

SOLAR PV MODULE

144 HALF CUT TOPCon CELL

BIFACIAL DUAL GLASS 10BB & 16BB 530-560 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 62804 (PID) | IEC 61701 (Salt Mist) | IEC 62726 (Ammonia)

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

IEC 60068 (Sand & Dust) | IEC 61215 | CEC, CE | IEC 61730 | UL 61730

MADE WITH PREMIER ENERGIES M10 CELLS

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

AVAILABLE IN ALL BLACK RANGE



Electrical Characteristics (STC)

| MODULE TYPE | PE-560 THGB 144 PEI-144-560 THGB-M10 | PE-565 THGB 144 PEI-144-565 THGB-M10 | PE-570 THGB 144 PEI-144-570 THGB-M10 | PE-575 THGB 144 PEI-144-575 THGB-M10 | PE-580 THGB 144 PEI-144-580 THGB-M10 | PE-585 THGB 144 PEI-144-585 THGB-M10 | PE-590 THGB 144 PEI-590-425 THGB-M10 |
|---|--|--|--|--|--|--|--|
| Maximum Power (Pmp) | 560 | 565 | 570 | 575 | 580 | 585 | 590 |
| Open Circuit Voltage (Voc) | 51.18 | 51.22 | 51.26 | 51.30 | 51.34 | 51.38 | 51.42 |
| Short Circuit Current (Isc) | 13.40 | 13.50 | 13.61 | 13.71 | 13.83 | 13.93 | 14.04 |
| Maximum Power Voltage (Vmp) | 43.91 | 43.95 | 43.99 | 44.03 | 44.07 | 44.11 | 44.15 |
| Maximum Power Current (Imp) | 12.76 | 12.86 | 12.96 | 13.06 | 13.17 | 13.27 | 13.37 |
| Module Efficiency % | 21.66 | 21.86 | 22.05 | 22.24 | 22.44 | 22.63 | 22.83 |
| Power Tolerance | 0 to +5W | | | | | | |
| Maximum System Voltage | 1500V (UL & IEC) | | | | | | |
| Maximum Series Fuse Rating | 25 Amp | | | | | | |
| *STC Irradiance 1000W/m ² , Module Temperature 25°C and AM 1.5 | | | | | | | Measuring Tolerance: ±3% |

Electrical Characteristics (NOCT)

| MODULE TYPE | PE-560 THGB 144 PEI-144-560 THGB-M10 | PE-565 THGB 144 PEI-144-565 THGB-M10 | PE-570 THGB 144 PEI-144-570 THGB-M10 | PE-575 THGB 144 PEI-144-575 THGB-M10 | PE-580 THGB 144 PEI-144-580 THGB-M10 | PE-585 THGB 144 PEI-144-585 THGB-M10 | PE-590 THGB 144 PEI-590-425 THGB-M10 |
|---|--|--|--|--|--|--|--|
| Maximum Power (Pmp) | 412 | 416 | 419 | 423 | 427 | 430 | 434 |
| Open Circuit Voltage (Voc) | 47.82 | 47.86 | 47.90 | 47.93 | 47.97 | 48.01 | 48.61 |
| Short Circuit Current (Isc) | 10.68 | 10.76 | 10.85 | 10.93 | 11.02 | 11.10 | 11.19 |
| Maximum Power Voltage (Vmp) | 40.74 | 40.78 | 40.82 | 40.86 | 40.89 | 40.93 | 40.97 |
| Maximum Power Current (Imp) | 10.11 | 10.19 | 10.27 | 10.35 | 10.43 | 10.51 | 10.59 |
| Module Efficiency % | 15.95 | 16.09 | 16.23 | 16.38 | 16.52 | 16.66 | 16.76 |
| *NOCT- Irradiance 800 W/m ² , AM 1.5, Ambient Temperature 25°C & Wind speed 1m/s | | | | | | | Measuring Tolerance: ±3% |

