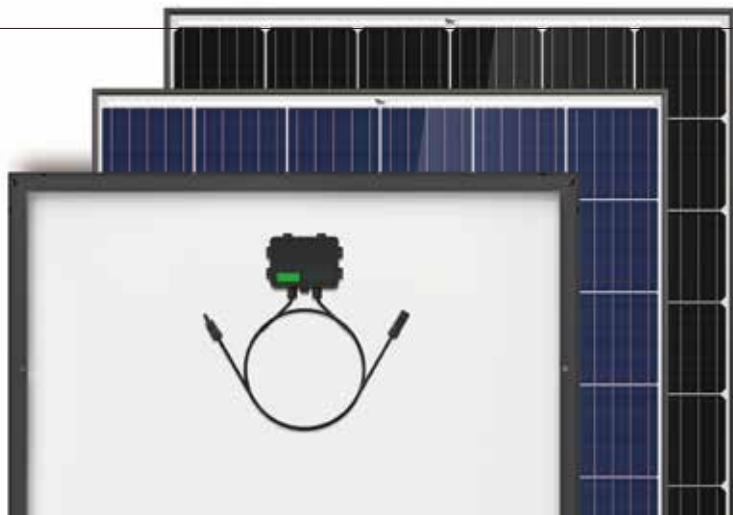


Trina^{smart}

THE OPTIMIZED SOLUTION



COMPATIBLE WITH MOST TRINA MODULES

340-375W
POWER OUTPUT RANGE

FULLY INTEGRATED SMART SOLUTION

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



Trinasolar



Safer Solar

- Panel-level disconnect to remotely deactivate modules
- Arc, fire and safety hazard mitigation



More Efficient O&M

- Panel-level monitoring to pinpoint problems
- Detailed real-time alerts and analytics



Highest Power Density

- Install more modules on any roof
- Uneven string lengths enables design flexibility



Maximized Energy Harvest

- Impedance matching technology eliminates mismatch losses
- More power from each module



Lower BOS Costs from Smart Curve Technology

- 30% lower max open circuit voltage, 30% longer strings
- Fewer combiners, fuses and copper wiring required

