

SOLAR PV ALL BLACK MODULE

120 HALF CUT MONO PERC CELL

MONO FACIAL 425-460 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

**TUV
NORD**

**CLEAN
ENERGY
COUNCIL**

**CSA
US**



IEC 62804 (PID) | IEC 61701 (Salt Mist) | IEC 61726 (Ammonia)

IEC 60068 (Sand & Dust) | IEC 61215 | IEC 61730 | UL 61730

M10-182MM WAFER, IDEAL FOR ULTRA-LARGE POWER PLANT

AVAILABLE IN ALL BLACK RANGE

Electrical Characteristics (STC)

MODULE TYPE	PE-425HM	PE-430HM	PE-435HM	PE-440HM	PE-445HM	PE-450HM	PE-455HM	PE-460HM
Maximum Power (Pmp)	425	430	435	440	445	450	455	460
Open Circuit Voltage (Voc)	40.54	40.06	40.8	40.41	41.2	41.4	41.6	41.8
Short Circuit Current (Isc)	13.00	13.27	13.34	13.41	13.49	13.60	13.69	13.78
Maximum Power Voltage (Vmp)	34.37	34.41	34.45	34.49	34.53	34.57	34.61	34.65
Maximum Power Current (Imp)	12.37	12.5	12.63	12.76	12.89	13.02	13.15	13.28
Module Efficiency (%)	19.64	19.87	20.10	20.34	20.57	20.80	21.03	21.26
Power Tolerance	(-0,+5W)							
Maximum System Voltage	1500							
Maximum Series Fuse Rating	25A							

*STC Irradiance 1000W/m2, Module Temperature 25°C and AM 1.5

Measuring Tolerance: ±3%

Electrical Characteristics (NOCT)

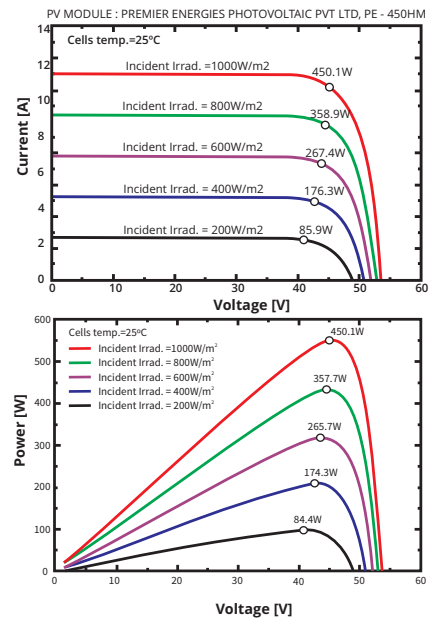
MODULE TYPE	PE-425HM	PE-430HM	PE-435HM	PE-440HM	PE-445HM	PE-450HM	PE-455HM	PE-460HM
Maximum Power (Pmp)	313	316	320	324	327	331	335	338
Open Circuit Voltage (Voc)	37.75	37.94	38.12	38.31	38.50	38.68	38.87	39.06
Short Circuit Current (Isc)	10.36	10.36	10.63	10.69	10.75	10.84	10.91	10.98
Maximum Power Voltage (Vmp)	31.89	31.93	31.97	32.00	32.04	32.08	32.11	32.15
Maximum Power Current (Imp)	9.80	9.91	10.01	10.11	10.22	10.32	10.42	10.52
Module Efficiency (%)	14.45	14.62	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

Test Uncertainty for Pmp: ±3%

Temperature Characteristics

Pmax Temperature Coefficient Up to	-0.35%/°C
Voc Temperature Coefficient Up to	-0.3%/°C
Isc Temperature Coefficient	0.05%/°C
Operating Tempertaurure	-40°C To + 85°C
Nominal Operating Cell Temperature	42 ± 2° C



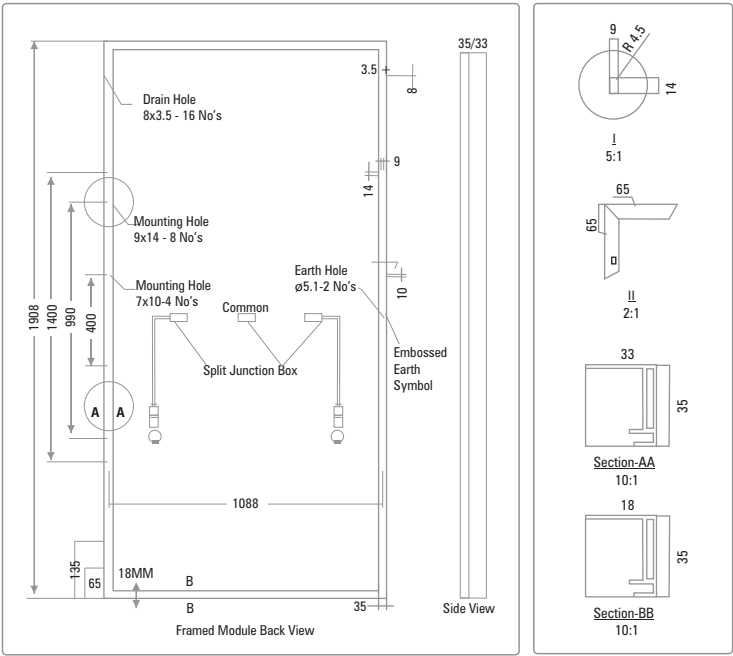
Mechanical Specifications

External Dimensions	1908 X 1134 X 35mm
Weight	23Kg
Solar Cells	Mono PERC - crystalline 91mm X 182mm
Front Glass	3.2 mm, High Transmission, Low Iron, Tempered Glass
Frame	Silver/Black Anodized Aluminium Alloy
Junction Box	3 Split, IP 68 Rated
Connector	Mc4 Compatible
Mechanical Load	5400 Pa For Snow Load, 2400 Pa Wind Load
Output Cable	4.0 mm2 400 mm Length

Frame Profile 35x33 (Long) & 35x18 (Short)

Packing Configuration

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



FIRST YEAR
DEGRADATION
< 2.0%

YEAR 2-25 POWER
DEGRADATION
< 0.55%