

ALPINE N Series

Half-Cell N-Type Bifacial Module

435-450Wp | **22.52%**
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 bifaciality

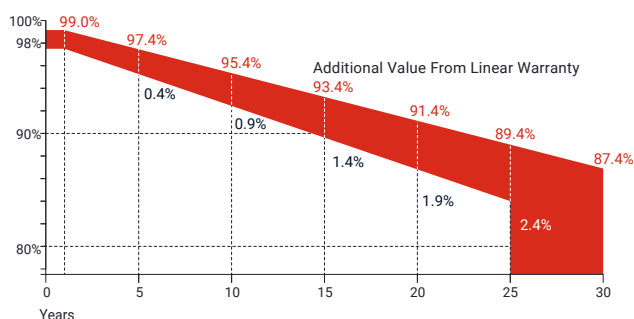


USA based liability insurance



Houston, Texas based company

Warranty



30
Years

Guarantee on product material and workmanship

30
Years

Linear power output warranty

Product Certification

IEC61215; IEC61730; UL61215; UL61730

IEC62804

PID

IEC61701

Salt Mist

IEC62716

Ammonia Resistance

IEC60068

Dust and Sand

IEC61215

Hailstone

Fire Type (UL61730): Type 29

ISO14001:2015; ISO9001:2015; ISO45001:2018



CALIFORNIA ENERGY COMMISSION



About SEG Solar

Founded in 2016, SEG is a leading vertically integrated PV manufacturer headquartered in Houston, Texas, U.S., and is dedicated to delivering reliable and cost-effective solar modules to the utility, commercial, and residential markets. By the end of 2024, SEG had shipped over 6 GW of solar modules worldwide and have achieved a module production capacity of 6 GW.



Download Datasheet

Electrical Characteristics

Module Type	SEG-435-BTE-BG			SEG-440-BTE-BG			SEG-445-BTE-BG			SEG-450-BTE-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)*	435	329	348	440	333	352	445	337	356	450	341	360
Open Circuit Voltage -Voc(V)	35.29	33.40	35.28	35.47	33.60	35.48	35.64	33.70	35.58	35.82	33.90	35.78
Short Circuit Current -Isc(A)	15.70	12.66	12.53	15.77	12.72	12.60	15.83	12.77	12.71	15.90	12.82	12.78
Maximum Power Voltage -Vmp(V)	29.24	27.60	29.18	29.42	27.80	29.38	29.60	27.90	29.58	29.78	28.10	29.78
Maximum Power Current -Imp(A)	14.88	11.94	11.93	14.96	12.00	11.98	15.04	12.07	12.04	15.12	12.13	12.09
Module Efficiency(%)	21.77			22.02			22.27			22.52		
Power Tolerance(W)						(0, +4.99)						
Maximum System Voltage						1500V DC						
Maximum Series Fuse Rating						35 A						
Bifaciality						80±10%						

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

*Measuring tolerance: ±3%

Mechanical Specifications

External Dimension	1762 x 1134 x 30 mm
Weight	25.5 kg
Solar Cells	N-Type Mono 96 pcs(48 x 2)
Front Glass	2.0 mm AR coating semi-tempered glass
Back Glass	2.0 mm Semi-tempered glass
Frame	Black anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Connector Type	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

Temperature Characteristics

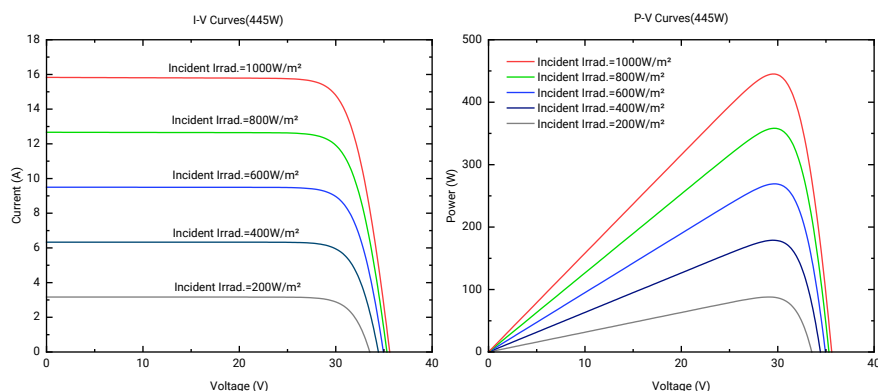
Pmax Temperature Coefficient	-0.30 %/°C
Voc Temperature Coefficient	-0.25 %/°C
Isc Temperature Coefficient	+0.046 %/°C
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature (NOCT)	45±2 °C

Packing Configuration

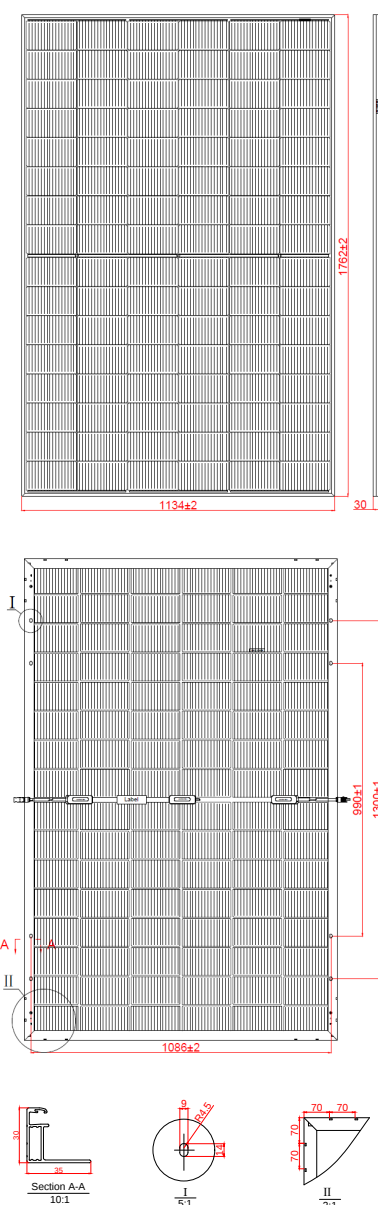
Container*	20'GP	40'HQ
Pieces per Pallet	36	36
Pallets per Container	5	24
Pieces per Container	180	864

*Refer to the SEG container technical documentation for 53' box trailer or other trucks loading quantity

Curves of PV Module



Technical Drawing



*Refer to SEG installation manual for details