



SOLAR PV MODULE

120 HALF CUT PERC CELL

BIFACIAL DUAL GLASS 435-460W



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).

Made with Premier Energies M10 Cells

M10-182mm wafer. Ideal for Residential , C & I Application

AVAILABLE IN ALL BLACK RANGE

30 YEARS

WARRANTY FOR
LINEAR POWER OUTPUT

12 YEARS

PRODUCT WARRANTY

CERTIFICATION



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

IEC 62782 (DMLT) | IEC 61853-1 & 2 (Panfile & IAM) | LID, LETID

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

IEC 62759 (Transportation) | CEC, CE | UL 61730

IDEAL FOR



Residential



Commercial



Utility



Off-grid

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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)	36.84	40.92	41.03	41.14	41.23	41.33
Short Circuit Current (Isc)	13.51	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 (ηm)	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	25Amp					

* STC - Irradiance 1000 W/m², Module temperature 25°C and AM=1.5

Measuring Tolerance: ±3%

ELECTRICAL CHARACTERISTICS(NOTC)

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)	34.42	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 (ηm)	14.79	14.96	15.13	15.30	15.47	15.64

* NOCT - Irradiance 800 W/m², AM 1.5, Ambient temperature 20°C and Wind speed 1m/s

Measuring Tolerance: ±3%

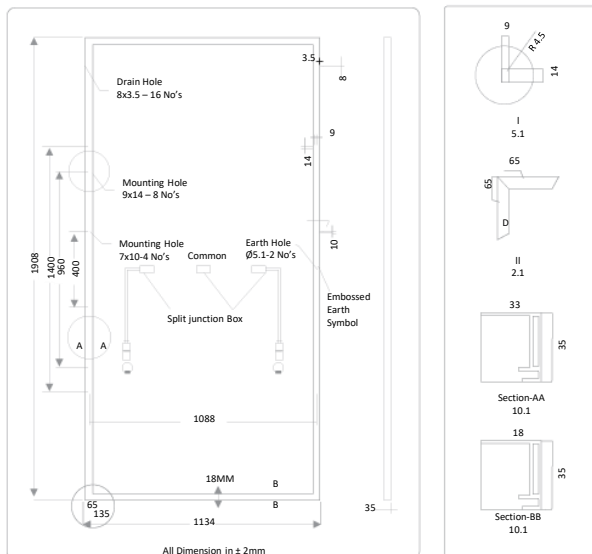
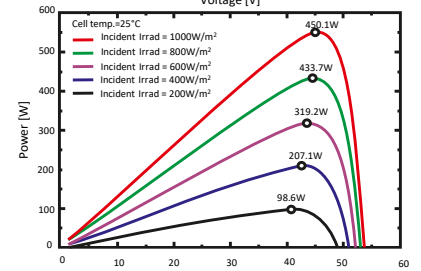
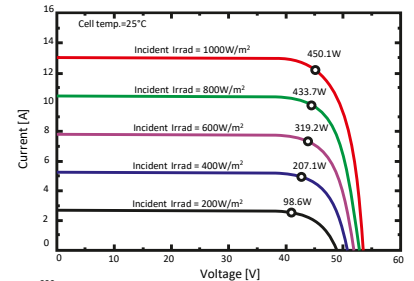
Gain	PE 435HGB	PE 440HGB	PE 445HGB	PE 450HGB	PE 455HGB	PE 460HGB
10% Power (Pmp)	478.5	484.0	489.5	495.0	500.5	506.0
20% Power (Pmp)	522.0	528.0	534.0	540.0	546.0	552.0
30% Power (Pmp)	565.5	572.0	578.5	585.0	591.5	598.0

- Bifacial gains depends on the power plant design and albedo of installation site
- Power Bifaciality= $P_{max}(Rear)/P_{max}(Front)$ are tested under STC

Measuring Tolerance: ±3%

TEMPERATURE CHARACTERISTICS

Pmax Temperature Coefficient	-0.35%/°C
Voc Temperature Coefficient	-0.27%/°C
Isc Temperature Coefficient	0.04%/°C
Operating Temperature	-40°C To +85°C
Nominal Operating Cell Temperature	42 ± 3°C



MECHANICAL SPECIFICATIONS

External Dimension	1908(±2mm)x 1134(±2mm)x35(±1mm)
Weight	27 (±3%)Kg
Solar Cells	10 BB, Mono PERC-crystalline 91mm x 182mm
Front Glass	2.0mm ARC Semi Tempered , HS Glass
Rear Cover	2.0mm Semi Tempered , HS Glass
Frame	Anodized Aluminium Alloy (Silver/Black)
Junction Box	3 Split, IP 68 Rated
Connector	MC 4 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 ² 400mm Length

FRAME PROFILE 35X33MM (LONG) AND 35X18MM (SHORT)

PACKING CONFIGURATION

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

FIRST YEAR DEGRADATION < 2.0%

YEAR 2-30 POWER DEGRADATION 0.45%

For more details, please contact:

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The specification and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement, Premier Energies reserves the right to make necessary adjustment to the information described herein at any time without further notice.