

SIII SERIES

Multiple upgrades were forged into one

435-450W



● SIII SERIES

SEG Solar 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 hailstones
 - Anti-PID

● PRODUCT CERTIFICATION

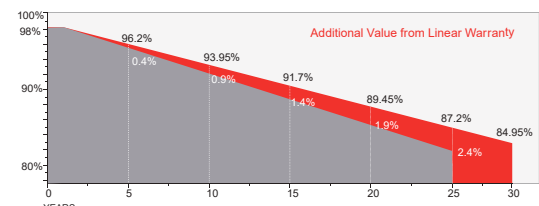
IEC61215:2016; IEC 61730:2016; UL1703; UL61730/CSA/CEC	
IEC62804	PID
IEC61701	Salt Mist
IEC62716	Ammonia Resistance
IEC60068	Dust and Sand
IEC61215	Hailstone(25mm)
Fire Type (UL61730):1/29 (Type1-HV Type29-BG)	
ISO14001:2015; ISO9001:2015; ISO45001:2018	



● INSURANCE

PICC

● WARRANTY



Guarantee on product material and workmanship



Linear power output warranty



SEG SOLAR INC.(SEG)

SEG Headquarter California office: 6200 Stoneridge Mall Rd., Ste 300 Pleasanton, CA 94588
SEG San Antonio, Texas office: 973 Isom Road San Antonio, TX 78216
Tel: 925-468-4198 Web: www.segsolar.com

Mechanical Specifications

External Dimension	2094 x 1038 x 30 mm
Weight	28.0 kg
Solar Cells	PERC Mono 166 x 83 mm(144 pcs)
Front / Back Glass	2.0 / mm AR coating semi-tempered glass / low iron
Frame	Anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Connector Type	MC4
Cable Type / Length	12 AWG PV Wire (UL) / 1200 mm
Mechanical Load(Front)	5400 Pa / 113 psf*
Mechanical Load(Rear)	3600 Pa / 75 psf*

*Refer to SEG installation Manual for details

Packing Configuration

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

For details, please consult SEG.

Electrical Characteristics

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

NOCT: Irradiance 800W/m² ambient temperature 20°C module temperature 45°C wind speed: 1m/s

Power measurement tolerance: +/-3%

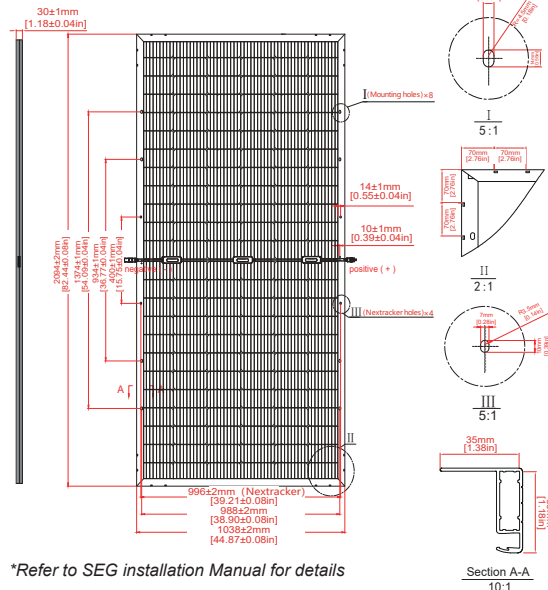
Rear Side Power Gain(SEG-435-BMA-BG)

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%

Technical Drawing



*Refer to SEG installation Manual for details

I-V Curve