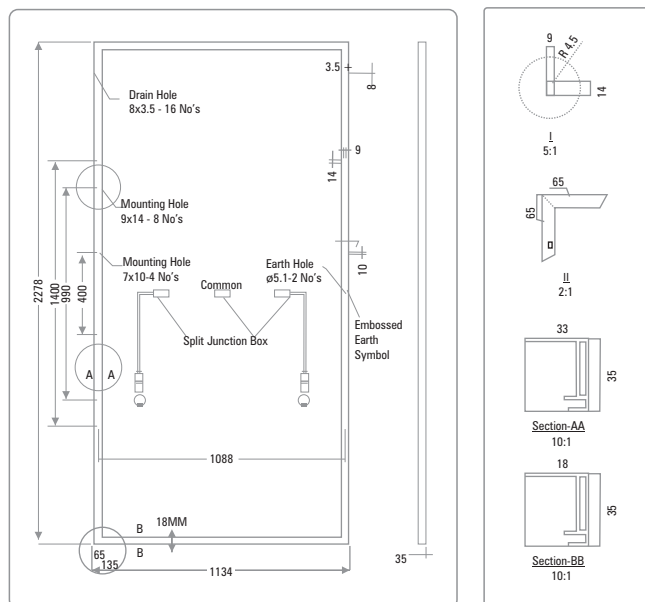
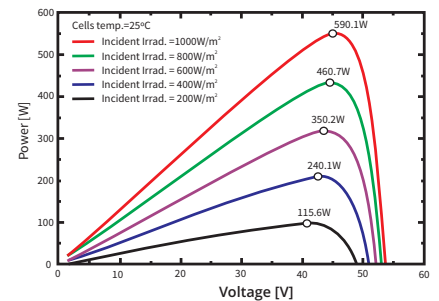
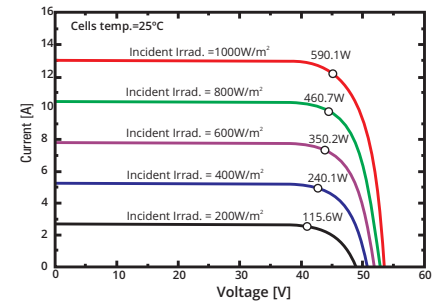
| GAIN | | PE-560 THGB 144 PEI-144-560 THGB-M10 | PE-565 THGB 144 PEI-144-565 THGB-M10 | PE-570 THGB 144 PEI-144-570 THGB-M10 | PE-575 THGB 144 PEI-144-575 THGB-M10 | PE-580 THGB 144 PEI-144-580 THGB-M10 | PE-585 THGB 144 PEI-144-585 THGB-M10 | PE-590 THGB 144 PEI-590-425 THGB-M10 |
|------|-----------|--|--|--|--|--|--|--|
| 10% | Power Pmp | 616.0 | 621.5 | 627.0 | 632.5 | 638.0 | 643.5 | 649.0 |
| 20% | Power Pmp | 672.0 | 678.0 | 684.0 | 690.0 | 696.0 | 702.0 | 708.0 |
| 30% | Power Pmp | 728.0 | 734.5 | 741.0 | 747.5 | 754.0 | 760.5 | 767.0 |

- 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%

Temperature Characteristics

| | |
|------------------------------------|-----------------|
| Pmax Temperature Coefficient Up to | -0.30%/°C |
| Voc Temperature Coefficient Up to | -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 Dimensions | 2278(±2mm) x 1134 (±2mm) x 35(±1mm) |
| Weight | 34 (± 3%) Kg |
| Solar Cells | 10BB/16BB, TOPCon - crystalline 91mm x 182mm ± 1mm |
| Front Glass | 2 mm, Semi Tempered, HS Glass |
| Rear Cover | 2 mm, 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 29 (UL 61730) Or Class C (IEC 61730) |
| Output Cable | 4.0 mm ² 400 mm Length |

Frame Profile 35x33(Long) & 35x18mm(Short)
Also Available 30x30(Long) & 30x15mm(Short)

Packing Configuration

| | |
|-----------------------|-------|
| Container | 40'HQ |
| Pieces per Pallet | 31 |
| Pallets per Container | 20 |
| Pieces per Container | 620 |

FIRST YEAR
DEGRADATION
< 2.0%

YEAR 2-30 POWER
DEGRADATION
< 0.45%

