









ZION Series

Half-Cell Bifacial Module

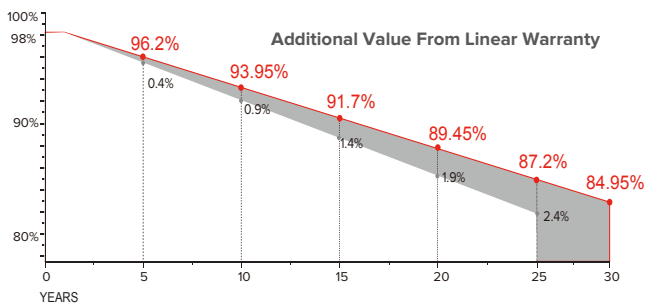
445-460Wp | **21.16%**
 Module Power Output | Max Efficiency



Key Features

-  High module conversion efficiency
-  Better temperature coefficient
-  Super multi busbar technology
-  Low attenuation long warranty
-  Superior load capacity
-  Higher bifacially
-  USA based liability insurance.
-  Houston, Texas based company.

Warranty



15 <Years> Guarantee on product material and workmanship

30 <Years> Linear power output warranty

Product Certification

IEC61215:2016; IEC 61730:2016; UL61730

IEC62804 PID

IEC61701 Salt Mist

IEC62716 Ammonia Resistance

IEC60068 Dust and Sand

IEC61215 Hailstone

Fire Type (UL61730):Type29

ISO14001:2015; ISO9001:2015; ISO45001:2018



About SEG Solar

SEG Solar is a leading manufacturer of high-performance solar panels for residential, commercial, and utility applications. The company, headquartered in Houston, Texas, is committed to providing cost-effective and reliable solar solutions that help customers reduce their energy costs and carbon footprint.



Download Datasheet

Electrical Characteristics

Module Type	SEG-445-BMA-BG			SEG-450-BMA-BG			SEG-455-BMA-BG			SEG-460-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 -Pmp(Wp)	445	334	312	450	338	315	455	342	319	460	346	322
Open Circuit Voltage -Voc(V)	49.90	46.60	49.60	50.10	46.80	49.80	50.30	46.90	50.00	50.50	47.10	50.20
Short Circuit Current -Isc(A)	11.34	9.17	8.00	11.42	9.22	8.04	11.49	9.29	8.09	11.57	9.34	8.14
Maximum Power Voltage -Vmp(V)	41.60	38.50	41.70	41.80	38.70	41.90	42.00	38.90	42.10	42.20	39.10	42.30
Maximum Power Current -Imp(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(%)	20.47			20.70			20.93			21.16		
Power Tolerance	(0, +3%)											
Maximum System Voltage	1500V DC											
Maximum Series Fuse Rating	25 A											

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

Mechanical Specifications

External Dimension	2094x 1038 x 30 mm
Weight	28.0 kg
Solar Cells	PERC Mono 166 x 83mm(144 pcs)
Front / Back Glass	2.0mm AR coating semi-tempered glass / low iron
Frame	Anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Connector Type	PV-CO02-xy / MC4
Cable Type	12 AWG PV Wire (UL)
Cable Length	Portrait: 400 mm(+)/ 200 mm(-) Landscape: 1200 mm(+)/ 1200 mm(-) or customized length
Mechanical Load(Front)	5400 Pa / 113 psf*
Mechanical Load(Rear)	2400 Pa / 50 psf*

*Refer to SEG installation Manual for details

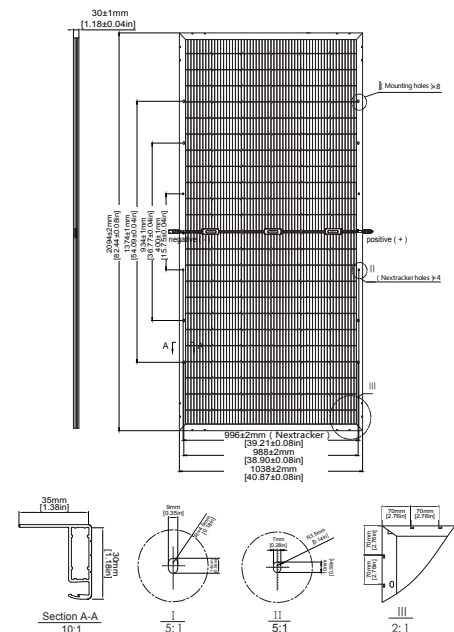
Packing Configuration

Container	20'GP	40'HQ	40'HQ(For USA)
Pieces per Pallet	36	36	36
Pallets per Container	5	22	18
Pieces per Container	180	792	648

Temperature Characteristics

Pmax Temperature Coefficient	-0.35 %/°C
Voc Temperature Coefficient	-0.27 %/°C
Isc Temperature Coefficient	+0.05 %/°C
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature (NOCT)	45±2 °C

Technical Drawing



*Refer to SEG installation Manual for details

I-V Curve

