

BIPRO

TM3G48M **96-**

430 - 450W

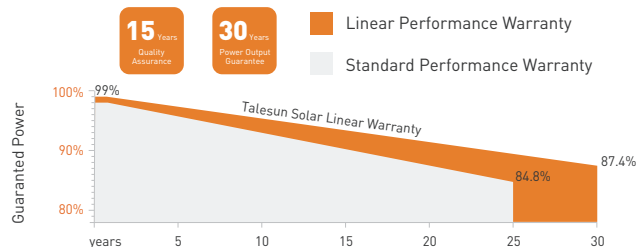
16BB Half-cut N-type
Full Black

E & D C CE CA E

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems



E A CE A A



E EA E



16BB - C

Lower LID/LeTID degradation and better low light performance
Attenuation $\leq 1\%$ (1st year) / $\leq 0.4\%$ (Linear)



Bifacial TOPCon cell technology,
Dual-sided power generation gain from back side depending on
albedo, significantly reduce LCOE



E A - D

192 hours Anti-PID test



A

No water-permeability and high wear-resistance,
can be widely used in high-humid, windy and dusty area



68 B

High waterproof level

E EC CA C A AC E C

| Testing Condition | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax/W) | 430 | 327 | 435 | 330 | 440 | 334 | 445 | 338 | 450 | 342 |
| Operating Voltage (Vmpp/V) | 28.92 | 27.30 | 29.22 | 27.50 | 29.52 | 27.70 | 29.79 | 28.00 | 30.09 | 28.20 |
| Operating Current (Impp/A) | 14.87 | 11.97 | 14.89 | 12.00 | 14.91 | 12.05 | 14.94 | 12.09 | 14.96 | 12.12 |
| Open-Circuit Voltage (Voc/V) | 34.76 | 33.00 | 34.98 | 33.20 | 35.20 | 33.40 | 35.42 | 33.60 | 35.64 | 33.80 |
| Short-Circuit Current (Isc/A) | 15.72 | 12.67 | 15.76 | 12.71 | 15.80 | 12.74 | 15.83 | 12.76 | 15.86 | 12.79 |
| Module Efficiency [%] | 21.50 | | 21.80 | | 22.00 | | 22.30 | | 22.50 | |

STC: Irradiance 1000W/m², Spectra at AM1.5, Module Temperature 25℃. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%
NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20℃, Wind speed 1m/s

EA DE E A (E E E CE 445)

| | | | | | |
|-----------|-------|-------|-------|-------|-------|
| Pmax gain | 5% | 10% | 15% | 20% | 25% |
| Pmax/W | 467 | 490 | 512 | 534 | 556 |
| Vmpp/V | 29.79 | 29.79 | 29.79 | 29.79 | 29.79 |
| Impp/A | 15.69 | 16.43 | 17.18 | 17.93 | 18.68 |
| Voc/V | 35.42 | 35.42 | 35.42 | 35.42 | 35.42 |
| Isc/A | 16.62 | 17.41 | 18.20 | 19.00 | 19.79 |

EC A CA C A AC E C

| | |
|-------------------|---|
| Cell Type | N-type Mono-Crystallin (16Busbar) |
| No. of Cells | 96pcs in series (6*16) |
| Module Dimensions | 1762*1134*30mm (69.37*44.65*1.18inches) |
| Weight | 24.7kg (54.45lbs.) |
| Front Glass | 2.0mm AR Coating Semi-tempered Glass |
| Back Glass | 2.0mm Glazed Semi-tempered Glass |
| Frame | Anodized Aluminium Alloy |
| Junction Box | IP68, 3 Bypass Diodes |
| Output Cables | 4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length |
| Connectors | T01/LJQ-3-CSY/MC4/MC4-EV02 |

A CA C D

| | |
|---------------------------|-------------------------------------|
| Maximun System Voltage | 1500V/DC |
| Operating Temperature | -40℃~+85℃ |
| Maximun Series Fuse | 35A |
| Safety Protection Class | Class II |
| Mechanical Load | Front side 5400Pa, Back side 2400Pa |
| Refer. Bifaciality Factor | 80%±5% |

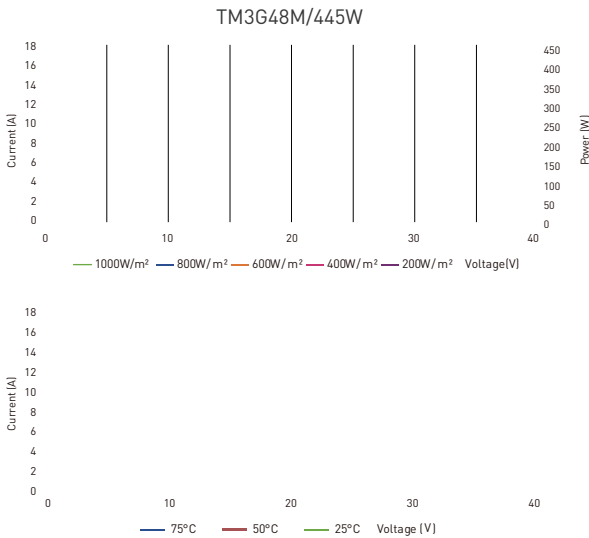
E E A E C A AC E C

| | |
|--|-----------|
| Temperature Coefficient of Pmax | -0.29%/℃ |
| Temperature Coefficient of Voc | -0.24%/℃ |
| Temperature Coefficient of Isc | +0.043%/℃ |
| Nominal Module Operating Temperature(NMOT) | 43±2℃ |

AC C A

| | | |
|-----------------------------|-----|---------|
| Pieces Per Pallet | 36 | 36(USA) |
| Pieces Per Container(40'HQ) | 936 | 720 |

E



EC CA D A



The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, Suzhou Talesun Solar Technologies Co., Ltd. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.