

SOLAR PV MODULE

# 120 HALF CUT PERC CELL

BIFACIAL DUAL GLASS 435-460 W

## Transition to a Brighter Tomorrow



### SMBB TECHNOLOGY

Better light trapping and current collection to improve module power output and reliability



### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control



### Higher Power Output

Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR



### Auto Bussing & Soldering Technology

Induction based Improved soldering quality without pollution to module



### Enhanced Mechanical Load

Certified to withstand wind load (2400 Pascal) and snow load (5400 Pascal)

## High Performance Guarantee!



**LINEAR POWER  
OUTPUT WARRANTY**



**PRODUCT  
WARRANTY**

## Suitable for



**RESIDENTIAL**



**UTILITY**



**COMMERCIAL**



**OFF-GRID**

## Certification



IEC 61215 | IEC 61730 | IEC 61701 (Salt Mist) | IEC 62716 (Ammonia)

IEC 62782 (DMLT) | IEC 61853-2 (Panfile & IAM) | LID, LETID

IEC 60068 (Sand & Dust) | IEC 62804 (PID) | CE | IEC 61730

**M10-182MM WAFER, IDEAL FOR RESIDENTIAL, C & I APPLICATION**

**AVAILABLE IN ALL BLACK RANGE**

## Electrical Characteristics (STC)

MODULE TYPE	PE-435HGB	PE-440HGB	PE-445HGB	PE-450HGB	PE-455HGB	PE-460HGB
Maximum Power (Pmp)	435	440	445	450	455	460
Open Circuit Voltage (Voc)	40.81	40.92	41.03	41.14	41.23	41.33
Short Circuit Current (Isc)	13.55	13.65	13.73	13.84	13.95	14.06
Maximum Power Voltage (Vmp)	34.28	34.39	34.48	34.59	34.68	34.78
Maximum Power Current (Imp)	12.69	12.80	12.91	13.02	13.12	13.23
Module Efficiency (%)	20.10	20.34	20.57	20.80	21.03	21.26
Power Tolerance	0 to +5W					
Maximum System Voltage	1500V (UL & IEC)					
Maximum Series Fuse Rating	25 Amp					
*STC Irradiance 1000W/m <sup>2</sup> , Module Temperature 25°C and AM 1.5			Measuring Tolerance: ±3%			

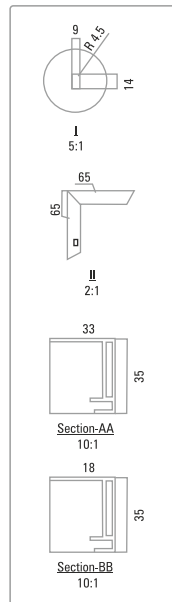
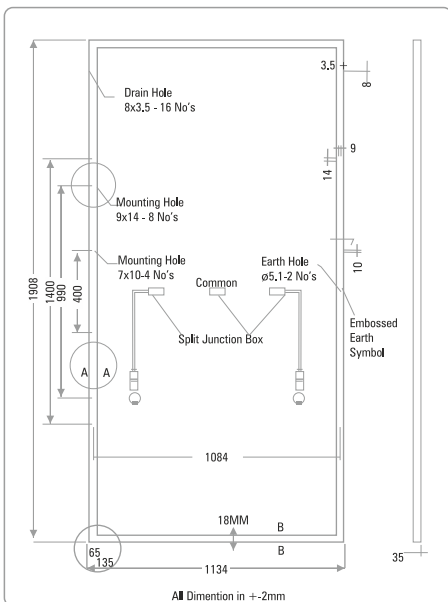
## Electrical Characteristics (NOCT)

MODULE TYPE	PE-435HGB	PE-440HGB	PE-445HGB	PE-450HGB	PE-455HGB	PE-460HGB
Maximum Power (Pmp)	320	324	327	331	335	338
Open Circuit Voltage (Voc)	34.11	38.23	38.34	38.44	38.52	38.62
Short Circuit Current (Isc)	10.77	10.88	10.95	11.03	11.12	11.21
Maximum Power Voltage (Vmp)	31.81	31.91	31.99	32.10	32.18	32.27
Maximum Power Current (Imp)	10.06	10.14	10.23	10.31	10.40	10.48
Module Efficiency (nm)	14.79	14.96	15.13	15.30	15.47	15.64
*NOCT-Irradiance 800 W/m <sup>2</sup> , AM 1.5, Ambient Temperature 20°C & Wind speed 1m/s			Measuring Tolerance: ±3%			

FOR PEIPL, MODEL CODE: PEI-120 - XXXHGB - M10  
(WHERE, XXX – 435 to 460 IN STEPS OF 5W)

GAIN		PE-435HGB	PE-440HGB	PE-445HGB	PE-450HGB	PE-455HGB	PE-460HGB
10%	Power Pmp	478.5	484.0	489.5	495.0	500.5	506.0
20%	Power Pmp	522.0	528.0	534.0	540.0	546.0	552.0
30%	Power Pmp	565.5	572.0	578.5	585.0	591.5	598.0

- Bifacial gains depends on the power plant design & albedo of installation site
  - Power Bifaciality = Pmax(Rear)/Pmax(Front) are tested under STC
- Measuring Tolerance: ±3%

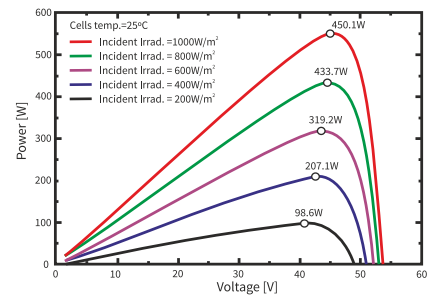
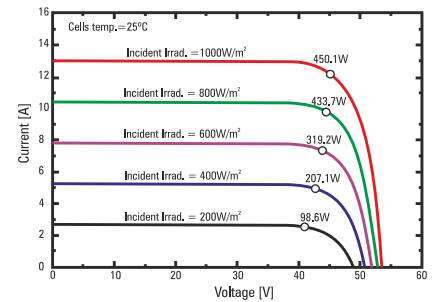


FIRST YEAR  
DEGRADATION  
< 2.0%

YEAR 2-30 POWER  
DEGRADATION  
< 0.45%

## Temperature Characteristics

Pmax Temperature Coefficient Up to	-0.35%/°C
Voc Temperature Coefficient Up to	-0.30%/°C
Isc Temperature Coefficient	0.04%/°C
Operating Temperature	-40°C To + 85°C
Nominal Operating Cell Temperature	42 ± 3° C



## Mechanical Specifications

External Dimensions	1908 (±2mm) x 1134 (±2mm) x 35 (±1mm)
Weight	26 (± 3%) Kg
Solar Cells	10 BB, Mono PERC - crystalline 91mm x 182mm ± 1mm
Front Glass	2.0 mm, ARC Semi Tempered, HS Glass
Rear Cover	2.0 mm, ARC Semi Tempered, HS Glass
Frame	Anodized Aluminium Alloy (Silver/Black)
Junction Box	3 Split, IP 68 Rated
Connector	MC4 Compatible
Mechanical Load	5400 Pa For Snow Load, 2400 Pa Wind Load
Fire Performance	TYPE 39 (UL 61730) Or Class C (IEC 61730)
Output Cable	4.0 mm <sup>2</sup>   400 mm Length

Frame Profile 35x33(Long) & 35x18mm(Short)

## Packing Configuration

Container	40'HQ
Pieces per Pallet	31
Pallets per Container	24
Pieces per Container	744