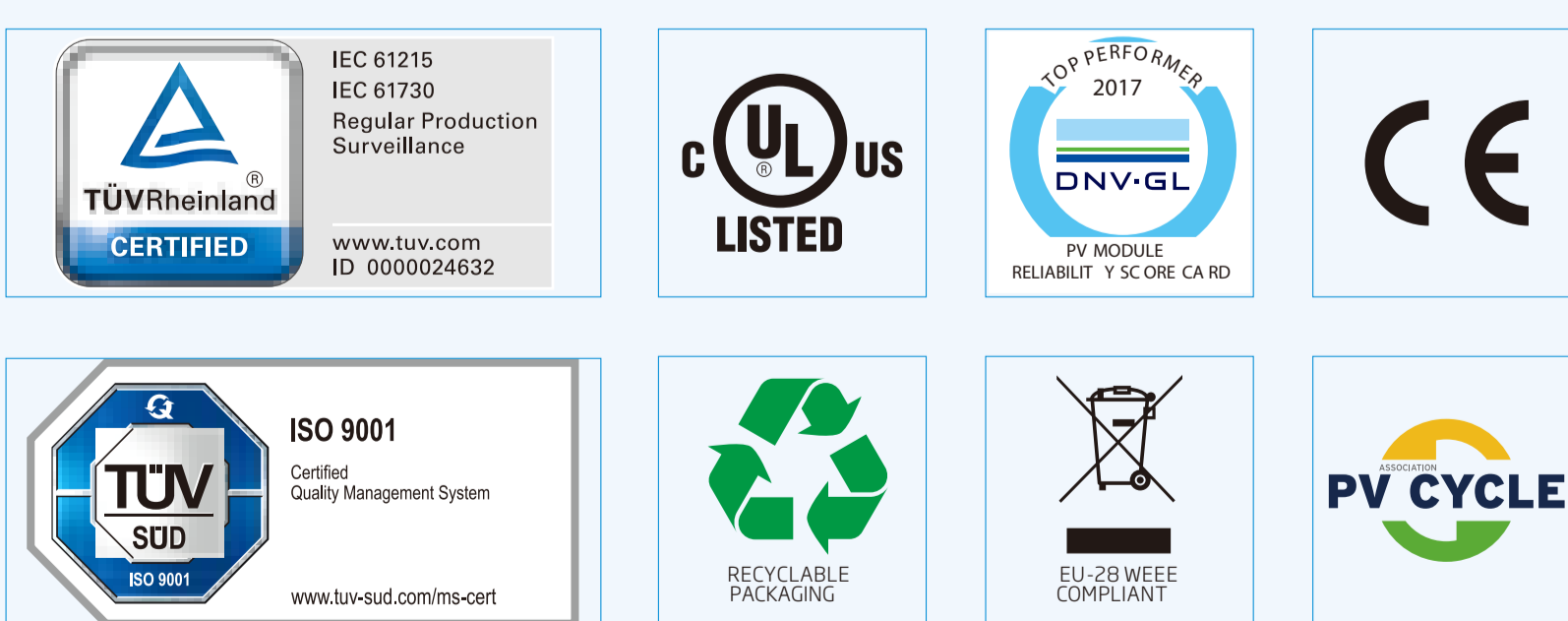
**19.2%**  
 MAXIMUM EFFICIENCY

**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 is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

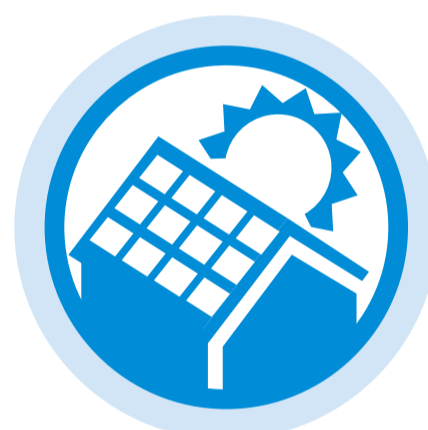
**Comprehensive Products  
 And System Certificates**

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



**Excellent low light performance on cloudy days, mornings and evenings**

- Advanced surface texturing
- Back surface field
- Selective emitter



**Maximize limited space with top-end efficiency**

- Up to 192W/m<sup>2</sup> power density
- 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

