

# Ultra edge series

## TP540HG10

72-Mono-Crystalline solar photovoltaic modules



Manufactured in India on leading edge module production line using world class process



Reliability under extreme weather condition, certified



Peace of mind guaranteed by Tata Power solar 25 years linear module warranty



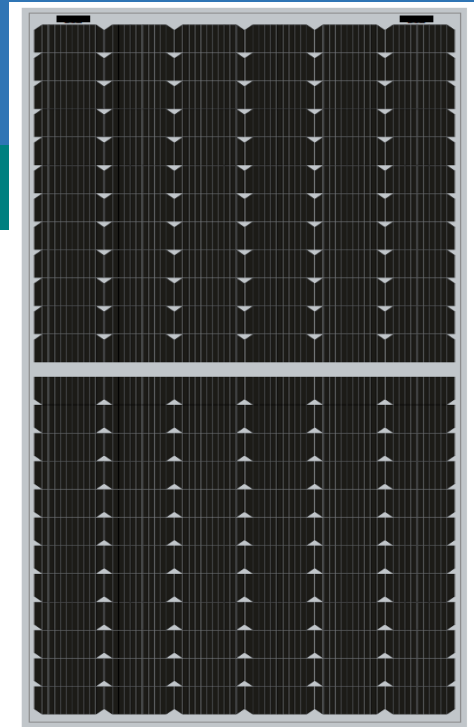
Reduced risk of failure warranty claims of less



Greater energy generated due to positive power tolerance of up to 5W



TUV and UL certified Potential Induced



### PRODUCT FEATURES

144 cells configuration with wattage ranging from 515W to 545W

High fill factor for improved energy conversion efficiency

Cell sorted by power and current to minimize mismatch losses in the field

Electroluminescence tested for micro cracks

Highly reliable IP68 rated junction box

MC4/MC4 compatible cable connectors

Torsion and corrosion resistant with anodized aluminium frame

Unique back sheet design for high resistance to moisture ingress

Enhanced reliability through use of distinctive encapsulant and back sheet

Ultra- soft interconnect with stress relief for enhanced reliability

Optimized edge clearance for high quality rugged design

### About Tata Power Solar

Tier 1\*\*\* bankable module Manufacturer \*\*\* with 30 years history

Backed by \$100Bn Tata Group; eliminates need for expensive 3rd party insurance

BP Solar heritage of state -of-the -art technology and stringent quality processes

Over 2GW of modules shipped globally

Highest standards of quality and management (ISO 9001,14001 and OHSAS 18001)

PID Free certified modules

### CERTIFICATIONS



### WARRANTY

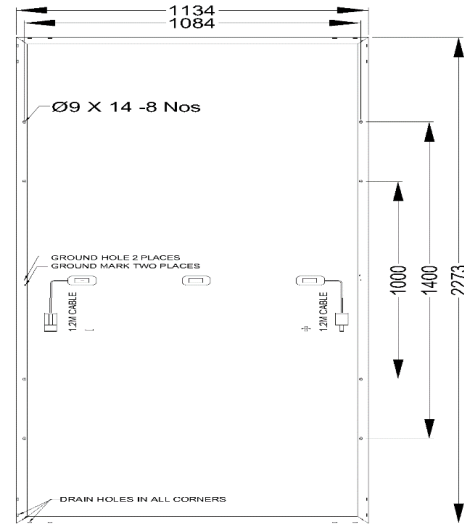
Product warranty :10 years warranty on material and workmanship  
Power warranty : 25 years linear power oupput warranty

Warranties are subject to the terms and conditions as per the tata power solar warranty document.  
Certifications may vary by module



