

Highest-Efficiency Module Technology
TOPCON SOLAR TECHNOLOGY – MADE IN INDIA

144 HC M10R GG BIFACIAL

580 – 600 Wp

23.20% Max. Module Efficiency

30 Years Linear Performance Warranty

TOPCon Cell Technology: Lower LID and reduced annual degradation for sustained high energy output

Positive power tolerance: 0 ~ +4.99 W output, assured rated power

High Bifaciality (80 ±5%): Enhanced rear-side power generation from reflected light

Bifacial Design: Dual-glass design for increased energy yield

Optimised Temperature Coefficient: Reliable performance even under high operating temperatures.

Strong Low-Light Performance: Higher power generation in cloudy, foggy, and low-irradiance conditions.

Lower LCOE & Faster ROI: Higher energy yield with optimised BOS costs.

Advanced Manufacturing & QA: Fully automated, AI-integrated production with 100% inline Hi-Pot and multi-stage EL testing using a Tier-1 BOM

Warranty: Offering an industry-leading product and performance warranty of 30 years and 12 years product warranty



Qualification & Certifications

IEC 61215 / IEC 61730 / IS 14286 / IS 61730
*IEC 61701 / *IEC 61716 / *IEC 60068
ISO 14001 / ISO 9001 / ISO 45001



*Under Process



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RPSG144MI0TGXXX (XXX= 580 - 600 WP)

Electrical Properties: Front Side @ STC

Peak power P _{mp} (W)	580	585	590	595	600
V _{mp} (V)	44.15	44.41	44.68	44.95	45.22
I _{mp} (A)	13.14	13.17	13.20	13.24	13.27
V _{oc} (V)	51.79	51.95	52.12	52.28	52.44
I _{sc} (A)	14.00	14.01	14.01	14.01	14.02
Module efficiency (%)	22.5%	22.6%	22.8%	23.0%	23.2%

Bifacial Power Output

Module Type	580	585	590	595	600
+10% (BNPI) P _{mp} (W)	638	644	649	655	660
+20% P _{mp} (W)	696	702	708	714	720
+30% P _{mp} (W)	754	761	767	774	780

STC: 1000 W/m², AM 1.5, Cell 25°C; BNPI: front 1000 W/m², rear 135 W/m²

Except P_{mp}, all other parameters have tolerance of ± 3%. Measurement uncertainty ≤ 3%

Mechanical Properties

Cells	Cell type	Mono-crystalline, n-type TOPCon
	Amount	144 half cells
Mechanical	Dimension	2278 mm x 1134 mm x 35 mm
	Front & Rear cover	2 mm heat-strengthened glass
	Encapsulant	EPE/EVA
Data	Weight	32 kg
Mounting	Mounting holes	8pcs, 9 mm diameter & 12 mm long
	Position	700 mm, and 495 mm from center
	Design	3-split, IP68
Junction	Cable	4.00 mm 2, 400 mm can be customized
Box	Connector	MC4/MC4 compatible
	Rated current	30 A

System Properties

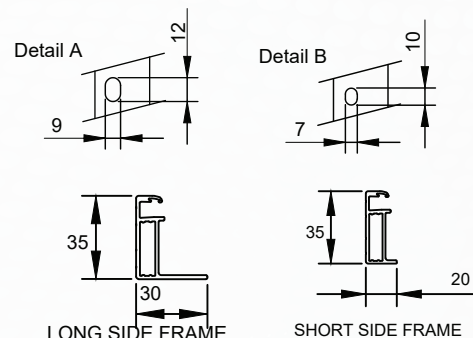
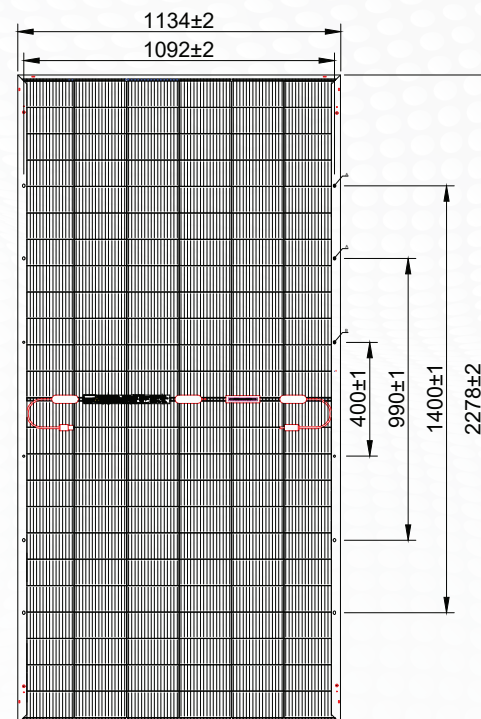
Operating Temperature	-40 to +80°C
Maximum system voltage	1500 V DC (IEC)
Maximum series fuse rating	30 A
Power tolerance	0 to +5W
Fire rating	Class C
Appliance class	II
Maximum mechanical load	-2400 Pa / +5400 Pa

Temperature coefficient

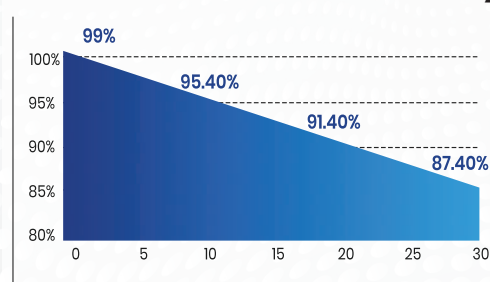
Temp. coefficient of P _{max}	-0.30%/K
Temp. coefficient of V _{oc} (V)	-0.25%/K
Temp. coefficient of I _{sc} (A)	0.045%/K
Nominal operating cell temperature (NOCT)	45 ± 2

*RPSG Solvanta reserves the right to modify the specifications and features outlined in this datasheet at any time without prior notice.

Mechanical Drawing



Linear Performance Warranty



Packaging Configuration

Module per pallet: 31 pieces,
Module per 40'HQ container: 20 pallets, 620



RPSG Solvanta

ServSpaces GM IT Park,
8th Floor, Sector 142,
Noida 201305



+91 92160 38650



support.solvanta@rpsg.in
sales.solvanta@rpsg.in



www.rpsgsolvanta.com