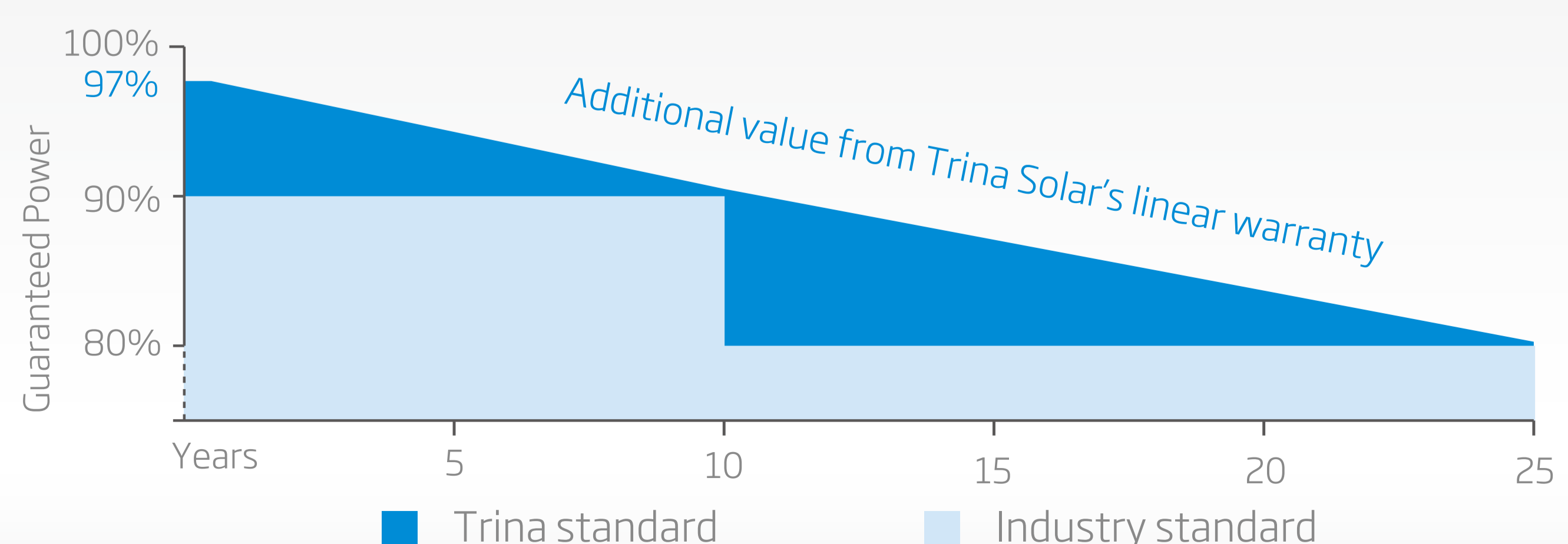


**Certified to withstand the most challenging environmental conditions**

- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

**LINEAR PERFORMANCE WARRANTY**

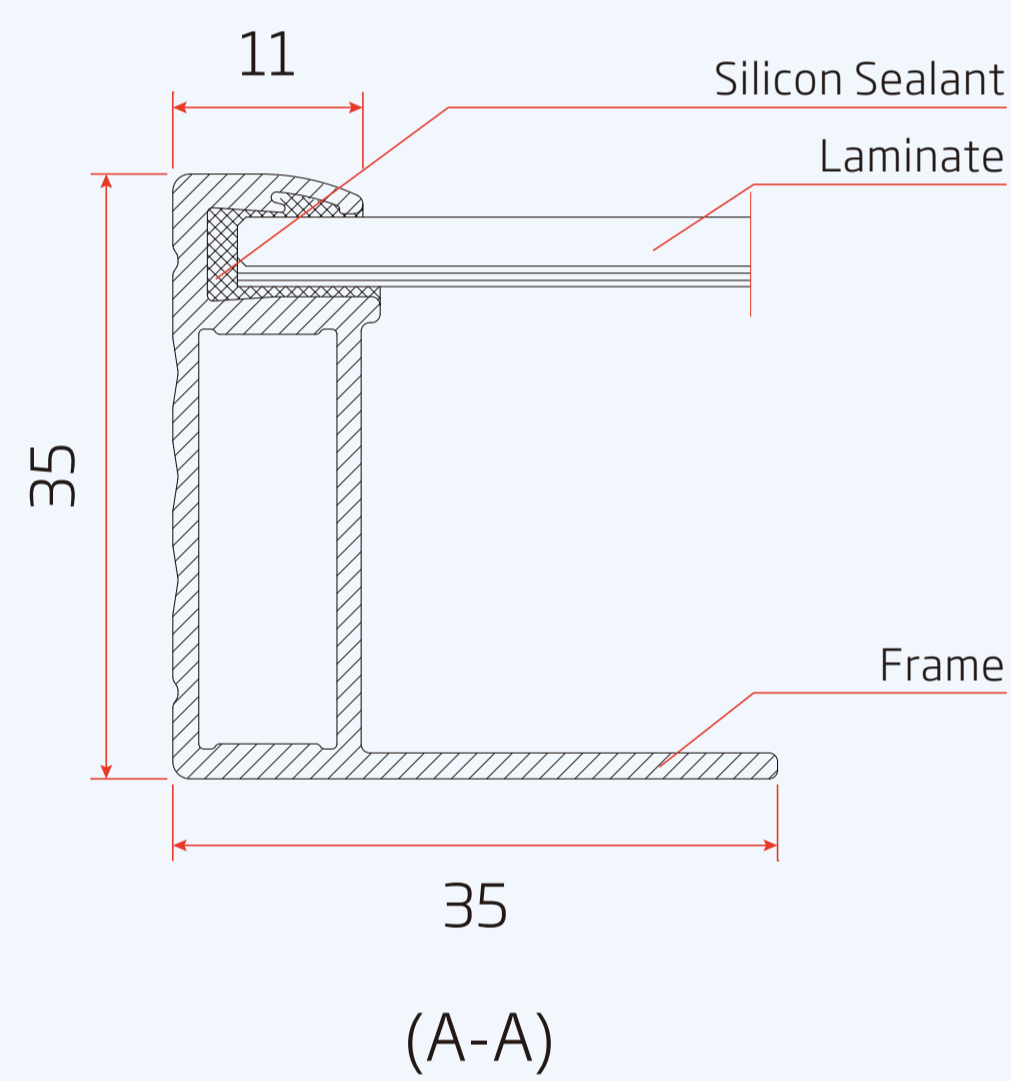
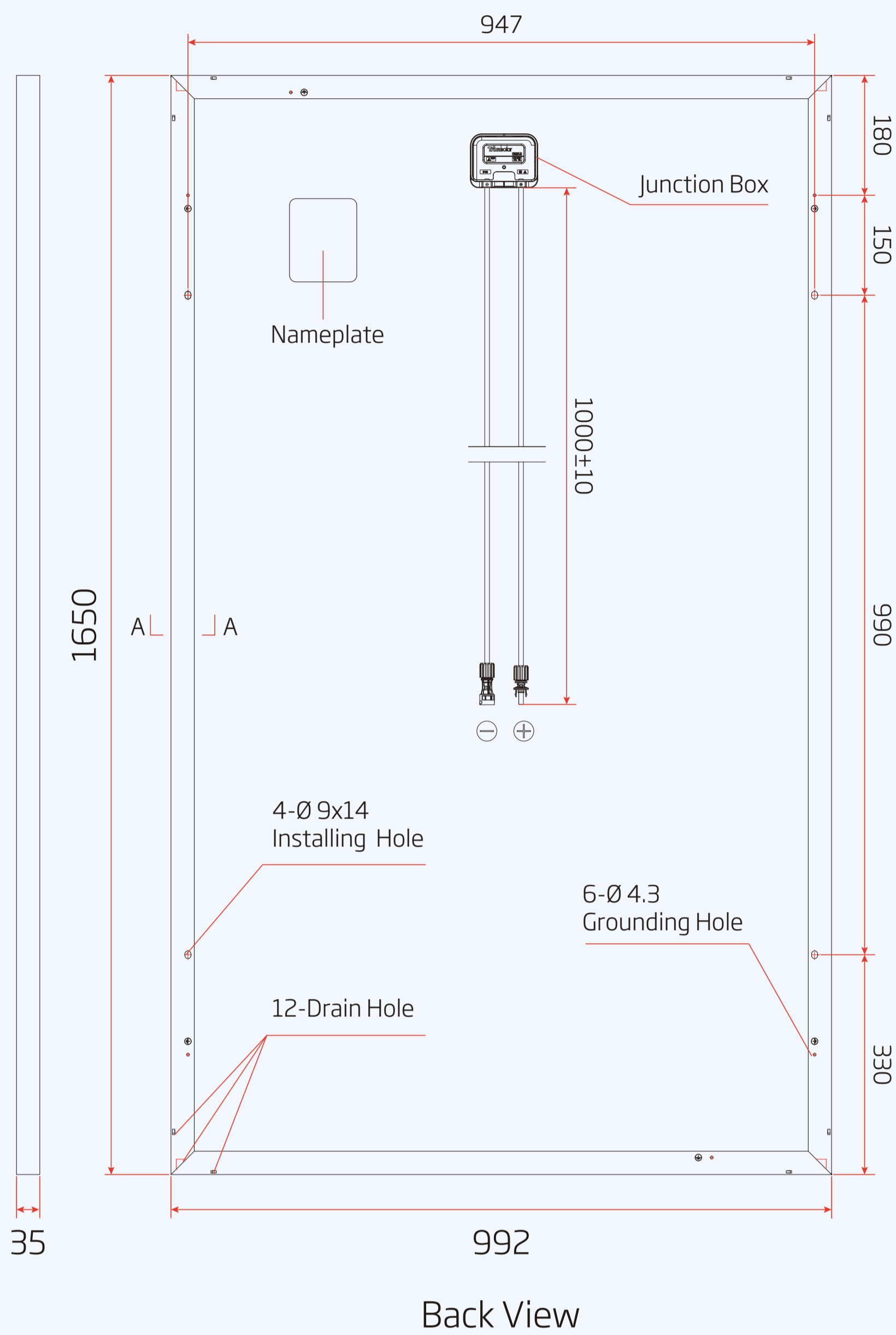
10 Year Product Warranty · 25 Year Linear Power Warranty