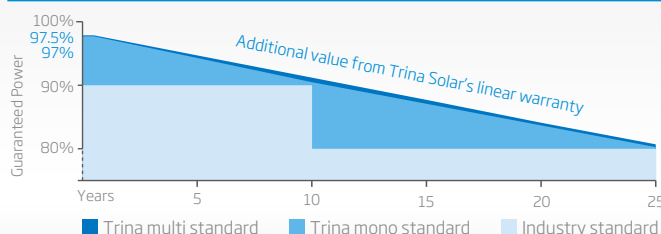


Fully Integrated

- Compatible with any inverter
- No additional boxes to mount on module

LINEAR PERFORMANCE WARRANTY

10 Year Product Warranty · 25 Year Linear Power Warranty

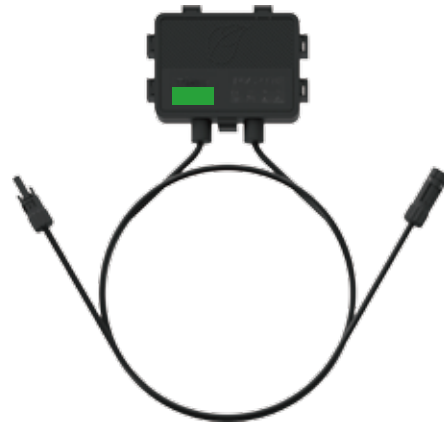


THE OPTIMIZED SOLUTION

Trina^{smart}

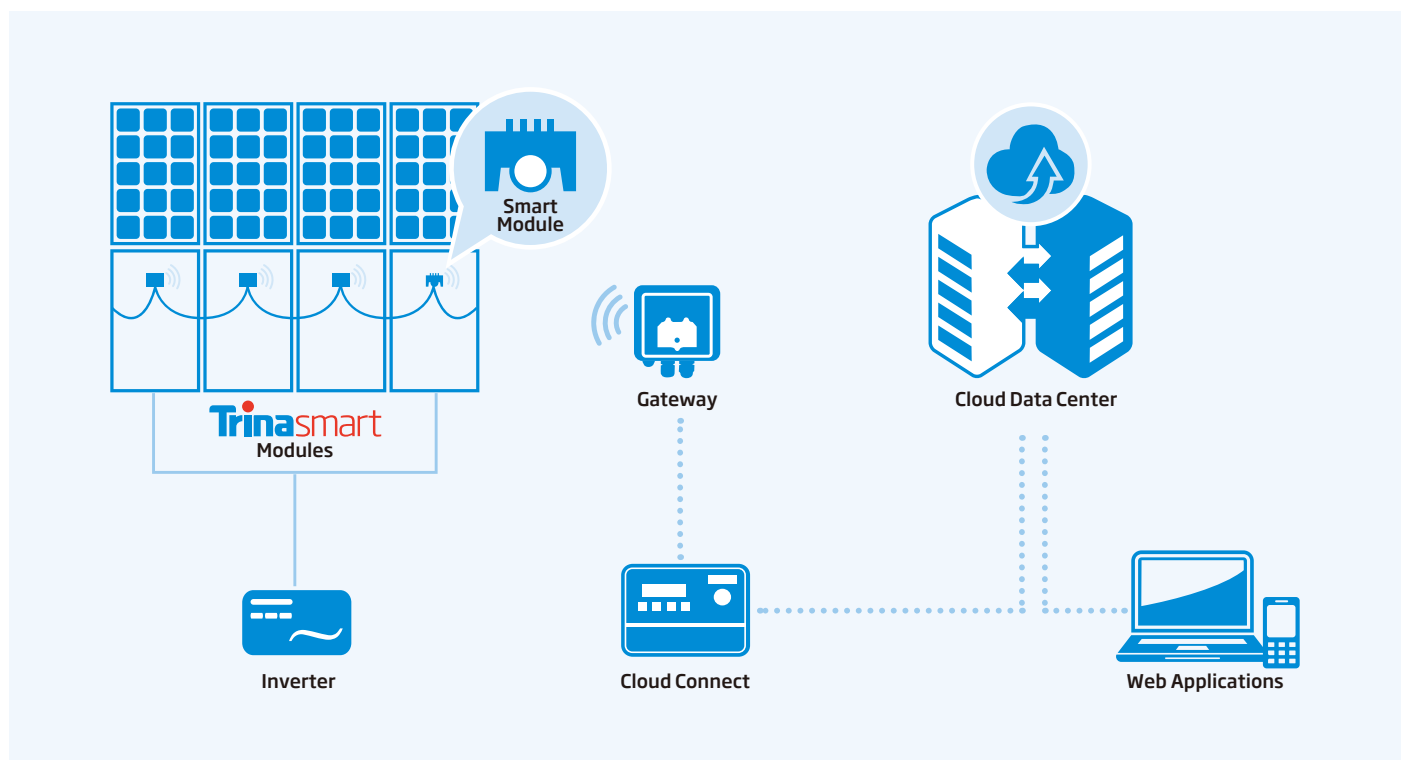
Trinasmart modules incorporate innovative power electronics from Tigo Energy to achieve module-level diagnostics, maximum energy harvest through module level DC power optimization, and reduction of arc, fire and safety hazards.

Integration of the module optimizer into the junction-box enables patented Smart Curve technology, which allows up to 30% longer strings and significant balance-of-system (BOS) savings.