515 520 525 530 535 540 545

## Technical drawings \*\* Dimensions in mm



### Electrical parameters at standard test conditions (STC)\*

	515	520	525	530	535	540	545
Nominal power output (W)	515	520	525	530	535	540	545
Power tolerance (W)	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5	0 ~ +5
Module efficiency (η%)	19.98	20.17	20.37	20.56	20.76	20.95	21.14
Voltage at Pmax VMPP (V)	40.99	41.14	41.29	41.45	41.60	41.75	41.90
Current at Pmax IMPP (A)	12.57	12.65	12.73	12.80	12.88	12.95	13.02
Open-circuit voltage VOC (V)	48.86	49.01	49.16	49.31	49.46	49.61	49.76
Short-circuit current ISC (A)	13.49	13.55	13.63	13.69	13.76	13.83	13.90

### Electrical parameters at NOCT

	515	520	525	530	535	540	545
Power output PMAX (W)	388.3	391.9	395.6	399.2	403.1	406.7	410.4
Voltage at PMAX VMPP (V)	37.70	37.90	38.00	38.20	38.40	38.50	38.70
Current at PMAX IMPP (A)	10.29	10.34	10.40	10.45	10.51	10.56	10.62
Open-circuit voltage VOC (V)	45.80	46.00	46.10	46.20	46.40	46.50	46.70
Short-circuit current ISC (A)	10.89	10.94	11.00	11.05	11.11	11.16	11.22

### Temperature coefficient Characteristics

NOCT (°C)	43±2
Temperature Coefficient of Pmax (% / °C)	-0.35
Temperature coefficient of Voc (% / °C)	-0.27
Temperature coefficient of Isc (% / °C)	0.05

### Operating conditions

Maximum system voltage (V)	1500V
Maximum series fuse rating (A)	25A
Operating temperature range (°C)	-40+85
Maximum static load (Wind and Snow)	2400 and 5400pa

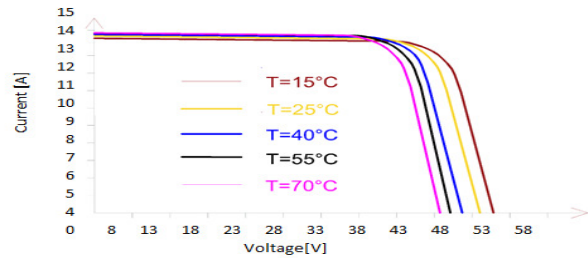
### Module general characteristics

Module dimensions L X W X H(mm)	2273 x 1134 x 35
Module mounting Pitch	X-1084, Y-1000,1400
Module mounting hole size	Oblong Hole -9 x14
Module weight (approx) (Kg)	29
No of cells & size	72cells x 2
Frame materials	Anodized aluminium
Glass	3.2mm [Anti-glare]
Junction box	IP68 rated
Cable & Connector	1200mm each side & MC4 Compatible connector

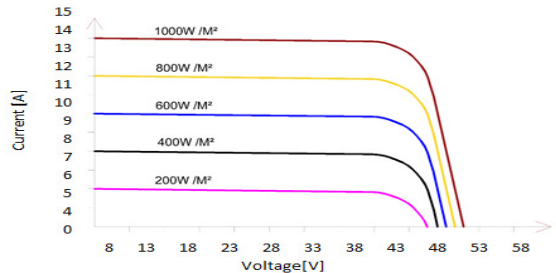
### Packaging details

No of modules per pallet	30 / 31
No of pallets per 40ft open type container	20
Box weight (Kg)	1000
Box dimensions L X W X H(mm)****	2350 x 1160 x 1285

### IV CURVE AT MULTIPLE TEMPERATURE



### IV CURVE AT MULTIPLE IRRADIANCE



\*Irradiance of 1000W/m<sup>2</sup>, Spectrum AM of 1.5 and cell temperature of 25°C

\*\*Tolerance for dimensions ±3mm

Tolerance for cable length 0/+50mm

Lock type frame -35mm

\*\*\*\*Box dimensions are subject to change.

Our vision is to be the most admired and responsible solar power company enabling solar everywhere with an international footprint, delivering sustainable value to all stakeholders



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Visit: [www.tatapowersolar.com](http://www.tatapowersolar.com)