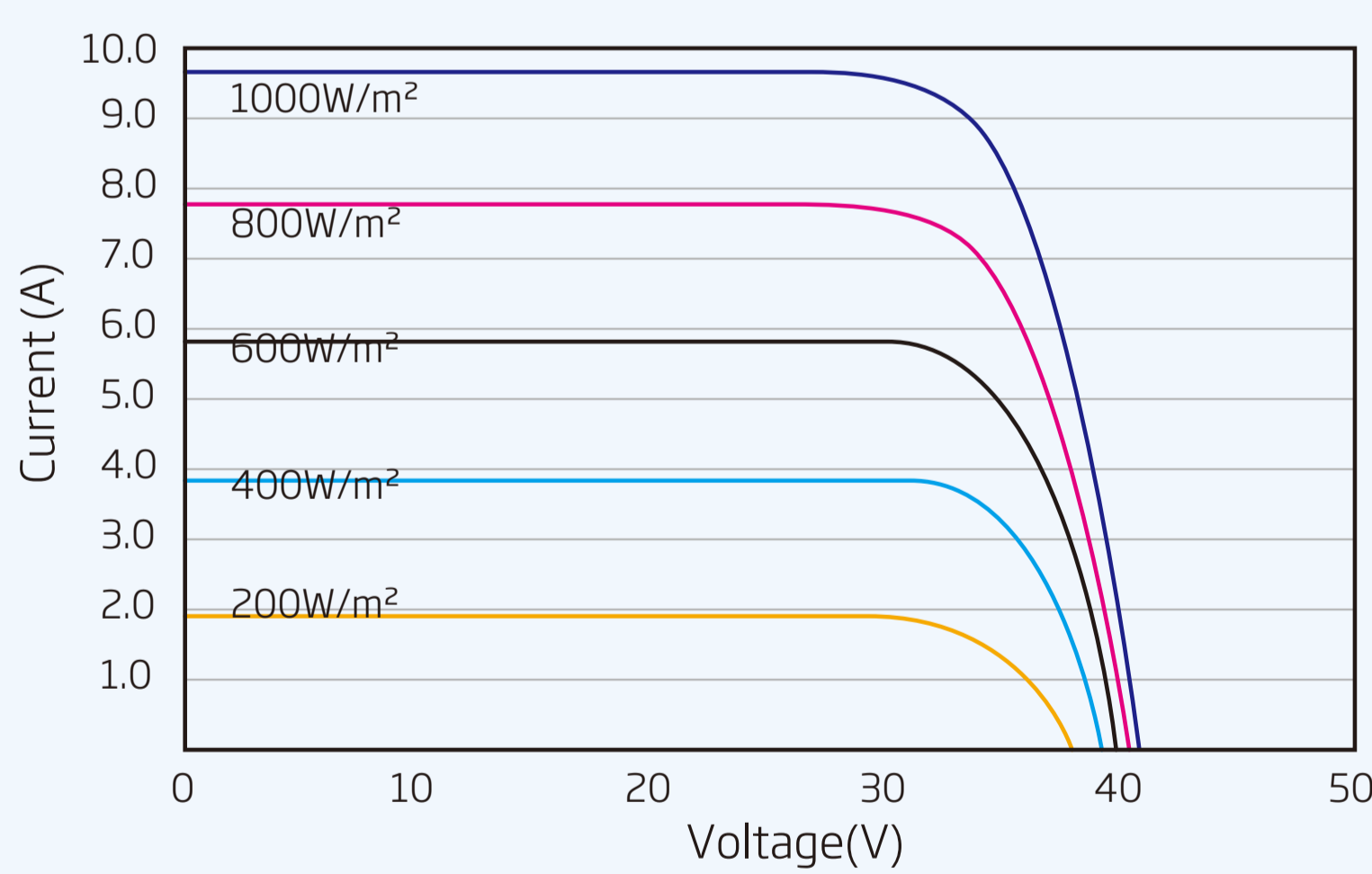
## PRODUCTS POWER RANGE

TSM-DD05A(II)	280-315W
TSM-DD05A.08(II)	280-315W
TSM-DD05A.05(II)	275-310W

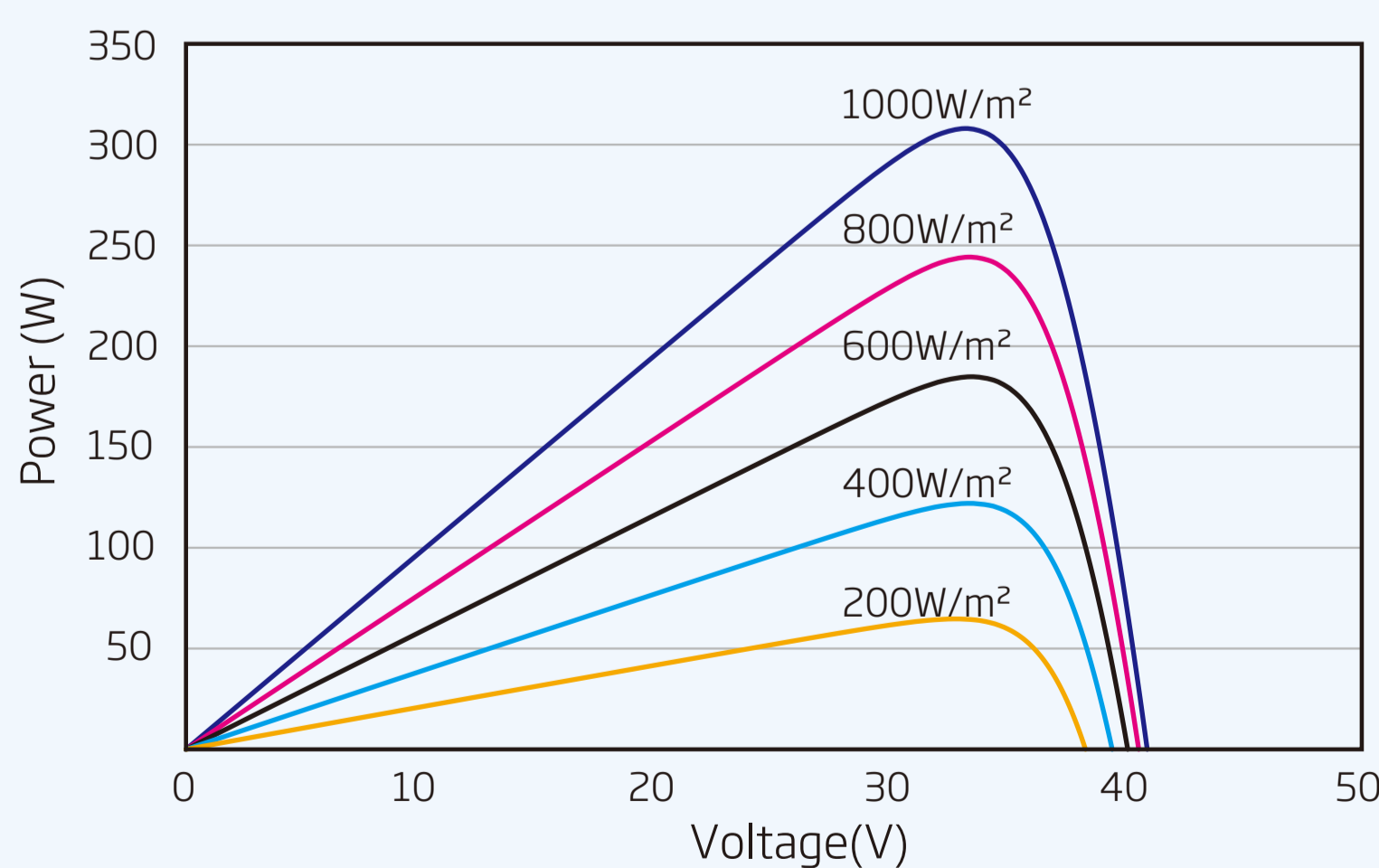
### DIMENSIONS OF PV MODULE(mm)



### I-V CURVES OF PV MODULE(305W)



### P-V CURVES OF PV MODULE(305W)



### ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}$ (Wp)*	275	280	285	290	295	300	305	310	315
Power Output Tolerance- $P_{MAX}$ (W)	0 ~ +5								
Maximum Power Voltage- $V_{MPP}$ (V)	31.4	31.7	31.8	32.2	32.5	32.6	32.9	33.1	33.3
Maximum Power Current- $I_{MPP}$ (A)	8.76	8.84	8.97	9.01	9.08	9.19	9.28	9.37	9.46
Open Circuit Voltage- $V_{OC}$ (V)	38.4	38.4	38.5	38.9	39.6	39.8	40.0	40.2	40.5
Short Circuit Current- $I_{SC}$ (A)	9.24	9.42	9.51	9.66	9.68	9.77	9.85	9.94	10.0
Module Efficiency $\eta_m$ (%)	16.8	17.1	17.4	17.7	18.0	18.3	18.6	18.9	19.2

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\*Measuring tolerance: ±3%.

### ELECTRICAL DATA (NOCT)

Maximum Power- $P_{MAX}$ (Wp)	205	209	212	216	220	223	227	231	235
Maximum Power Voltage- $V_{MPP}$ (V)	29.1	29.4	29.5	29.9	30.1	30.2	30.5	30.7	30.9
Maximum Power Current- $I_{MPP}$ (A)	7.04	7.10	7.21	7.24	7.30	7.38	7.46	7.53	7.60
Open Circuit Voltage- $V_{OC}$ (V)	35.7	35.7	35.8	36.2	36.8	37.0	37.2	37.4	37.6
Short Circuit Current- $I_{SC}$ (A)	7.46	7.61	7.68	7.80	7.82	7.89	7.95	8.03	8.10

NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

### MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6 inches)
Cell Orientation	60 cells (6 × 10)
Module Dimensions	1650 × 992 × 35 mm (65.0 × 39.1 × 1.38 inches)
Weight	18.6 kg (41.0 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Backsheet	White [DD05A(II), DD05A.08(II)]; Black [DD05A.05(II)]
Frame	Silver Anodized Aluminium Alloy [DD05A(II)]; Black Anodized Aluminium Alloy [DD05A.08(II), DD05A.05(II)]
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ), 1000 mm (39.4 inches)
Connector	MC4/UTX/TS4/QC4*

\*Please refer to regional datasheet for specified connector.

### TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	44°C (±2°C)
Temperature Coefficient of $P_{MAX}$	-0.39%/°C
Temperature Coefficient of $V_{OC}$	-0.29%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

### MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1000V DC (IEC) 1000V DC (UL)
Max Series Fuse Rating	15A (Power ≤ 285W) 20A (Power ≥ 290W)

