

S-ENERGY

High-efficiency photovoltaic module using silicon nitride polycrystalline cells.

SM-XXXPC8 Series

205 ~ 285Watt Photovoltaic Module

Performance

Rated power (Pmax)	205~285W
Power tolerance	0~3%
Nominal voltage	24V
Limited Warranty	30 years



Electrical Characteristics

Model	285PC8	280PC8	250PC8	245PC8	240PC8	235PC8	215PC8	210PC8	205PC8
Voltage at Pmax (Vmp)	35.9V	35.8V	30.8V	30.4V	30.0V	29.8V	27.1V	26.7V	26.4V
Current at Pmax (Imp)	7.95A	7.84A	8.14A	8.08A	8.02A	7.89A	7.95A	7.89A	7.78A
Warranted minimum Pmax	276W	271W	242W	237W	232W	228W	208W	203W	198W
Short-circuit current (Isc)	8.56A	8.45A	8.67A	8.63A	8.58A	8.51A	8.56A	8.51A	8.39A
Open-circuit voltage (Voc)	44.5V	44.3V	37.5V	37.4V	37.3V	37.1V	33.4V	33.3V	33.1V
Temperature coefficient of Isc	0.04%/°C	0.04%/°C	0.04%/°C	0.04%/°C	0.04%/°C	0.04%/°C	0.04%/°C	0.04%/°C	0.04%/°C
Temperature coefficient of Voc	-0.32%/°C	-0.32%/°C	-0.32%/°C	-0.32%/°C	-0.32%/°C	-0.32%/°C	-0.32%/°C	-0.32%/°C	-0.32%/°C
Temperature coefficient of power	-0.35%/°C	-0.35%/°C	-0.35%/°C	-0.35%/°C	-0.35%/°C	-0.35%/°C	-0.35%/°C	-0.35%/°C	-0.35%/°C
NOCT (Air 20°C; Sun 0.8kW/C; Wind 1m/s)	47±2°C	47±2°C	47±2°C	47±2°C	47±2°C	47±2°C	47±2°C	47±2°C	47±2°C
Maximum series fuse rating	15A	15A	15A	15A	15A	15A	15A	15A	15A
Maximum system voltage	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V	1000V
Module efficiency	14.37%	14.11%	15.03%	14.72%	14.42%	14.12%	14.30%	13.96%	13.63%
Dimensions (L x W x D)	1985mm x 999mm x 50mm		1665mm x 999mm x 50mm			1505mm x 999mm x 50mm			
Weight	23Kg		20Kg			18Kg			
Solar cells	72 cells (6 x 12 matrix)		60 cells (6 x 10 matrix)			54 cells (6 x 9 matrix)			

Mechanical Characteristics

Frame	Static load : 8,000Pa (816Kg/m ²) ; Color: Silver/Black ; Anodizing thickness 16µm
Output Cables	RHW-2, 12AWG (4mm ²) cable with polarized weatherproof DC rated connectors; Cable length-1000mm (+ -)
Construction	Front : High-transmission 3.2mm low iron tempered glass; White back sheet; Encapsulant; EVA

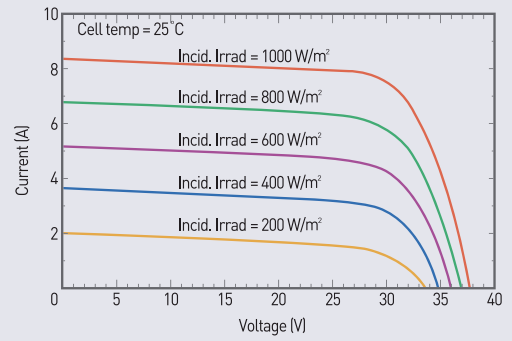
1. Warrant : Power output for 30 years (90% of minimum output power per 10 years, 80% of minimum output power per 30 years). Freedom from defects in materials and workmanship for 10 years.
2. These data represent the performance of typical SM-XXXPC8 Series products, and are based on measurements made in accordance with ASTM E1038 corrected to SRC (STC)
3. During the stabilization process that occurs during the first few months of deployments, module power may decrease by up to 3% from typical P_{max}

Quality Assurance

S-Energy photovoltaic modules have passed the following tests.

Thermal shock / cycling test	Mechanical loading test
UV preconditioning test	Hot-spot endurance test
Humidity - Freeze test	Water proof test
Electrical insulation test	Outdoor exposure test
Damp-heat test	Hail impact test

Irradiance coefficient

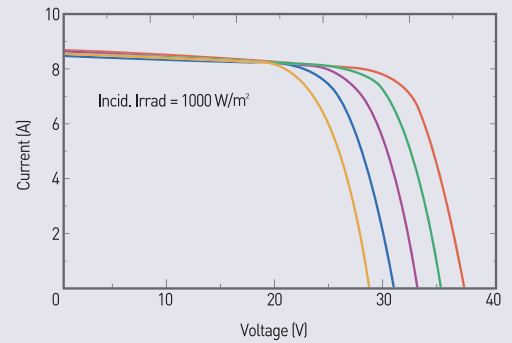


Qualification Test Parameters

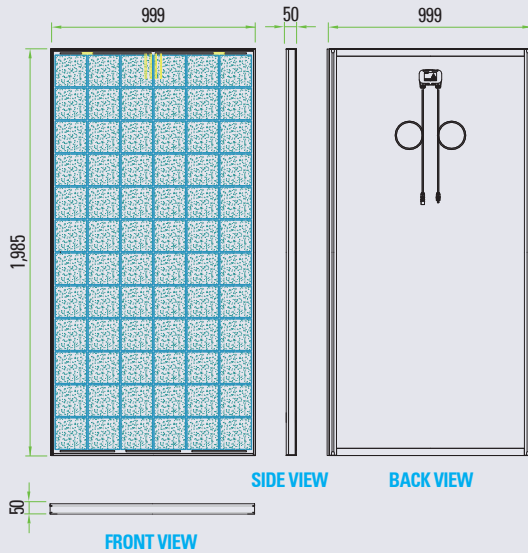
Tests are proceeded by IEC 61215 standard.

Thermal cycling range	-40°C to +85°C
Humidity freeze, damp heat	85% RH
Static load front and back	8,000Pa (816Kg/m²)
Hailstone impact	25mm at 30.7m/s
STC	1000W/m² ; 25°C ; AM 1.5

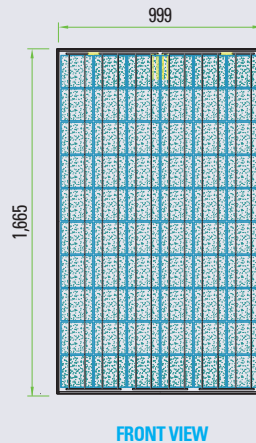
Temperature coefficient



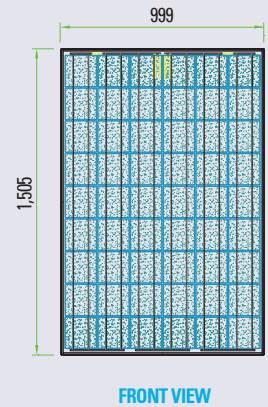
Module Diagram



Module : SM-285PC8, SM-280PC8



Module : SM-250PC8, SM-245PC8,
SM-240PC8, SM-235PC8



Module : SM-215PC8, SM-210PC8,
SM-205PC8

NOTE : This publication summarizes product warranty and specification, which are subject to change without notice

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