

SIII SERIES

Multiple upgrades were forged into one







435-450W



● SIII SERIES

Seraphim Energy Group INC. (SEG) redefined the high-efficiency module series by integrating 166mm silicon wafers with multi-busbar and half-cut cell technologies. SEG 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
-  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

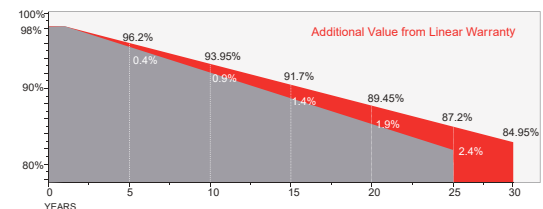
● PRODUCT CERTIFICATION



● INSURANCE



● WARRANTY

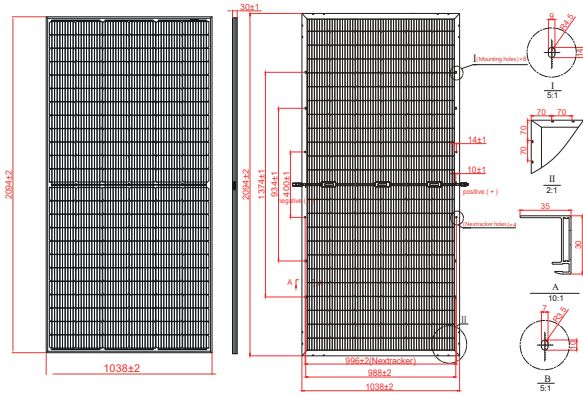


Guarantee on product material and workmanship



Linear power output warranty

Technical Drawing



* All Dimensions in mm
 * The above drawing is a graphical representation of the product. For engineering quality drawings please contact SERAPHIM.

Mechanical Specifications

External Dimension	2094 x 1038 x 30 mm
Weight	28.0 kg
Solar Cells	PERC Mono 166 x 83 mm (144pcs)
Front / Back Glass	2.0mm AR coating semi-tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables	4.0mm ² , 250mm(+)/350mm(-) or Customized Length

Packing Configuration

Container	40'HQ
Pieces per Pallet	32
Pallets per Container	22
Pieces per Container	704

Module Type	SEG-435-BMA-BG			SEG-440-BMA-BG			SEG-445-BMA-BG			SEG-450-BMA-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)	435	271	305	440	275	308	445	277	312	450	282	315
Open Circuit Voltage -V _{oc} (V)	49.6	38.5	49.3	49.7	38.6	49.4	49.9	38.8	49.6	50.1	39.0	49.8
Short Circuit Current -I _{sc} (A)	11.18	9.02	7.88	11.27	9.10	7.95	11.34	9.17	8.00	11.41	9.22	8.04
Maximum Power Voltage -V _{mp} (V)	41.3	31.8	41.4	41.4	31.9	41.5	41.6	32.0	41.7	41.8	32.3	41.9
Maximum Power Current -I _{mp} (A)	10.54	8.53	7.37	10.63	8.61	7.43	10.70	8.66	7.49	10.77	8.74	7.52
Module Efficiency STC-η _m (%)	20.01			20.24			20.47			20.70		
Power Tolerance (W)	(0, +3%)											
Pmax Temperature Coefficient	-0.35 %/°C											
Voc Temperature Coefficient	-0.27 %/°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(SEG-435-BMA-BG)

Power Gain	10%	15%	20%	25%	30%
Maximum Power -P _{mp} (W)	479	500	522	544	566
Open Circuit Voltage -V _{oc} (V)	49.6	49.6	49.6	49.6	49.6
Short Circuit Current -I _{sc} (A)	12.29	12.86	13.41	13.97	14.53
Maximum Power Voltage -V _{mp} (V)	41.3	41.3	41.3	41.3	41.3
Maximum Power Current -I _{mp} (A)	11.59	12.12	12.64	13.17	13.70

Application Conditions

Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	20 A
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature	45±2 °C
Bifaciality	70%±10%
Mechanical Load	Front side 5400 Pa / Rear side 2400 Pa

I-V Curve