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

### WARRANTY

10 year Product Workmanship Warranty
25 year Linear Power Warranty

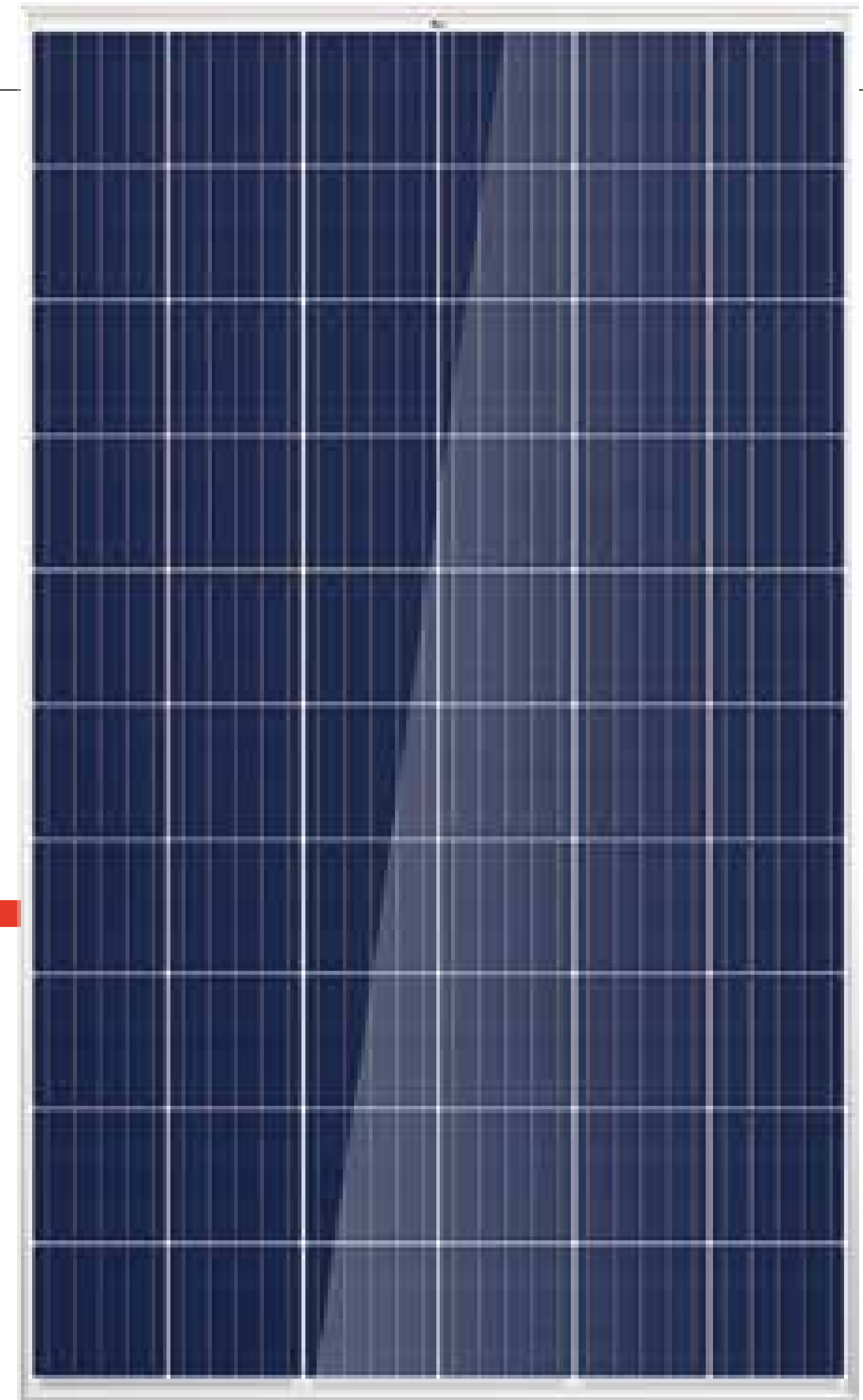
(Please refer to product warranty for details)

### PACKAGING CONFIGURATION

Modules per box: 30 pieces
Modules per 40' container: 840 pieces

# THE Honey

## FRAMED 60-CELL MODULE



**60 CELL**  
MULTICRYSTALLINE MODULE

**265-285W**  
POWER OUTPUT RANGE

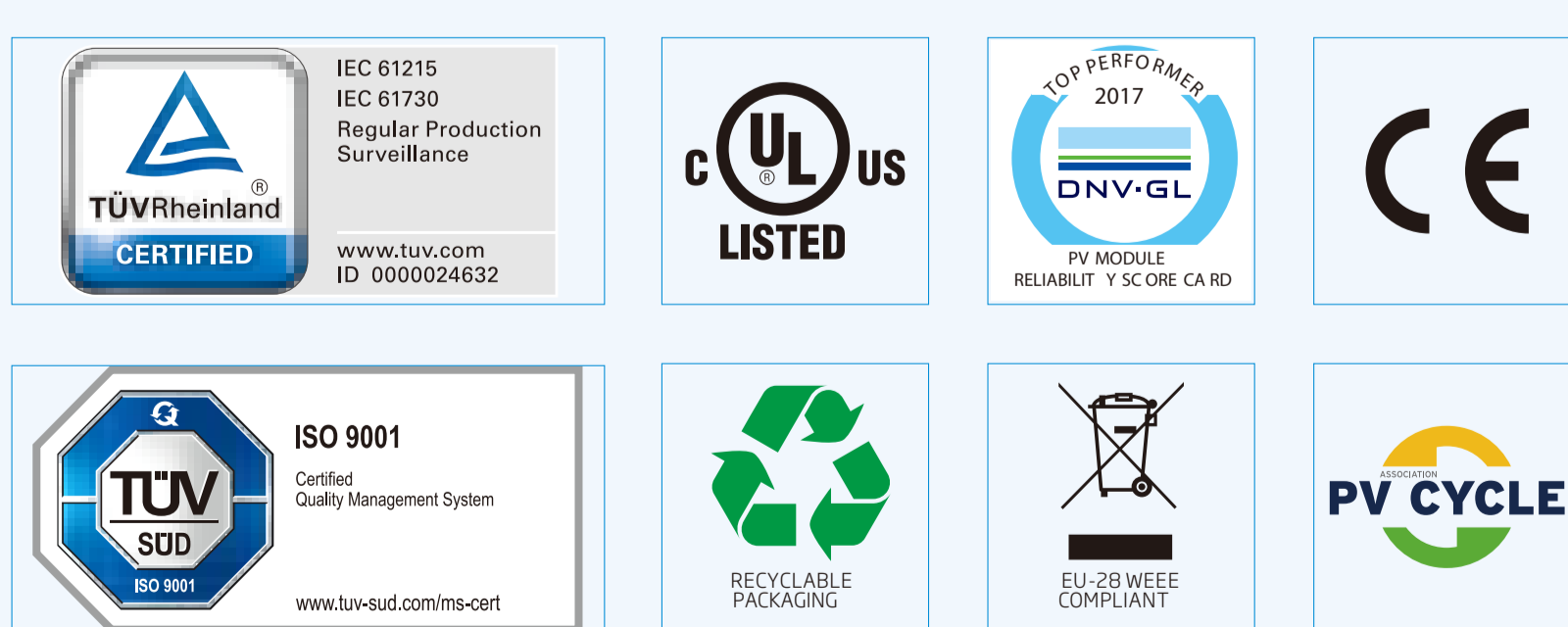
**17.4%**  
MAXIMUM EFFICIENCY

**0~+5W**  
POSITIVE POWER TOLERANCE

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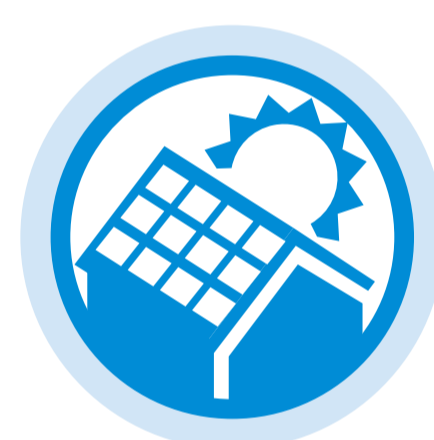
### Comprehensive Products And System Certificates

