



SAPPHIRE SERIES

30 - 160 Watt

36 Cell Module

Poly Crystalline Solar PV Modules

Solarium PV Modules are manufactured with the highest quality materials and features best in class quality and performance. Our Meticulous product design and stringent quality control ensures our modules deliver an exceptional high PV yield.



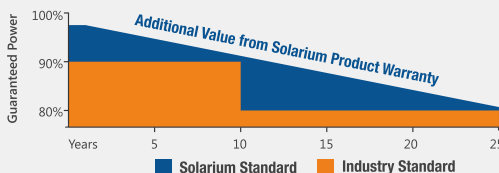
Excellent Module Efficiency
Upto 16.33%

Product Warranty
10 Years

Positive Power Tolerance
Upto 3W

PID Resistant

25 Year Linear Warranty



Qualifications & Certificates

IEC 61215, IEC 61730 -1 & 2, IEC 62804,
IEC 61701, IS 14286, IS 61730 - 1&2
ISO 9001, 14001, 45001



High Power Density

High conversion efficiency and more power output per square meter



Durability

Certified for Salt Mist Corrosion and PID Resistance



Advanced Glass

High-transmission glass that directs more light on the solar cells



Reliability

100 % EL tested before and after lamination



Premium Quality

Built to the most stringent quality standards in the industry.

Sapphire + PERC Modules

Designed with latest PERC Technology
Higher Module Efficiency with High Power Output
Lower Temperature Co-efficient



Engineered in
INDIA

ELECTRICAL PERFORMANCE

Electrical Parameters at Standard Test Conditions (STC)

Module Type	SGE 18Pxxx (xxx=Pmax)									
Maximum Power P _{max} (Wp)	30	37	40	50	60	75	100	125	150	160
Maximum Voltage V _{mpp} (V)	18.57	18.57	18.57	18.57	18.57	18.57	18.68	18.68	18.68	18.97
Maximum Current I _{mp} (A)	1.61	2.03	2.18	2.70	3.23	4.06	5.38	6.69	8.07	8.43
Open-Circuit Voltage V _{oc} (V)	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.50	22.60
Short-Circuit Current I _{sc} (A)	1.77	2.23	2.39	2.97	3.55	4.46	5.92	7.09	8.66	8.94
Module Efficiency (%)	10.20	12.58	13.60	13.51	14.41	14.45	14.69	15.76	15.33	16.33

STC: 1000W/m² irradiance, 25°C module temperature, AM1.5G spectrum according to EN 60904-3.
Average relative efficiency reduction of < 5.0% for every 200W/m² reduction in Irradiances according to EN 60904-1.

Electrical Parameters at Nominal Operating Cell Temperature (NOCT)

Maximum Power P _{max} (Wp)	21.60	26.64	28.8	36	43.2	54	72	90	108	115.2
Maximum Voltage V _{mpp} (V)	16.77	16.40	16.51	16.67	16.72	16.63	16.73	16.82	16.73	17.08
Maximum Current I _{mp} (A)	1.29	1.62	1.74	2.16	2.58	3.25	4.30	5.35	6.46	6.74
Open-Circuit Voltage V _{oc} (V)	20.70	20.70	20.70	20.70	20.70	20.70	20.70	20.70	20.70	20.79
Short-Circuit Current I _{sc} (A)	1.42	1.79	1.91	2.38	2.84	3.57	4.74	5.67	6.93	7.15
NOCT (°C)	46+/-2									

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature, 1m/s wind speed.

MECHANICAL DATA

Dimensions (L / W / H) (in mm)	446x666x30	446x666x30	446x666x30	561x666x30	630x666x30	786x666x30	1031x666x30	1205x666x30	1486x666x35	1486x666x35
Weight (Kg)	3.8	3.8	3.8	4.6	5.4	6.3	8	9.7	11.5	11.5
Mounting holes pitch (X)-mm	630	630	630	630	630	630	630	630	630	630
Mounting holes pitch (Y)-mm	200	200	200	200	200	300	600	600	1000	1000
Cell Type	Poly Crystalline (or Poly Crystalline PERC)									
Cell Arrangement	36 (9 X 4)									
Superstrate (Glass)	3.2 mm -High Transmission Low-Iron Tempered Glass									
Frame Material	Silver Anodized Alluminum Frame (Black Optional)**									
Cell Encapsulant	EVA (Ethylene Vinyl Acetate) - FC/UFC									
Back Sheet	Composite Film - White (Black and Transparent Optional)**									
Junction Box	IP 65/67									
Cable	1200mm / 4mm ²									
Connectors	Optional									

OPERATING CONDITIONS

Maximum System Voltage	1000 Vdc
Maximum Series Fuse Rating	15.0 A
Limiting Reverse Current Rating	15.0 A
Operating Temperature Range (°C)	-40°C to 85°C
Maximum Static Load, Front	5400 Pa
Maximum Static Load, Back (e.g., wind)	2400Pa
Max. Hailstone Impact (diameter / velocity)	25mm / 23m/s

NOTE :

1. Due to constant product modifications, Solarium reserves the right to amend the above specifications without prior notice. The Electrical data given here is for reference purpose only.
2. For handling & installation instructions, refer Solarium Installation Manual.
3. Please read Solarium warranty documents thoroughly.
4. Please confirm your exact requirements with sales representative while placing your order.

** Black and Transparent back sheet and black frame module without IEC certification

I-V Curve (for different Irradiances)