SYSTEM ARCHITECTURE

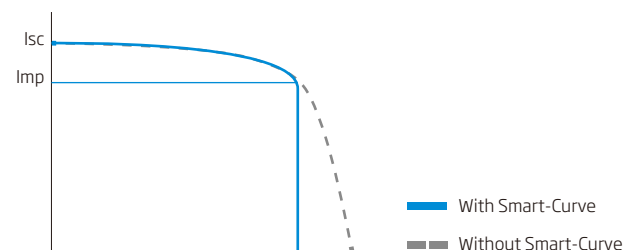
Trinasmart system components work together with any inverter to maximize energy harvest. Trinasmart modules communicate wirelessly through the gateway, allowing users to monitor system performance in real time.



SMART CURVE TECHNOLOGY

Module-integrated Trinasmart technology reduces the open circuit voltage range for each module and allows longer strings to be designed. The maximum voltage is programmed by Trina Solar in the factory.

- Hardware voltage clamp prevents over-voltage
- Design up to 30% longer strings
- Fewer combiner boxes, fuses and wiring



CLOUD CONNECT

The cloud connect controls processes in real time and sends data to a remote sever for monitoring.

SPECIFICATIONS	ONE CC SUPPORTS UP TO 7 GATEWAYS, 360 TRINASMART MODULES	
Internet	Ethernet Interface	10/100M
	Wireless Interface	Wi-Fi
	Other	Cellular LTE Modem
Electrical	Supply Voltage	24VDC +/-1V
	Power Consumption	Max 10W
	Power Supply	100-240VAC
	Din Rail	Terminal Block
	Socket	EU/UK/US/AU Interchangeable, 2-Pin Plug
Capacity(single CC)	Supports to Gateway	7 PCS
	Supports to Smart Modules	360 PCS
Mechanical Specifications	Mounting Type	DIN Rail/Wall Mount
	Dimensions (L x W x H)	159.5 × 90.2 × 57.5 mm (6.28 × 3.55 × 2.26 inches)
	Weight	0.5 kg (1.1 lb)
	Enclosure	Indoor NEMA 1
	Operating Temperature	-20°C ~ +60°C



Cloud Connect

An internet connection is required for full monitoring functionality.

GATEWAY

Radio transceiver that communicates with Trinasmart modules and relays data to the cloud connect.

SPECIFICATIONS	ONE GATEWAY SUPPORTS UP TO 120 TRINASMART MODULES	
Communication with modules	Wireless (802.15)	
Communication with CC	RS-485 cable connection; in series with other gateways	
Mounting Location	Center of array	
Mounting Method	Mounted to module frame or rack clips included for frame mounting	
Wireless Range	15m line-of-sight	
Capacity (single GW)	120 smart modules	
Mechanical Specifications	Dimensions	141.3 × 48.5 × 33.3 mm (with bracket) (5.56 × 1.91 × 1.31 inches)
	Weight	0.9kg (2.0 lb)
	Operating temperature range	-30°C ~ +70°C
	Enclosure environmental rating	IP 65 rated



Gateway

The wireless communications system is FCC and CE Class 2 certified. Fixing hole comes with a M3.5X6 SST pan head screw.

MONITORING SERVICE

Trinasmart monitoring provides total insight into the performance of any system. You can choose to upgrade online once your system is installed.



Explore the monitoring portal at
www.trinasmart.com

FEATURES	FREE	PREMIUM
Reports	Monthly	Daily
1-min data granularity	current&previous month	Full History
Full history	•	•
Safety alerts	•	•
Dashboard showing enviomental impact	•	•
Trending data charts	•	•
Performance analytics		•
Ability to download		•
Device Integration		•
Performance alerts		•
API access		•

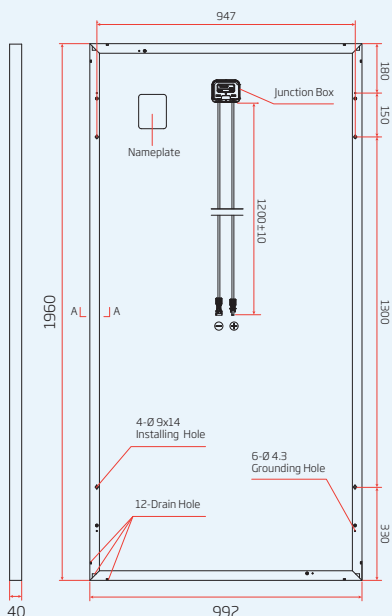
PRODUCTS

TSM-DD14A.082(II)