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



### Our most versatile product

- Compatible with all major BOS components and system designs
- 1000V UL/1000V IEC certified



### Maximize Limited Space

- Up to 174 W/m<sup>2</sup> power density



### 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

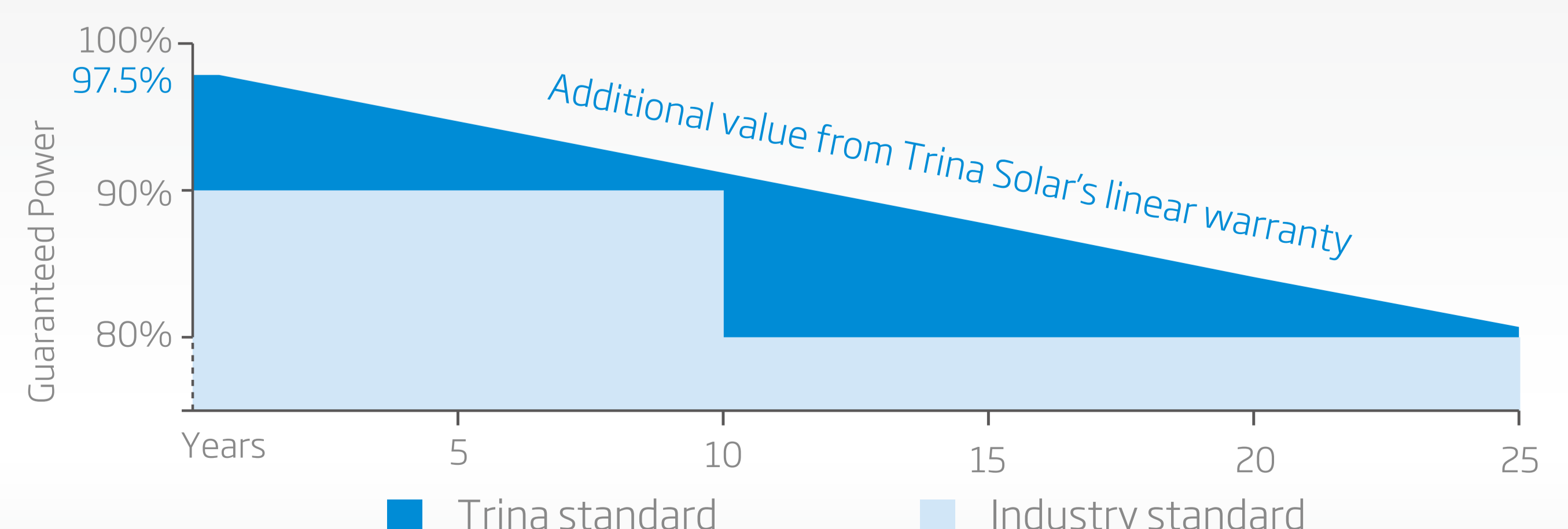


