

## RAYTECH DOUBLE-GLASS MODULE

**72 LAYOUT**  
MONO MODULES

**430-450W**  
POWER OUTPUT

**20.3%**  
MAX. EFFICIENCY



10% WHITE  
TRANSPARENCY OPAQUE



### COMPANY PROFILE

Ningbo Raytech New Energy Materials Co., Ltd. (hereinafter referred to as Raytech) is a comprehensive manufacturing enterprise integrating R&D, design, manufacturing, sales and services based on "new energy and new materials". Headquartered in Hangzhou Bay New Zone, Ningbo City, Zhejiang Province, China, Raytech is specialized in "photovoltaic power generation equipment manufacturing and system integration" and "smart home panel materials", and it is equipped with independent technology R&D team, national key laboratory and full-automatic production line in intelligent manufacturing. Its production scale, product types and product standards all take the lead in the industry.

Raytech's manufacturing capacity of photovoltaic power generation equipment is 1.2GW, producing single-sided and two-sided power generation equipment with the brand of Raytech. Its manufacturing capacity of intelligent panel materials is 1 million square meters, flexibly supporting diverse functions such as spatial separation, intelligent control, and light and temperature regulations, with the brand of Rayshine. Its production bases are located in Zhejiang, Jiangsu and Shandong, and its products have obtained German TÜV certification, North America UL certification, Australia CEC certification, Brazil INMETRO certification, the first batch of front runner certification of double-glass modules in China, ISO9001 international quality system certification, national 3C compulsory certification in the construction industry, and other certifications of authorities.

By adhering to its development philosophy of centering on customer value and focusing on service, Raytech takes the responsibility of new energy business to "let the golden sunshine return to its natural color" and chases the dream on intelligent material business to "let modern science and technology perfectly integrate with the nature". Raytech forges ahead based on its own cultural concept of "pragmatism, inclusiveness, craftsmanship and innovation".

### PRODUCT FEATURES



#### Optimized Power Gain

- Half-Cell Cutting Technology to Lower the Output Power Losses Brought by Shading;
- Integrates Multiple-Busbar(MBB) Tech, Higher Power Output



#### Working Condition Compatibility & Safety

- High Resistance to High Temp., High Humidity, Sand, Acid and Alkali Environment;
- 5400Pa Snow Loading, 2400Pa Wind Loading;
- Frames with Light Double Glass to meet customer's Requirements of Lightness and Safety



#### Higher-Than-Ever ROI

- 1500V System Voltage, Lower BOS Cost;
- Annual Degradation < 0.5%, 30-year Linear Performance Warranty;

### CERTIFICATION



### CONTACT US

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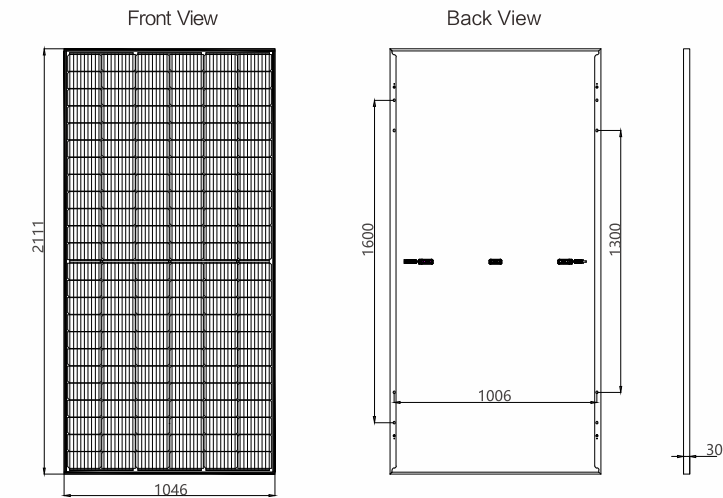