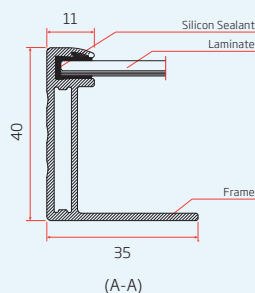
POWER RANGE

340-375W

DIMENSIONS OF PV MODULE(mm)

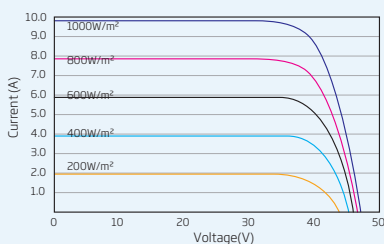


Back View(Portrait/Landscape)

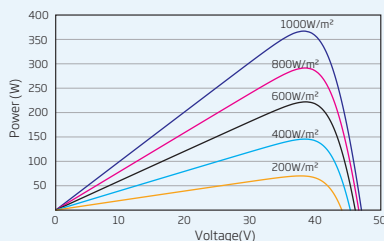


(A-A)

I-V CURVES OF PV MODULE(365W)



P-V CURVES OF PV MODULE(365W)



ELECTRICAL DATA (STC)

Peak Power Watts- P_{MAX} (Wp)*	340	345	350	355	360	365	370	375
Power Output Tolerance- P_{MAX} (W)	0 ~ +5							
Maximum Power Voltage- V_{MPP} (V)	38.2	38.5	38.7	38.8	39.0	39.3	39.7	40.0
Maximum Power Current- I_{MPP} (A)	8.90	8.96	9.04	9.14	9.24	9.30	9.33	9.37
Open Circuit Voltage- V_{OC} (V)	46.2	46.7	47.0	47.4	47.7	48.0	48.3	48.5
Short Circuit Current- I_{SC} (A)	9.50	9.55	9.60	9.65	9.70	9.77	9.83	9.88
Module Efficiency η_m (%)	17.5	17.7	18.0	18.3	18.5	18.8	19.0	19.3

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

*Measuring tolerance: $\pm 3\%$.

ELECTRICAL DATA (NOCT)

Maximum Power- P_{MAX} (Wp)	253	257	261	264	268	272	276	279
Maximum Power Voltage- V_{MPP} (V)	35.4	35.7	35.9	36.0	36.2	36.4	36.8	37.1
Maximum Power Current- I_{MPP} (A)	7.15	7.20	7.26	7.34	7.42	7.47	7.50	7.53
Open Circuit Voltage- V_{OC} (V)	42.9	43.4	43.7	44.1	44.3	44.6	44.9	45.1
Short Circuit Current- I_{SC} (A)	7.67	7.71	7.75	7.79	7.83	7.89	7.94	7.98

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

MECHANICAL DATA

Solar Cells	Monocrystalline 156.75 × 156.75 mm (6.17 inches)
Cell Orientation	72 cells (6 × 12)
Module Dimensions	1960 × 992 × 40 mm (77.17 × 39.06 × 1.57 inches)
Weight	22.5 kg (49.6 lb)
Glass	3.2 mm (0.13 inches) High Transmission, AR Coated Tempered Glass
Backsheet	White
Frame	40mm (1.57 inches) Anodized Aluminium Alloy
J-Box	IP 67 or IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²), Portrait/Landscape: N 1200 mm / P 1200 mm (47.24/47.24 inches)
Connector	MC4/UTX/TS4/QC4/MC4 EVO2*

* Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	44°C ($\pm 2^\circ\text{C}$)
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	20A

(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: 27 pieces

Modules per 40' container: 648 pieces