### Certified to withstand the most challenging environmental conditions

- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

### LINEAR PERFORMANCE WARRANTY

10 Year Product Warranty · 25 Year Linear Power Warranty

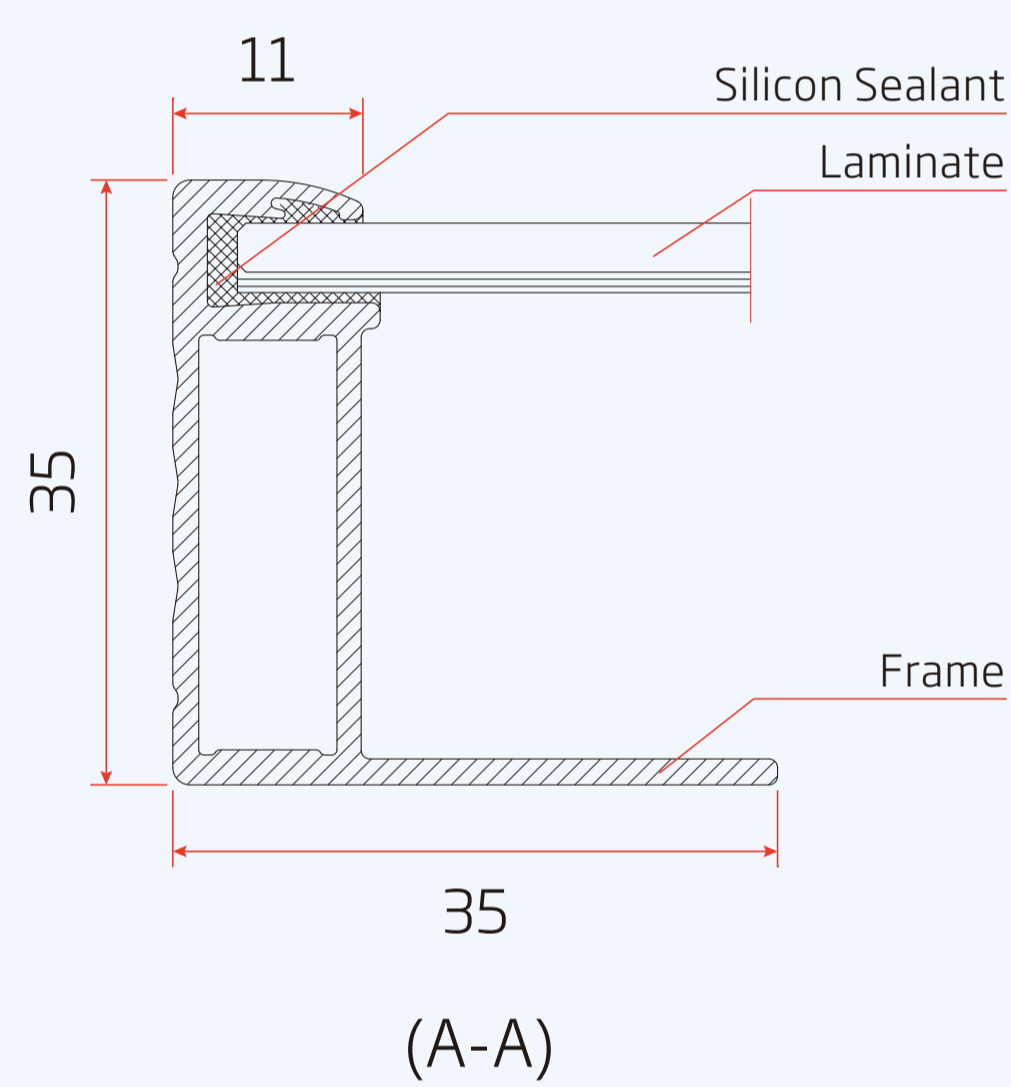
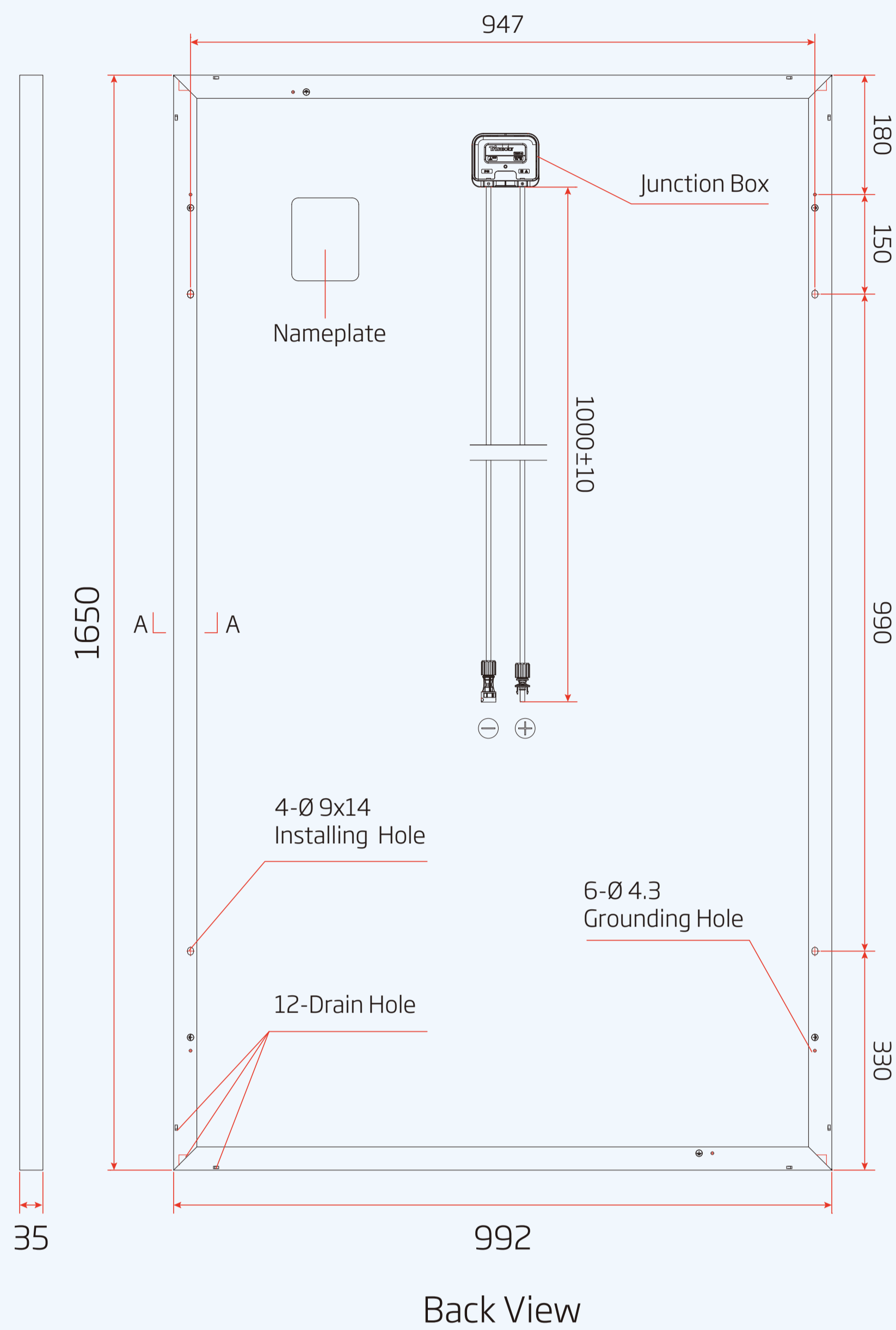


