SERAPHIM®

SHIFTING·THE FUTURE
www.seraphim-energy.com

SIV SERIES

Small Changes, Big Accomplishments

445-460W

SIV SERIES

Seraphim redefined the high-efficiency module series by integrating 182mm silicon wafers with multi-busbar and half-cut cell technologies. Seraphim panel combined creative technology effectively and extremely improved the module efficiency and power output.

KEY FEATURES

- Less mismatch to get more power
- Less power loss by minimizing the shading impact
- Competitive low light performance
- 3 times EL test to ensure best quality
- Ideal choice for utility and commercial scale projects by reduced BoS and improved ROI
- PVEL — Outstanding reliability proven by PVEL for stringent environment condition:
  - Sand, acid, salt and hail stones
  - 2400 Pa wind load and 5400 Pa snow load
  - Anti-PID

QUALITY SYSTEM

ISO9001 / ISO14001 / ISO45001

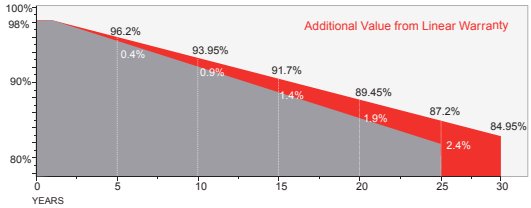
PRODUCT CERTIFICATION

TÜV SÜD | CE | PV CYCLE | CLEAN ENERGY COUNCIL MEMBER | CGC

INSURANCE

PICC

WARRANTY



15 YEARS — Guarantee on product material and workmanship

30 YEARS — Linear power output warranty

JIANGSU SERAPHIM SOLAR SYSTEM CO., LTD

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Tel: +86-519-68788166 Email: info@seraphim-energy.com

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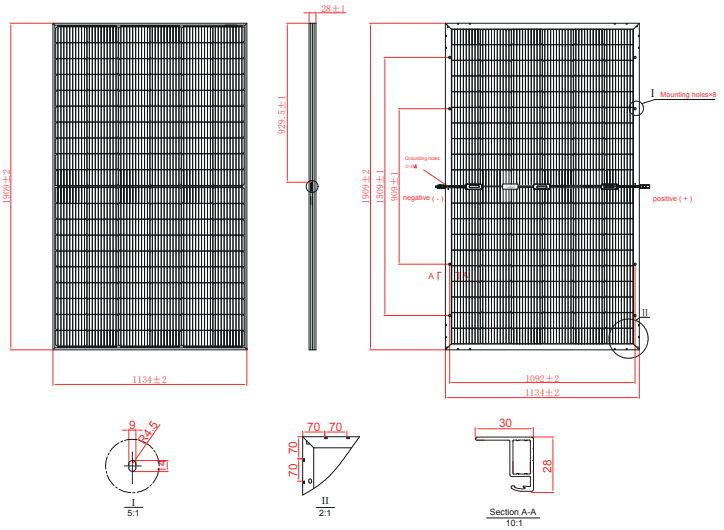
Mechanical Specifications

External Dimension	1909 x 1134 x 28 mm
Weight	22.8 kg
Solar Cells	PERC Mono crystalline(120 pcs)
Front / Back Glass	1.6mm AR coating semi-tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables	4.0mm², 250mm(+)/350mm(-) or Customized Length

Technical drawing



Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	39	39
Pallets per Container	5	24
Pieces per Container	195	936

Electrical Characteristics

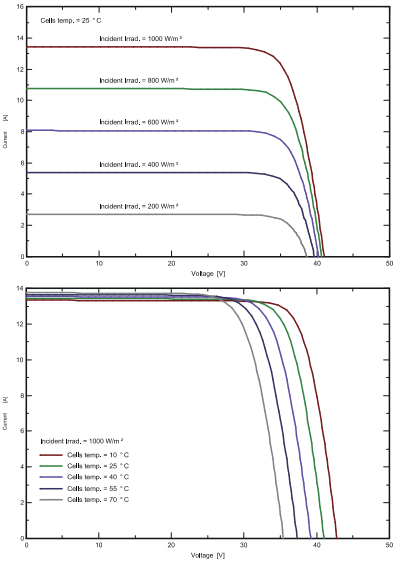
Module Type	SRP-445-BMB-BG			SRP-450-BMB-BG			SRP-455-BMB-BG			SRP-460-BMB-BG		
	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC
Maximum Power -P_{mp} (W)	445	333	312	450	337	315	455	341	319	460	345	322
Open Circuit Voltage -V_{oc} (V)	41.22	38.41	41.20	41.32	38.57	41.30	41.42	38.67	41.40	41.52	38.77	41.50
Short Circuit Current -I_{sc} (A)	13.66	11.04	9.63	13.76	11.12	9.70	13.86	11.20	9.77	13.96	11.28	9.84
Maximum Power Voltage -V_{mp} (V)	34.18	31.82	34.22	34.28	31.98	34.29	34.38	32.06	34.42	34.48	32.18	34.49
Maximum Power Current -I_{mp} (A)	13.03	10.48	9.12	13.13	10.56	9.19	13.24	10.64	9.27	13.34	10.73	9.34
Module Efficiency STC-η_m (%)	20.56			20.79			21.02			21.25		
Power Tolerance（W）	(0, +4.99)											
Pmax Temperature Coefficient	-0.34 %/°C											
Voc Temperature Coefficient	-0.26 %/°C											
Isc Temperature Coefficient	+0.05 %/°C											

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5
Power measurement tolerance: +/-3%

Rear Side Power Gain(SRP-450-BMB-BG)

Power Gain	10%	15%	20%	25%	30%
Maximum Power -P_{mp} (W)	495	518	540	563	585
Open Circuit Voltage -V_{oc} (V)	41.32	41.32	41.32	41.32	41.32
Short Circuit Current -I_{sc} (A)	15.14	15.82	16.51	17.20	17.89
Maximum Power Voltage -V_{mp} (V)	34.28	34.28	34.28	34.28	34.28
Maximum Power Current -I_{mp} (A)	14.44	15.10	15.76	16.41	17.07

I-V Curve



Application Conditions

Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25 A
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature	45±2 °C
Bifaciality	70%±10%
Mechanical Load	Front side 5400 Pa / Back side 2400 Pa

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