



TP7F54M  
 TP7F54M(H) **108-ce**  
 395 - 415W  
 10BB Half-cut Mono Perc



**SYSTEM & PRODUCT CERTIFICATES**

- 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



**PERFORMANCE WARRANTY**

12 Years  
Quality Assurance

25 Years  
Power Output Guarantee

Linear Performance Warranty

**KEY FEATURES**



**10BB Half-cut Mono Perc**  
 New circuit design, lower internal current, lower Rs loss  
 Ga doped wafer, attenuation < 2% (1st year) / 0.55% (Linear)



**2% more power generation, lower LCOE**



**2 times of industry standard Anti-PID test**



**High waterproof level**

## ELECTRICAL CHARACTERISTICS

| Testing Condition             | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax/W)        | 395   | 294   | 400   | 298   | 405   | 302   | 410   | 306   | 415   | 310   |
| Operating Voltage (Vmpp/V)    | 30.85 | 28.8  | 31.05 | 29.0  | 31.24 | 29.2  | 31.43 | 29.3  | 31.64 | 29.6  |
| Operating Current (Impp/A)    | 12.81 | 10.23 | 12.89 | 10.30 | 12.97 | 10.36 | 13.05 | 10.42 | 13.13 | 10.48 |
| Open-Circuit Voltage (Voc/V)  | 36.75 | 34.6  | 37.00 | 34.8  | 37.25 | 35.1  | 37.50 | 35.3  | 37.75 | 35.5  |
| Short-Circuit Current (Isc/A) | 13.69 | 11.04 | 13.78 | 11.11 | 13.86 | 11.17 | 13.94 | 11.24 | 14.02 | 11.30 |
| Module Efficiency (%)         | 20.20 |       | 20.50 |       | 20.70 |       | 21.00 |       | 21.30 |       |

STC: Irradiance 1000W/m<sup>2</sup>, Spectra at AM1.5, Module Temperature 25 . Power output tolerance: 0~+5W, Test uncertainty for Pmax : ±3%  
 NMOT : Irradiance 800W/m<sup>2</sup>, Spectra at AM1.5, Ambient Temperature 20 , Wind speed 1m/s

## MECHANICAL CHARACTERISTICS

|                   |   |
|-------------------|---|
| Cell Type         | Monocrystalline Silicon (10Busbar)  |
| No. of Cells      | 108pcs in series (6*18)   |
| Module Dimensions | 1722*1134*30mm<br>(67.80*44.65*1.18inches)                                  |
| Weight            | 21.5kg (47.4lbs.)   |
| Front Glass       | 3.2mm AR Coating Tempered Glass   |
| Frame             | Anodized Aluminium Alloy  |
| Junction Box      | IP68, 3 Bypass Diodes   |
| Output Cables     | 4mm <sup>2</sup> (IEC), 12AWG(UL)<br>350mm(+),250mm(-) or Customized Length |
| Connectors        | T01/LJQ-3-CSY/MC4/MC4-EV02  |

## APPLICATION CONDITIONS

|                         |                |
|-------------------------|----------------|
| Maximun System Voltage  | 1000V/1500V/DC |
| Operating Temperature   | -40°C~+85°C    |
| Maximun Series Fuse     | 25A            |
| Safety Protection Class | Class          |
|                         |                |
|                         |                |

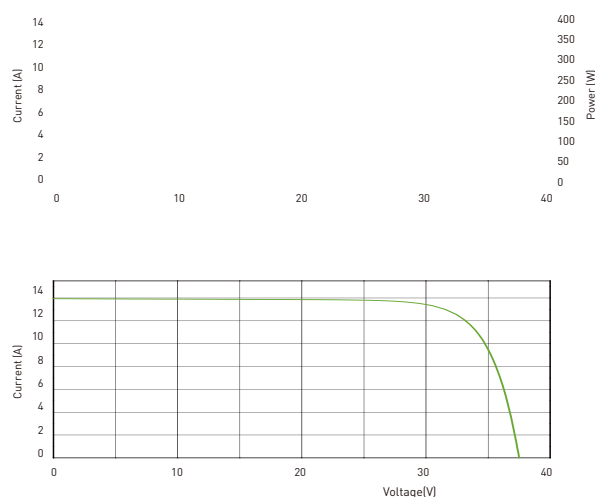
## TEMPERATURE CHARACTERISTICS

|  |            |
|--|------------|
| Temperature Coefficient of Pmax            | -0.35%/°C  |
| Temperature Coefficient of Voc             | -0.26%/°C  |
| Temperature Coefficient of Isc             | +0.048%/°C |
| Nominal Module Operating Temperature(NMOT) | 43±2°C     |

## PACKING CONFIGURATION

|                             |     |         |
|-----------------------------|-----|---------|
| Pieces Per Pallet           | 36  | 36(USA) |
| Pieces Per Container(40'HQ) | 936 | 828     |

## I-V CURVE



## TECHNICAL DRAWINGS



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