## PRODUCTS

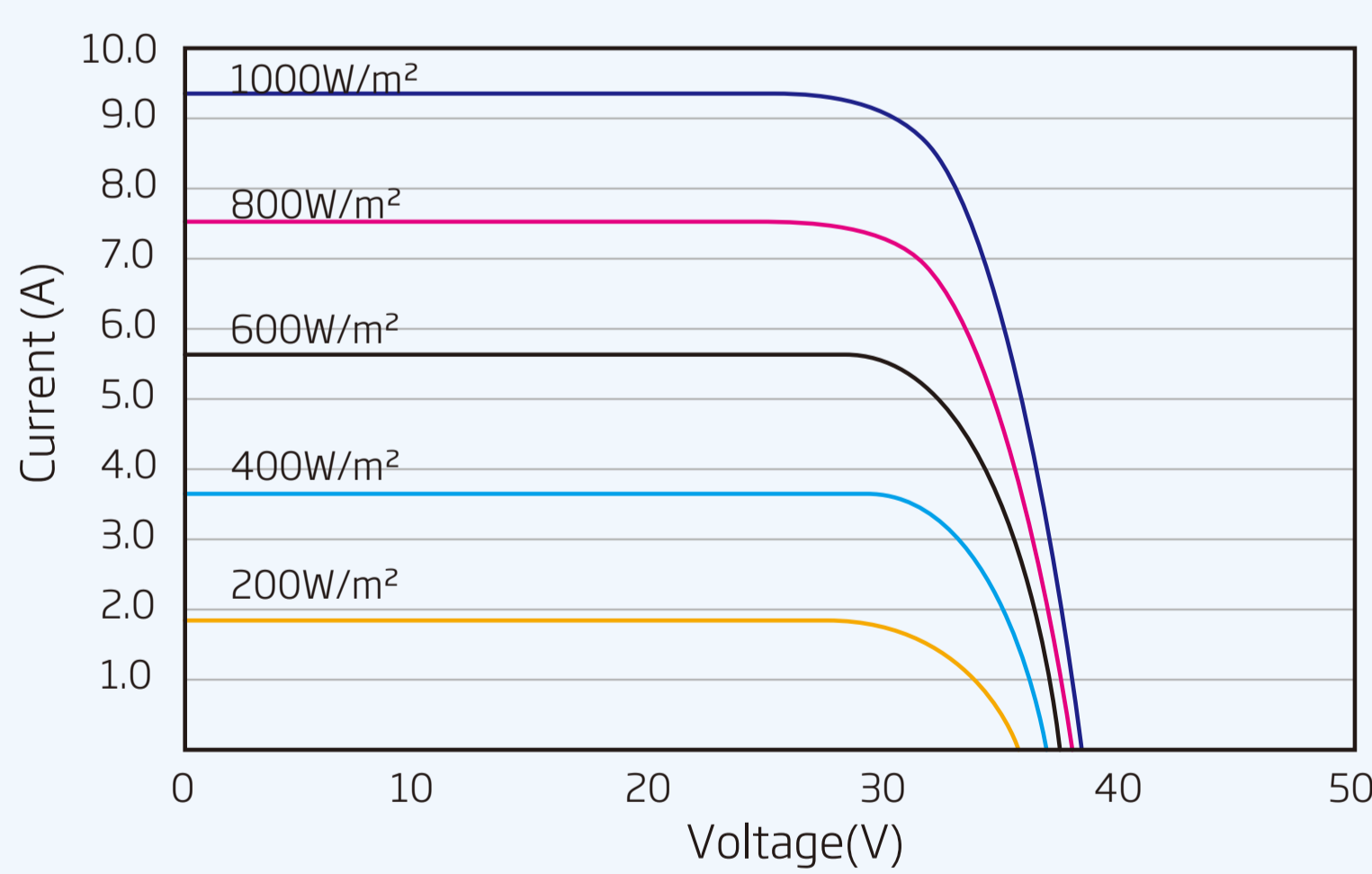
## POWER RANGE

TSM-PD05	270-285W
TSM-PD05.08	270-285W
TSM-PD05.05	265-280W

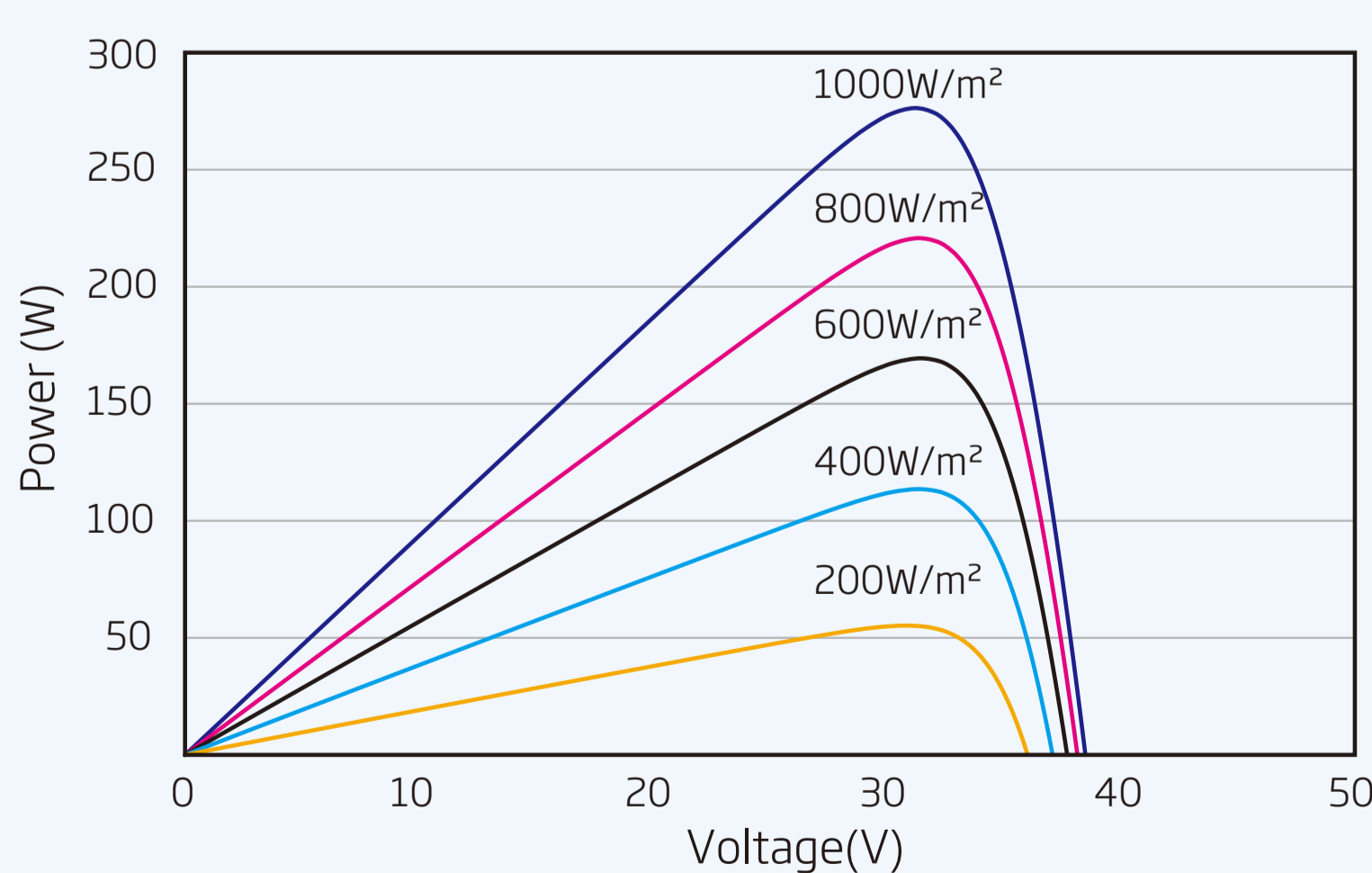
## DIMENSIONS OF PV MODULE(mm)



## I-V CURVES OF PV MODULE(280W)



## P-V CURVES OF PV MODULE(280W)



## ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}$ (Wp)*	265	270	275	280	285
Power Output Tolerance- $P_{MAX}$ (W)	0 ~ +5				
Maximum Power Voltage- $V_{MPP}$ (V)	30.8	30.9	31.1	31.4	31.6
Maximum Power Current- $I_{MPP}$ (A)	8.61	8.73	8.84	8.92	9.02
Open Circuit Voltage- $V_{OC}$ (V)	37.7	37.9	38.1	38.2	38.3
Short Circuit Current- $I_{SC}$ (A)	9.15	9.22	9.32	9.40	9.49
Module Efficiency $\eta_m$ (%)	16.2	16.5	16.8	17.1	17.4

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\*Measuring tolerance: ±3%.

## ELECTRICAL DATA (NOCT)

Maximum Power- $P_{MAX}$ (Wp)	197	200	204	208	211
Maximum Power Voltage- $V_{MPP}$ (V)	28.5	28.6	28.8	29.0	29.2
Maximum Power Current- $I_{MPP}$ (A)	6.90	7.00	7.09	7.15	7.23
Open Circuit Voltage- $V_{OC}$ (V)	34.9	35.1	35.3	35.4	35.5
Short Circuit Current- $I_{SC}$ (A)	7.39	7.44	7.52	7.59	7.66

NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

## MECHANICAL DATA

Solar Cells	Multicrystalline 156.75 × 156.75 mm (6 inches)
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J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ), 1000 mm (39.4 inches)
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## TEMPERATURE RATINGS

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Temperature Coefficient of $P_{MAX}$	- 0.41%/°C
Temperature Coefficient of $V_{OC}$	- 0.32%/°C
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Operational Temperature	-40~+85°C
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