SunPower

Performance 8 COM

HSM-GHJ-NM 580~590

580–590 W | Up to **24%** efficiency



- Ideal for commercial applications
- One-third cut, shingled cell design
- Bifacial - up to 10% energy gain
- Hail: 45 mm (27.5 m/s)
- Ammonia corrosion certified
- Salt mist corrosion certified

Smaller but mightier!

+5% power output per m2!

New G12R Cell Technology!

60.8% increase in illumination and 5.3% decrease in LCOE.

High lifetime energy production

The shingled-cell design helps to manage shade and keep cell temperatures low to produce more power over time.

Made for real weather

Its strong frame and cell connection design helps to protect the panels against weather challenges like temperature swings, snow loads, and hail.

Leading with Transparency

From polysilicon source to finished product, Performance 8 is fully traceable.

30 YEAR WARRANTY
Power | Product | Service

Comprehensive warranty coverage

Product, power, service coverage	30 Years
Year 1 minimum warranted output	99.0%
Maximum annual degradation	0.35%

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Learn more about SunPower panels
www.sunpowerglobal.com/au

Made in China
TCL Zhonghuan Energy Technology (Jiangsu) Co., Ltd.

Performance 8 COM | Power: 580–590 W | Efficiency: up to 24%

Electrical Data, Front STC[2] and BNPI[4]						
	HSM-GHJ-NM580		HSM-GHJ-NM585		HSM-GHJ-NM590	
Testing Condition	STC	BNPI	STC	BNPI	STC	BNPI
Nominal Power (Pnom)[3]	580 W	647 W	585 W	652 W	590 W	658 W
Power Binning	3/0%		3/0%		3/0%	
Rated Voltage (Vmpp)	37.60 V	37.6	37.77 V	37.77	37.95 V	37.95
Rated Current (Impp)	15.43 A	17.2	15.49 A	17.27	15.55 A	17.33
Open-Circuit Voltage (Voc)[3]	45.40 V	45.40 V	45.58 V	45.58 V	45.76 V	45.76 V
Short-Circuit Current (Isc)[3]	16.19 A	18.05 A	16.25 A	18.11 A	16.31 A	18.18 A
Power Efficiency	23.6%		23.8%		24.0%	

Bifacial Gain[5]			
Pmax with 5% Bifacial Gain	609 W	614 W	620 W
Isc with 5% Bifacial Gain	17.00 A	17.06 A	17.13 A
Pmax with 10% Bifacial Gain	638 W	644 W	649 W
Isc with 10% Bifacial Gain	17.81 A	17.88 A	17.91 A
Bifaciality Coefficients[7]	φ Pmax: 82%, φ Voc: 100%, φ Isc: 81%		

Short Circuit Current @ BSI[7] :20.20 A (BSI Test condition: front irradiance 1000 W/m², rear irradiance 300 W/m²)

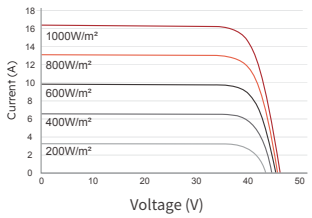
Electrical Data	
Maximum System Voltage	1500 V IEC
Operation Temperature	−40°C to +70°C (IEC TS 63126)
Maximum Series Fuse	30 A
Power Temp. Chef.	−0.26% / °C
Voltage Temp. Coef.	−0.24% / °C
Current Temp. Coef.	0.046% / °C

Mechanical Data	
Solar Cells	N-Type TOPCon Shingled 180pcs (6×30)
Glass	2.0 mm + 2.0 mm, high transmission heat strengthened glass, AR coating on front glass
Junction Box	IP-68, 3 bypass diodes
Connector	Stäubli MC4-EVO2A
Cables	4.0mm², +-1400mm
Weight / Dimension	29.6kg(+-3%) / 2165x 1134x30mm
Max. Load[6]	Wind: 2400 Pa, 245 kg/m² front & back
	Snow: 5400 Pa, 550 kg/m² front
Impact Resistance	45 mm diameter hail at 27.5 m/s
Frame	Silver anodized aluminum alloy

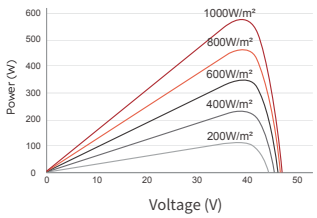
Tests and Certifications	
Standard Tests	IEC 61215, IEC 61730
Fire Rating	Class A (IEC 61730-2 / UL 790
Protection Class	Class II (IEC 61140)
Quality Certs	ISO 9001:2015, ISO 14001:2015
	ISO 45001-2018, ISO 50001:2018, Recycling Scheme
Salt Mist Corrosion	Severity 8 - IEC61701
Ammonia Corrosion	IEC62716

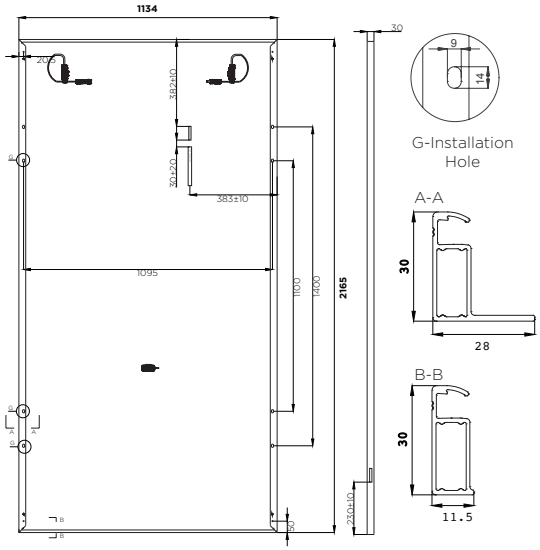
Packaging Configuration	
Number of modules per pallet	36
Number of pallets per 40ft HQ container	20
Number of modules per container	720

I-V Curves (580W)



P-V Curves (580W)





Please read the safety and installation instructions.
www.sunpowerglobal.com/au/documents

1 Tier1 BloombergNEF based on https://taiyangnews.info/topmodules/top-solarmodules-listing-january-2026.
2 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25° C). NREL calibration Standard: SOMS current, LACCS FF and Voltage.
3 Measurement tolerance is Pmax ± 3%, Voc ±3%, Isc ±4%.
4 BNPI Test Condition (front 1000 W/m², rear 135 W/m2 irradiance, AM 1.5, 25° C).
5 The additional gain from the back side of the panel compared to the power of the front side of the panel at the standard test conditions. It depends on mounting (structure, height, tilt angle etc.) and albedo of the underlying surface.
6 Test load as per IEC 61215-2 is equal to design load with safety factor = 1.5. See "Safety and Installation Instructions" for details.
7 Measurement tolerance of Bifaciality Coefficients: φPmax/ φIsc: ±10%, φVoc: ±2%

REV C / A4_ANZ
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Specifications included in this datasheet are subject to change without notice.
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