

Orion

PERC 210MM Bifacial Transparent Backsheet Module

640-670W



Larger PV Cell Technology

Revolutionizing solar technology with large silicon wafers, our modules are the prime choice for major projects.



Superior Hail Resistance

Our 210mm series, equipped with a transparent back sheet, excels in hail resistance, ensuring unparalleled durability for small to medium-sized solar projects.



High Efficiency, Low LOCE

Low LOCE ensures optimal performance and minimal costs through durable, high-yield, and easy maintenance energy solutions.



Lighter Weight

Unburden your projects with a lighter weight solution, making solar energy more accessible and efficient.

Pmax:

670W

Power range:

640-670W

Efficiency:

21.6%

Warranty:

25 years

Annual degradation:

0.55%

Product Certification



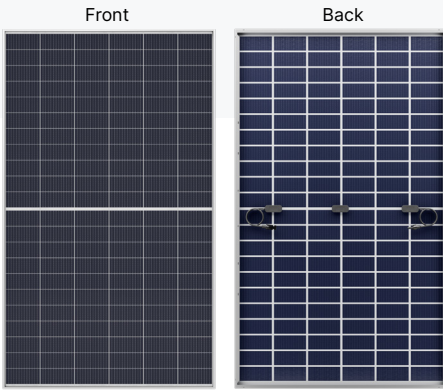
PVEL



CE

Reliably Built.

Imperial Star is a solar manufacturer committed to empowering PV excellence in America. With a rich, 10-year manufacturing legacy, Imperial Star delivers 3 GW of PV Module capacity through its integrated and dependable supply chain.



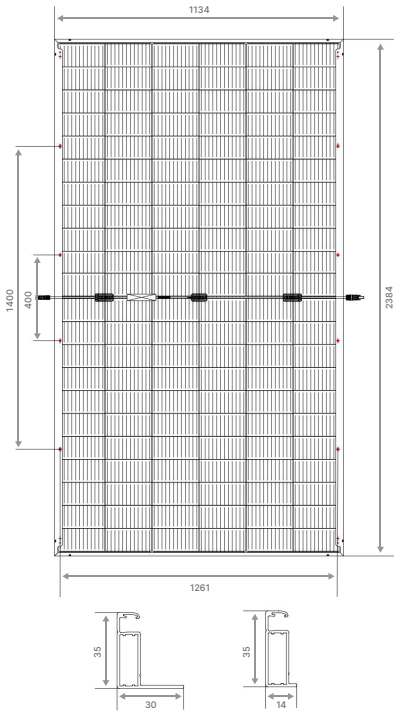
670W
Maximum Power Output

21.6%
Module Efficiency

25 Year
Power Output Warranty

12 Year
Product Warranty

Engineering Drawing



- Anti-reflection coating and self-cleaning glass
- Special cutting and soldering technology leads to low hotspot risk
- Selected encapsulating material and stringent production process control ensure the product is highly PID resistant and snail trail free
- Optimized system performance due to module level current sorting
- Highly transparent self-cleaning glass brings additional yield and easy maintenance

Item		ISM8-TPDB132-640/M		ISM8-TPDB132-645/M		ISM8-TPDB132-650/M		ISM8-TPDB132-655/M		ISM8-TPDB132-660/M		ISM8-TPDB132-665/M		ISM8-TPDB132-670/M	
		STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC
Max. Power (Pmax)	W	640	485	645	488.6	650	492.4	655	496.2	660	500.0	665	503.8	670	507.6
Opt. Operating Current (Imp)	A	17.17	14.01	17.21	14.04	17.25	14.08	17.29	14.11	17.33	14.14	17.37	14.17	17.41	14.21
Opt. Operating Voltage (Vmp)	V	37.3	34.6	37.50	34.80	37.70	34.98	37.90	35.17	38.10	35.35	38.30	35.54	38.50	35.72
Short Circuit Current (Isc)	A	18.17	14.90	18.22	14.94	18.27	14.98	18.32	15.02	18.37	15.07	18.42	15.11	18.47	15.15
Open Circuit Voltage (Voc)	V	44.8	41.7	45.00	41.85	45.20	42.04	45.40	42.23	45.60	42.41	45.80	42.60	46.00	42.78
Module Efficiency		20.6%		20.8%		20.9%		21.1%		21.2%		21.4%		21.6%	
Module Power Tolerance		0~+3%													
Operating Temperature		-40°C~+85°C													
Max. System Voltage		1500VDC (IEC)													
Max. Nominal Fuse Current		35A													
Application Level		A													
STC		Irradiance 1000W/m ² , Module temperature 25°C, AM 1.5													
NOTC		Irradiance 800W/m ² , Module temperature 20°C, AM 1.5, Wind speed 1m/s													

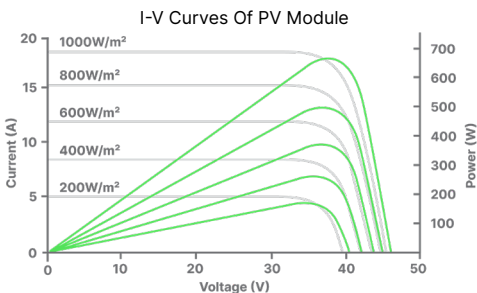
Temperature Characteristics	
Nominal Operating Cell Temperature	45±2°C
Temperature Coefficient (Pmax)	-0.35%/°C
Temperature Coefficient (Voc)	-0.27%/°C
Temperature Coefficient (Isc)	+0.045%/°C

Mechanical Data	
Dimensions	2384 × 1303 × 35 mm
Weight	33.5±0.5kg
Module composition	132 (6*22)
Front glass thickness	3.2 mm high transparency, AR coating, thermal reinforced glass
Frame material	Anodized aluminum alloy
J-Box	IP68, 3 diodes
Cable	Portrait: 300 mm; Landscape: 1400mm, 4mm ² / 12 AWG
Connector	MC Compatible / MCA-EV02 (optional)

Packaging Specifications	
Container	40HQ
Module quantity per pallet	31
Pallet quantity per container	18
Module quantity per container	558

Performance under low irradiation
 Industry-leading performance under low irradiance conditions. The module efficiency of irradiance 200/m² is above 96.5% of the irradiance 1000W/m module efficiency.

Product Certification	
ISO 9001: Quality management system certification	CEC
ISO 14001: Environmental management system certificate	TUV
ISO 45001: International standards for occupational health and safety	CE
IEC 61215: Standards for durability	UL
IEC 61730: Standards for safety operation	



Warranty

