

Atlas N

N-Type 182MM Bifacial Double Glass Module 420-445W



30% Bifacial Power Gain

Delivers an impressive 30% increase in power generation with an 80±5% bifacial rate, harnessing energy from both sides



Peak Efficiency 22.8%

Achieves a leading efficiency rate of 22.8%, maximizing solar power conversion



Advanced Cell Technology

Significant reductions in Light-Induced Degradation (LID) and Light and Elevated Temperature Induced Degradation (LETID), maintaining peak performance



Customized Configuration

Provides versatility with 5 size options to meet residential, commercial, or industrial solar energy needs

Pmax:

445W

Power range:

420-445W

Efficiency:

22.8%

Warranty:

30 years

Annual degradation:

0.40%

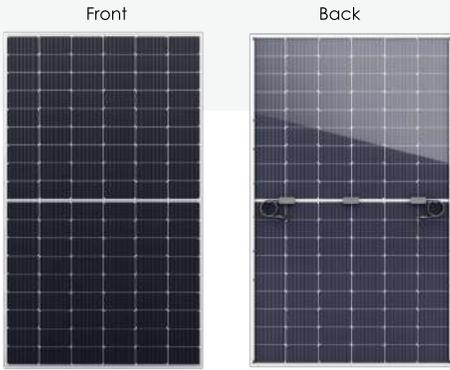
Product Certification



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 6 GW of PV module capacity through its integrated and dependable supply chain by 2024.





445W

Maximum Power Output

22.8%

Module Efficiency

30 Year

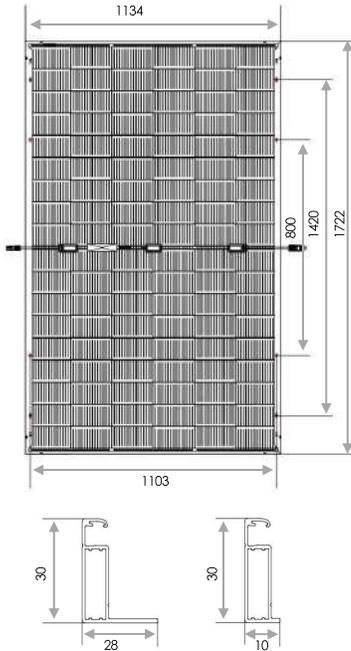
Power Output Warranty

12 Year

Product Warranty

Item		ISN7-UHSB108-420/M ISN7-UHSB108-425/M ISN7-UHSB108-430/M ISN7-UHSB108-435/M ISN7-UHSB108-440/M ISN7-UHSB108-445/M											
		STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC	STC	NOTC
Max. Power (Pmax)	W	420	314	425	318	430	321	435	325	440	329	445	333
Opt. Operating Current (Imp)	A	13.25	10.61	13.33	10.68	13.40	10.73	13.47	10.79	13.54	10.85	13.61	10.90
Opt. Operating Voltage (Vmp)	V	31.7	29.6	31.9	29.8	32.1	29.9	32.3	30.1	32.5	30.3	32.7	30.5
Short Circuit Current (Isc)	A	14.01	11.30	14.07	11.35	14.13	11.40	14.19	11.44	14.25	11.49	14.31	11.54
Open Circuit Voltage (Voc)	V	38.0	35.7	38.2	35.9	38.4	36.1	38.6	36.3	38.8	36.5	39.0	36.7
Module Efficiency		21.5%		21.8%		22.0%		22.3%		22.5%		22.8%	
Module Power Tolerance		0~+3%											
Operating Temperature		-40°C~+85°C											
Max. System Voltage		1500VDC (IEC)											
Max. Nominal Fuse Current		30A											
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											

Engineering Drawing



Temperature Characteristics	
Nominal Operating Cell Temperature	45±2°C
Temperature Coefficient (Pmax)	-0.3%/°C
Temperature Coefficient (Voc)	-0.27%/°C
Temperature Coefficient (Isc)	+0.045%/°C

Mechanical Data	
Dimensions	1772 x 1134 x 30mm
Weight	26±0.5kg
Module composition	108(6*18)
Front glass thickness	2.0mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Frame material	Aluminum, silver anodized
J-Box	IP68, 3 diodes
Cable	Portrait: 300 mm; Landscape: 1400mm, 4mm ² / 12AWG
Connector	MC Compatible / MC4-EV02 (optional)

Packaging Specifications	
Container	40HQ
Module quantity per pallet	36
Pallet quantity per container	26
Module quantity per container	936

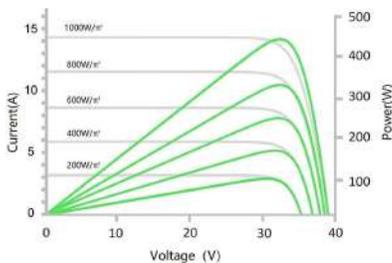
Performance under low irradiation
Industry-leading performance under low irradiance conditions. The module efficiency of irradiance 200/m² is above 96.5% of the irradiance 1000W/m² module efficiency.

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	



- 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

I-V Curves Of PV Module



Warranty

