

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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**144 HC M10R GG BIFACIAL**

RPSG144MI0TGXXX (XXX= 580 - 600 WP)

**Electrical Properties: Front Side @ STC**

Peak power P <sub>mp</sub> (W)	580	585	590	595	600
V <sub>mp</sub> (V)	44.15	44.41	44.68	44.95	45.22
I <sub>mp</sub> (A) 1	13.14	13.17	13.20	13.24	13.27
V <sub>oc</sub> (V)	51.79	51.95	52.12	52.28	52.44
I <sub>sc</sub> (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 <sub>mp</sub> (W)	638	644	649	655	660
+20% P <sub>mp</sub> (W)	696	702	708	714	720
+30% P <sub>mp</sub> (W)	754	761	767	774	780

STC: 1000 W/m<sup>2</sup>, AM 1.5, Cell 25°C; BNPI: front 1000 W/m<sup>2</sup>, rear 135 W/m<sup>2</sup>

Except P<sub>mp</sub>, 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**

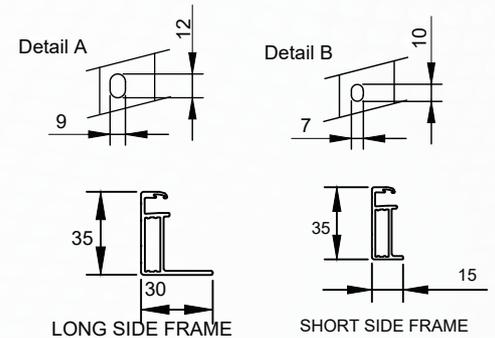
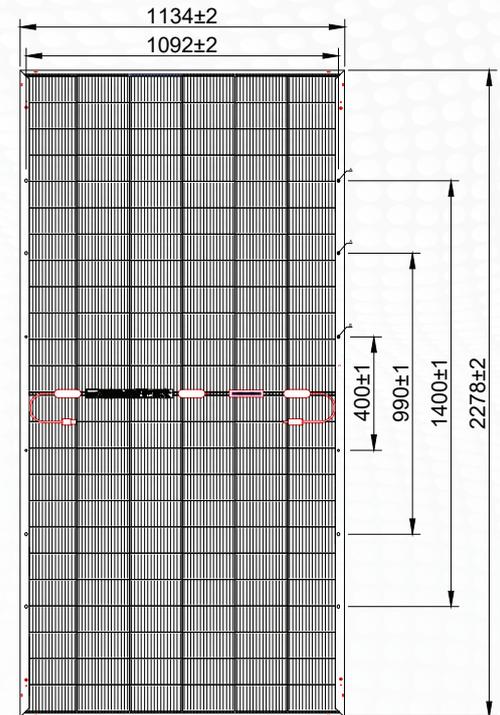
Operating Temperature	-40 to +80°C
Maximum system voltage	1500 V DC (IEC)
Maximum series fuse rating	30 A
Power tolerance	0 to +5W
Fire rating	Class C
Appliance class	II
Maximum mechanical load	-2400 Pa / +5400 Pa

**Temperature coefficient**

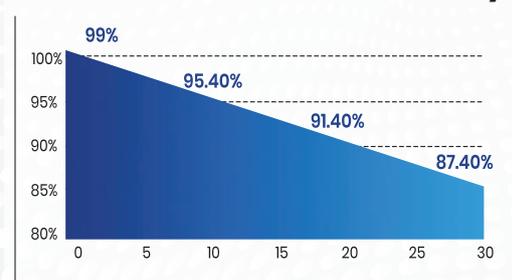
Temp. coefficient of P <sub>max</sub>	-0.30%/K
Temp. coefficient of V <sub>oc</sub> (V)	-0.25 %/K
Temp. coefficient of I <sub>sc</sub> (A)	0.045 %/K
Nominal operating cell temperature (NOCT)	45 ± 2

\*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



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