Wechat Public Account

Double-Glass Mono Module: 430-450W

ENGINEERING DRAWING

MECHANICAL SPECIFICATIONS



|                            |                                  |
|----------------------------|----------------------------------|
| Cell Type                  | Mono crystalline                 |
| Solar Cells                | 144(6*24)                        |
| Module Dimension [mm]      | 2111*1046*30mm                   |
| Weight [Kg]                | 27.0                             |
| Front Glass [mm]           | 2.0 Semi tempered coated glass   |
| Interlayer                 | EVA/POE/PVB                      |
| Back Glass [mm]            | 2.0 Semi tempered glass          |
| Junction Box               | Ip67 Rated, 3 by-pass diodes     |
| Connector                  | Multi-Contact MC4(or equivalent) |
| Frame                      | 30mm Aluminum Frame              |
| Maximum Load Capacity [Pa] | 2400(wind load)/5400(snow load)  |

ELECTRICAL CHARACTERISTICS

|  |                                    |     | DMJ72H(S)-430 | DMJ72H(S)-435 | DMJ72H(S)-440 | DMJ72H(S)-445 | DMJ72H(S)-450 |
|--|------------------------------------|-----|---------------|---------------|---------------|---------------|---------------|
| STC:<br>Air Mass AM1.5, Ir-radiance 1000W/m <sup>2</sup><br>Cell temperature 25°C                      | Maximum Power at STC [Pmax]        | [W] | 430           | 435           | 440           | 445           | 450           |
|  | Open Circuit Voltage [Voc]         | [V] | 48.79         | 49.01         | 49.29         | 49.54         | 49.75         |
|  | Short Circuit Current [Isc]        | [A] | 11.30         | 11.34         | 11.38         | 11.42         | 11.46         |
|  | Voltage at Maximum Power point[Vm] | [V] | 40.47         | 40.76         | 41.06         | 41.33         | 41.55         |
|  | Current at Maximum Power point[Im] | [A] | 10.63         | 10.67         | 10.72         | 10.77         | 10.83         |
|  | Power Tolerance                    | [%] | 0~+3%         |               |               |               |               |
|  | Module Efficiency                  | [%] | 19.4%         | 19.7%         | 19.9%         | 20.1%         | 20.3%         |
| NMOT:<br>Air Mass AM1.5, Ir-radiance 800W/m <sup>2</sup><br>Ambient temperature 20°C, wind speed 1m/s. | Maximum Power at NMOT [Pmax]       | [W] | 321           | 325           | 329           | 333           | 336           |
|  | Open Circuit Voltage [Voc]         | [V] | 45.6          | 45.8          | 46.0          | 46.3          | 46.5          |
|  | Short Circuit Current [Isc]        | [A] | 9.11          | 9.14          | 9.18          | 9.21          | 9.24          |
|  | Voltage at Maximum Power point[Vm] | [V] | 37.2          | 37.4          | 37.7          | 37.9          | 38.1          |
|  | Current at Maximum Power point[Im] | [A] | 8.65          | 8.69          | 8.73          | 8.77          | 8.82          |
|  | Power Tolerance                    | [%] |               |               |               |               |               |

WORKING CONDITIONS

TEMPERATURE COEFFICIENTS

|                                    |      |              |
|------------------------------------|------|--------------|
| Maximum System Voltage(With S)     | [V]  | 1000 DC(IEC) |
| Maximum System Voltage(Without S)  | [V]  | 1500 DC(IEC) |
| Operating Temperature              | [°C] | -40~+85      |
| Nominal Operating Cell Temperature | [°C] | 45±3         |
| Maximum rated current              | [A]  | 20           |

|                                 |        |       |
|---------------------------------|--------|-------|
| Temperature Coefficient of Pmax | [%/°C] | -0.42 |
| Temperature Coefficient of Voc  | [%/°C] | -0.33 |
| Temperature Coefficient of Isc  | [%/°C] | 0.04  |

| PACKAGE CONFIGURATION |                   |
|-----------------------|-------------------|
| Per box 35 pieces     | 40" HQ 770 pieces |

ELECTRICAL CURVES

LINEAR PERFORMANCE WARRANTY

