SEG SOLAR

SIV SERIES

Small Changes, Big Accomplishments

405-420W



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 ≥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 aceticacid modules
- PVEL Consistent with conventional component production process, no need to modify production equipment

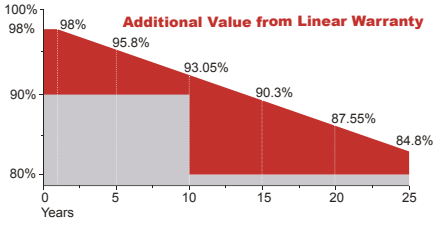
PRODUCT CERTIFICATION

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

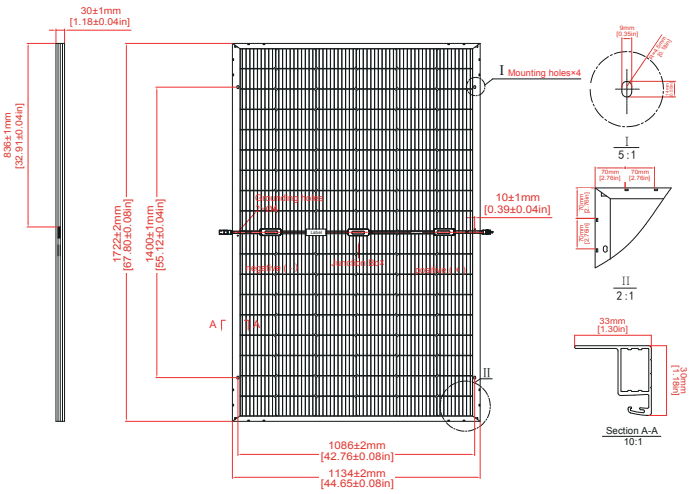
25 YEARS Linear power output warranty

Mechanical Specifications

External Dimension	1722 x 1134 x 30 mm
Weight	21.5 kg
Solar Cells	PERC Mono crystalline(108 pcs)
Front Glass	3.2 / mm AR coating semi-tempered glass / low iron
Backsheet	Transparent backsheet
Frame	Black 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*

Technical Drawing



Packing Configuration

Container	20'GP	40'HQ
Pieces per Pallet	40	36
Pallets per Container	6	26
Pieces per Container	240	936

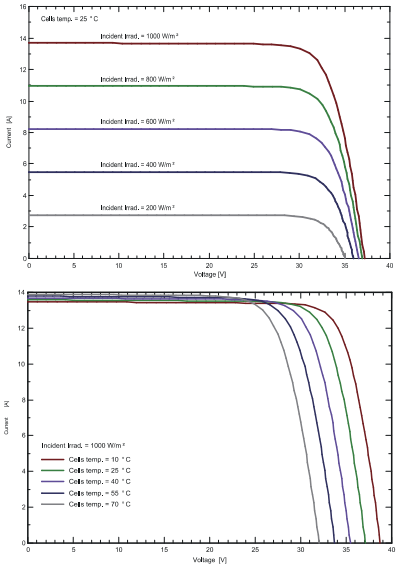
For details, please consult SEG.

Electrical Characteristics

Module Type	SEG-405-BMD-TB			SEG-410-BMD-TB			SEG-415-BMD-TB			SEG-420-BMD-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)	405	304	284	410	308	287	415	311	291	420	314	294
Open Circuit Voltage -V_{oc} (V)	37.22	34.73	37.20	37.32	34.81	37.30	37.42	34.90	37.40	37.52	34.99	37.50
Short Circuit Current -I_{sc} (A)	13.70	11.07	9.66	13.80	11.15	9.73	13.90	11.23	9.80	14.00	11.31	9.87
Maximum Power Voltage -V_{mp} (V)	30.93	28.91	30.98	31.05	29.05	31.03	31.16	29.19	31.17	31.28	29.33	31.29
Maximum Power Current -I_{mp} (A)	13.10	10.51	9.17	13.21	10.59	9.25	13.32	10.66	9.34	13.43	10.73	9.42
Module Efficiency STC-η_m (%)	20.74			21.00			21.25			21.51		
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
NOCT: Irradiance 800W/m² ambient temperature 20°C module temperature 45°C wind speed: 1m/s
Power measurement tolerance: +/-3%

I-V Curve



Rear Side Power Gain(SEG-410-BMD-TB)

Power Gain	10%	15%	20%	25%	30%
Maximum Power -P_{mp} (W)	451	472	492	513	533
Open Circuit Voltage -V_{oc} (V)	37.22	37.22	37.22	37.22	37.22
Short Circuit Current -I_{sc} (A)	15.18	15.87	16.56	17.25	17.94
Maximum Power Voltage -V_{mp} (V)	31.05	31.05	31.05	31.05	31.05
Maximum Power Current -I_{mp} (A)	14.53	15.19	15.85	16.51	17.17

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%

Specifications are subject to change without further notification SEG-DS-EN-2022V1.0 © Copyright 2022 SEG