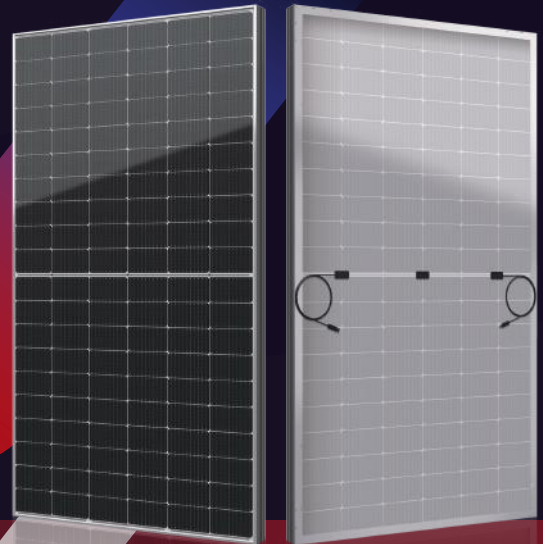


SIV SERIES

Small Changes, Big Accomplishments

445-460W



● SIV SERIES

SEG Solar INC. (SEG) redefined the high-efficiency module series by integrating 182mm 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/m² 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

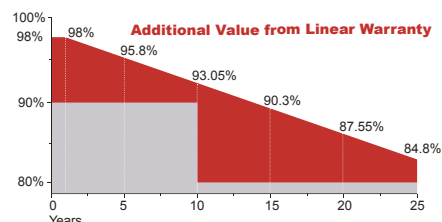
IEC61215:2016; IEC 61730:2016; UL1703; UL61730/CSA/CEC	
IEC62804	PID
IEC61701	Salt Mist
IEC62716	Ammonia Resistance
IEC60068	Dust and Sand
IEC61215	Hailstone(25mm)
Fire Type (UL61730):1/29 (Type1-HV Type29-BG)	
ISO14001:2015; ISO9001:2015; ISO45001:2018	



● INSURANCE

PICC

● WARRANTY



15 YEARS Guarantee on product material and workmanship

25 YEARS 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	1909 x 1134 x 35 mm
Weight	22.3 kg
Solar Cells	PERC Mono crystalline(120 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/IEC) / 1200 mm
Mechanical Load(Front)	5400 Pa / 113 psf*
Mechanical Load(Rear)	3600 Pa / 75 psf*

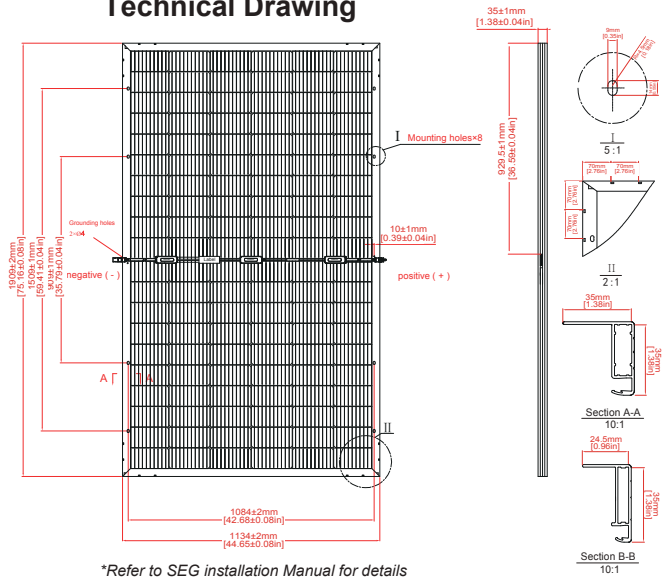
*Refer to SEG installation Manual for details

Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	31	31
Pallets per Container	5	24
Pieces per Container	155	744

For details, please consult SEG.

Technical Drawing



*Refer to SEG installation Manual for details

Electrical Characteristics

Module Type	SEG-445-BMB-TB			SEG-450-BMB-TB			SEG-455-BMB-TB			SEG-460-BMB-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 _{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, +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-450-BMB-TB)

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

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%

I-V Curve

