

## ELECTRICAL CHARACTERISTICS

| Testing Condition             | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax/W)        | 460   | 349   | 465   | 354   | 470   | 358   | 475   | 362   | 480   | 366   |
| Operating Voltage (Vmpp/V)    | 34.70 | 33.10 | 34.87 | 33.00 | 35.03 | 33.10 | 35.19 | 33.20 | 35.36 | 33.40 |
| Operating Current (Impp/A)    | 13.26 | 10.54 | 13.34 | 10.74 | 13.42 | 10.81 | 13.50 | 10.87 | 13.58 | 10.94 |
| Open-Circuit Voltage (Voc/V)  | 42.03 | 39.90 | 42.20 | 39.90 | 42.36 | 40.00 | 42.52 | 40.20 | 42.69 | 40.40 |
| Short-Circuit Current (Isc/A) | 14.00 | 11.28 | 14.08 | 11.35 | 14.16 | 11.42 | 14.24 | 11.48 | 14.32 | 11.54 |
| Module Efficiency (%)         | 21.26 |       | 21.49 |       | 21.72 |       | 21.95 |       | 22.19 |       |

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

## REAR SIDE POWER GAIN(REFERENCE TO 470W FRONT)

| Pmax gain | 10%   | 15%   | 20%   | 25%   | 30%   |
|-----------|-------|-------|-------|-------|-------|
| Pmax/W    | 517   | 541   | 564   | 588   | 611   |
| Vmpp/V    | 35.03 | 35.03 | 35.03 | 35.03 | 35.03 |
| Impp/A    | 14.76 | 15.43 | 16.10 | 16.77 | 17.44 |
| Voc/V     | 42.36 | 42.36 | 42.36 | 42.36 | 42.36 |
| Isc/A     | 15.57 | 16.28 | 16.99 | 17.70 | 18.40 |

## MECHANICAL CHARACTERISTICS

|                   |   |
|-------------------|---|
| Cell Type         | N-type Mono-Crystallin (16Busbar)   |
| No. of Cells      | 120pcs in series (6*20)   |
| Module Dimensions | 1908*1134*30mm (75.12*44.65*1.18inches)                                   |
| Weight            | 27.0kg (59.5lbs)  |
| 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     | 4mm <sup>2</sup> (IEC), 12AWG(UL)<br>300mm in Length or Customized Length |
| Connectors        | T01/LJQ-3-CSY/PV-KST4&PV-KBT4<br>PV-KST4-EVO2&PV-KBT4-EVO2                |

## APPLICATION CONDITIONS

|                           |                                     |
|---------------------------|-------------------------------------|
| Maximun System Voltage    | 1500V/DC                            |
| Operating Temperature     | -40°C~+85°C                         |
| Maximun Series Fuse       | 30A                                 |
| Safety Protection Class   | Class                               |
| Mechanical Load           | Front side 5400Pa, Back side 2400Pa |
| Refer. Bifaciality Factor | 80%±5%                              |

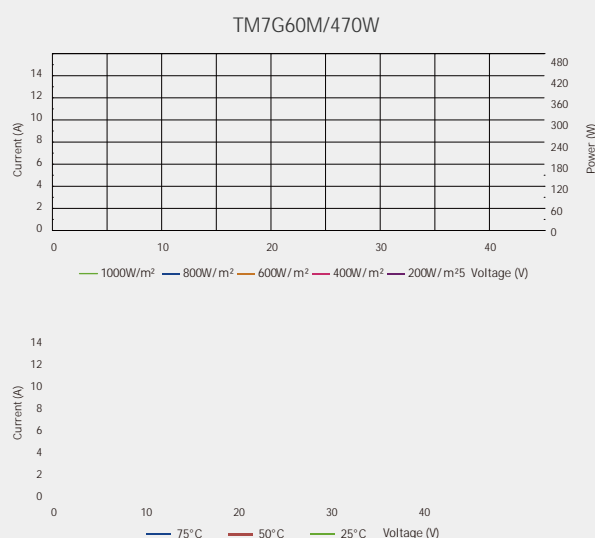
## TEMPERATURE CHARACTERISTICS

|  |            |
|--|------------|
| Temperature Coefficient of Pmax            | -0.30%/°C  |
| Temperature Coefficient of Voc             | -0.25%/°C  |
| Temperature Coefficient of Isc             | +0.046%/°C |
| Nominal Module Operating Temperature(NMOT) | 43±2°C     |

## PACKING CONFIGURATION

|                             |     |         |
|-----------------------------|-----|---------|
| Pieces Per Pallet           | 31  | 31(USA) |
| Pieces Per Container(40'HQ) | 744 | 682     |

## I-V CURVE



## TECHNICAL DRAWINGS



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