



TOPCon 182 Solar Module PCE-590/144-S5

590 w / 144 Cells - N-Type Bifacial Mono PV Module

FEATURES



25-year Warranty for Materials & Processing



30-year Warranty for Extra Linear Power Output



Double-sided power generation

Generates electricity from both sides, with sunlight reflected from surrounding surfaces for enhanced efficiency



Durability Against Extreme Environmental Conditions

High salt mist & ammonia resistance certified by TUV NORD



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control



High Efficiency

Higher module conversion efficiency benefit from half cell structure [low resistance characteristic]



Low-light Performance

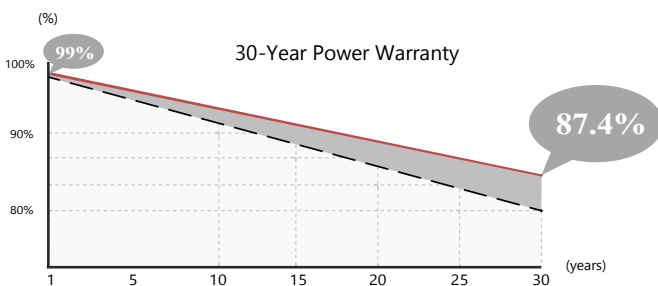
Advanced glass and cell surface textured design ensure excellent performance in low-light environment



Severe Weather Resilience

Certified to withstand: Wind load 2400 pascal, & snow load 5400 pascal

Additional Value



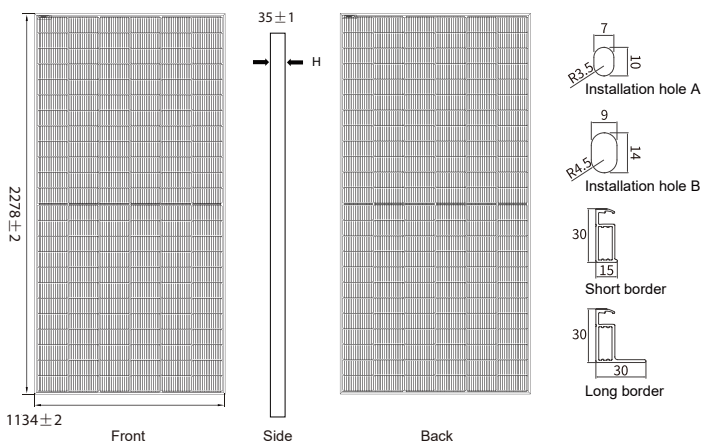
ISO 9001: 2015: ISO Quality Management Systems
 ISO 14001: 2015: ISO Environment Management Systems
 ISO 45001: 2018: ISO Occupational Health and Safety Management Systems
 GB/T 29490-2013

SPECIFICATIONS

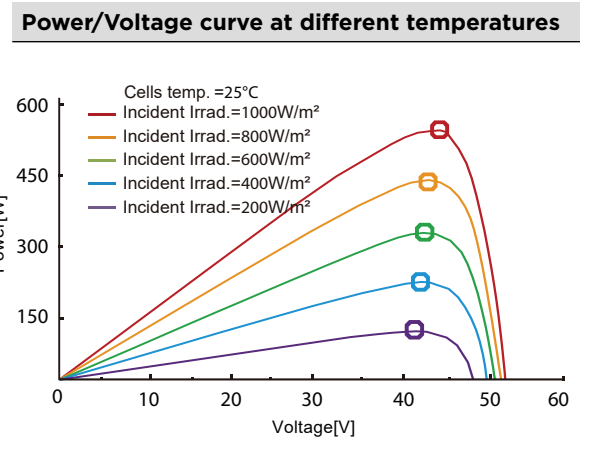
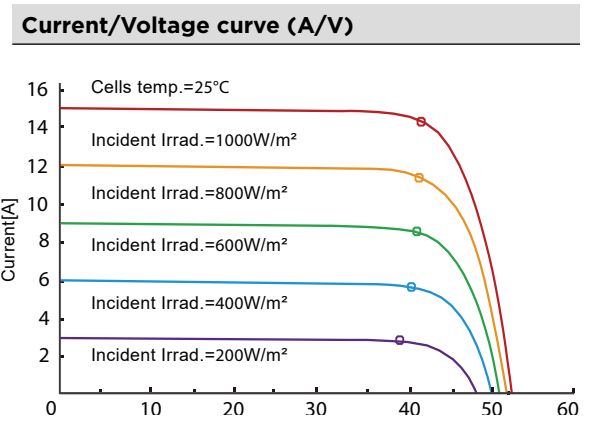
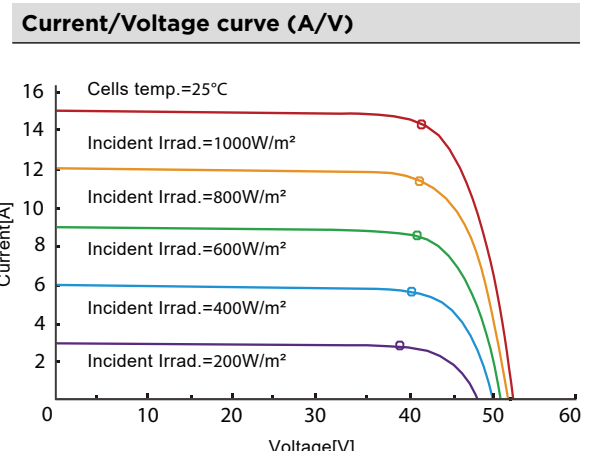
Model		PCE-590/144-S5
Mechanical Specification		
Cell	N-Type Monocrystalline	
No. of Cells	144 (6x24)	
Cable Length	300 (+) / 300 (-) mm or customized length	
Cable Cross Section Size	4 mm ² (IEC)	
Junction Box	IP68,3 diodes	
Connector	MC4 Compatible	
Operation		
Maximum System Voltage	1,500 VDC	
Maximum Series Fuse	25 A	
Maximum StaticLoad,Front	5,400 Pa (112 lb/ft ²)	
Maximum StaticLoad,Back	2,400 Pa (50 lb/ft ²)	
Operating Temperature	-40°C ± 85°C	
Safety Class	Class II	
Electrical Characteristics		
Testing Condition	STC	NOCT
Maximum Power (Pmax/Wp)	590	444
Open Circuit Voltage (Voc/V)	51.30	48.69
Short Circuit Current (Isc/A)	14.63	11.81
Voltage at Maximum Power (Vmp/V)	42.67	39.99
Current at Maximum Power (Imp/A)	13.83	11.10
Module Efficiency	22.8%	
Temperature Ratings		
Nominal Operating Cell Temperature	45 ± 2°C	
Temperature Coefficient of Isc	+0.045% /°C	
Temperature Coefficient of Voc	-0.275% /°C	
Temperature Coefficient of Pmax	-0.350% /°C	
Physical		
Dimension, L x W x T (mm)	2,278 ± 1 x 1,134 ± 1 x 35 ± 1	
Net Weight (kg)	32.6 ± 3%	
Cells Type	TOPCon 182	

STC:AM1.5 1000W/m² 25°C NOCT:AM1.5 800W/m² 20°C 1m/s

LAYOUT



CHARACTERISTICS



Power Output of the Front-Rear Side					
Power Gain (%)	5	10	15	20	25
Maximum Power (Pmax/W)	609	643	678	714	750
Pmax Gain (%)	23.6	24.9	26.2	27.6	29.0

Referenced specifically to 580Wp front



pcepower.com

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