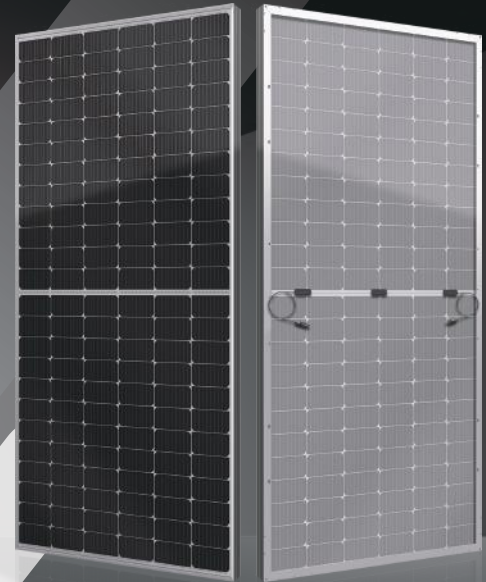


# SIII SERIES

Multiple upgrades were forged into one

## 445-460W



### ● 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

- The transmittance of 400~1100nm band in the transparent region is  $\geq 90\%$
- Using POE or EVA package, there is no need to worry about component power attenuation caused by PID
- A transparent backsheet reduces module weight by 30%, resulting in reduced shipping and installation costs
- Through ultraviolet 500kWh/m<sup>2</sup> strict test, fully meet the requirements of 25 years of use of the modules
- Timely release of packaging material decomposition of acetic acid, effectively reduce the concentration of acetic acid modules
- Consistent with conventional component production process, no need to modify production equipment

### ● PRODUCT CERTIFICATION

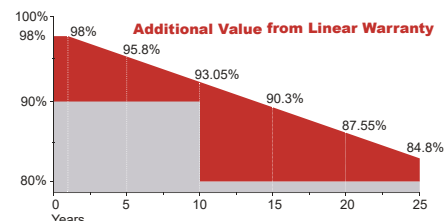
IEC61215:2016; IEC 61730:2016; UL1703; UL61730/CSA/CEC	
IEC62804	PID
IEC61701	Salt Mist
IEC62716	Ammonia Resistance
IEC60068	Dust and Sand
IEC61215	Hailstone(25mm)
Fire Type (UL61730):1/29 (Type1-HV Type29-BG)	
ISO14001:2015; ISO9001:2015; ISO45001:2018	



### ● 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 35 mm
Weight	23.5 kg
Solar Cells	PERC Mono 166 x 83 mm(144 pcs)
Front Glass	3.2 / mm AR coating semi-tempered glass / low iron
Backsheet	Transparent backsheet
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*

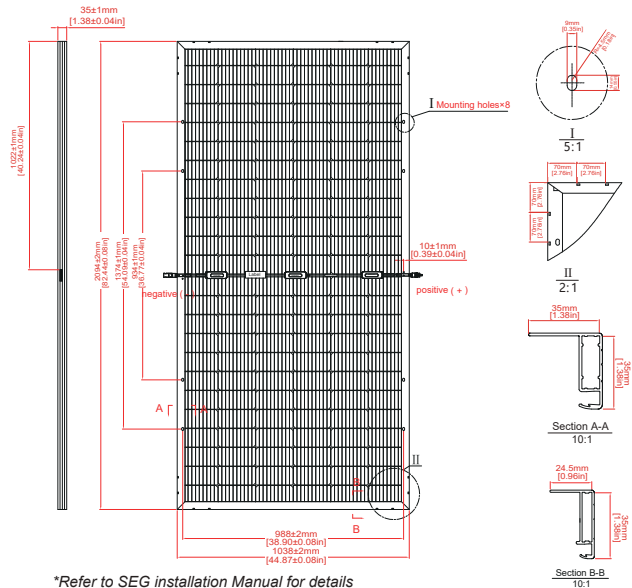
\*Refer to SEG installation Manual for details

## Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	31	31
Pallets per Container	5	22
Pieces per Container	155	682

For details, please consult SEG.

## Technical Drawing



\*Refer to SEG installation Manual for details

## Electrical Characteristics

Module Type	SEG-445-BMA-TB			SEG-450-BMA-TB			SEG-455-BMA-TB			SEG-460-BMA-TB		
	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 <sub>mp</sub> (W)	445	334	312	450	338	315	455	342	319	460	346	322
Open Circuit Voltage -V <sub>oc</sub> (V)	49.9	46.6	49.6	50.1	46.8	49.8	50.3	46.9	50.0	50.5	47.1	50.2
Short Circuit Current -I <sub>sc</sub> (A)	11.34	9.17	8.00	11.41	9.22	8.04	11.48	9.29	8.09	11.55	9.34	8.14
Maximum Power Voltage -V <sub>mp</sub> (V)	41.6	38.5	41.7	41.8	38.7	41.9	42.0	38.9	42.1	42.2	39.1	42.3
Maximum Power Current -I <sub>mp</sub> (A)	10.70	8.68	7.49	10.77	8.73	7.54	10.84	8.80	7.59	10.91	8.85	7.64
Module Efficiency STC-η <sub>m</sub> (%)	20.47			20.70			20.93			21.16		
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/m<sup>2</sup> module temperature 25°C AM=1.5

NOCT: Irradiance 800W/m<sup>2</sup> ambient temperature 20°C module temperature 45°C wind speed: 1m/s  
Power measurement tolerance: +/-3%

## Rear Side Power Gain(SEG-450-BMA-TB)

Power Gain	10%	15%	20%	25%	30%
Maximum Power -P <sub>mp</sub> (W)	495	518	540	563	585
Open Circuit Voltage -V <sub>oc</sub> (V)	50.1	50.1	50.1	50.1	50.1
Short Circuit Current -I <sub>sc</sub> (A)	12.55	13.12	13.69	14.26	14.83
Maximum Power Voltage -V <sub>mp</sub> (V)	41.8	41.8	41.8	41.8	41.8
Maximum Power Current -I <sub>mp</sub> (A)	11.85	12.39	12.92	13.46	14.00

## 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%

## I-V Curve

