



**未来光能**  
FUTURE ENERGY

# FUTURE210R Series

## 108 Half-piece Bifacial Dual Glass HJT Module (Black)

# 500~520W



### OBB Technology

Less light obstruction and stronger current collection ability



### Up to 90% Bifaciality

Natural symmetrical bifacial structure bringing more energy yield from the backside.



### Better temperature coefficient

-0.24%/°C, More stable power generation



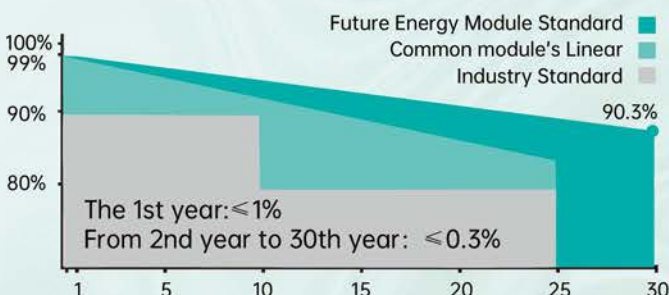
### High Reliability

Excellent anti-LID & anti-PID performance, Sealing with PIB based sealant, Stronger water resistance, greater air impermeability to extend module lifespan.



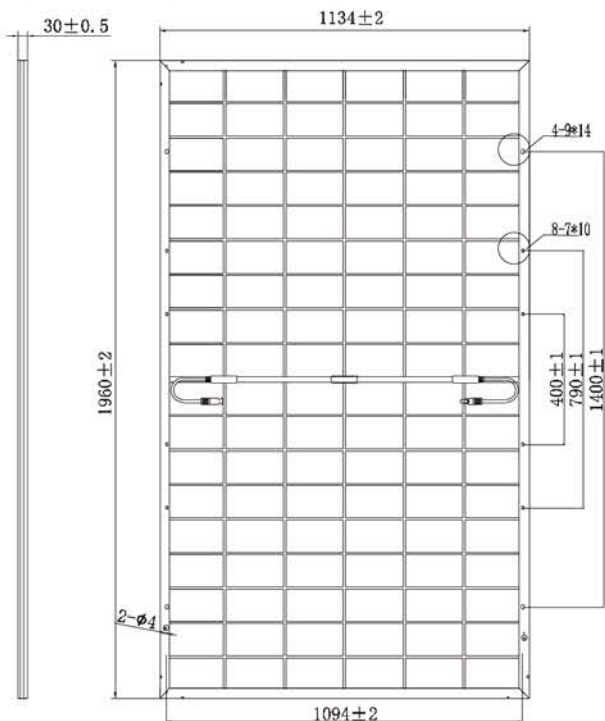
### Ideal choice for solar rooftop system

Suitable for various rooftop projects.



**15<sup>y</sup>** Product Warranty

**30<sup>y</sup>** Linear Power Warranty

**Engineering Drawings** Unit: mm

**ELECTRICAL DATA (STC\*)**

|                               |       |       |       |       |       |
|-------------------------------|-------|-------|-------|-------|-------|
| Rated Power in Watts-Pmax(Wp) | 500   | 505   | 510   | 515   | 520   |
| Maximum Power Voltage-Vmpp(V) | 34.36 | 34.49 | 34.62 | 34.75 | 34.88 |
| Maximum Power Current-Impp(A) | 14.55 | 14.64 | 14.73 | 14.82 | 14.91 |
| Open Circuit Voltage-Voc(V)   | 42.68 | 41.84 | 41.98 | 42.14 | 42.17 |
| Short Circuit Current-Isc(A)  | 15.39 | 15.46 | 15.51 | 15.56 | 16.01 |
| Module Efficiency (%)         | 22.50 | 22.72 | 22.95 | 23.17 | 23.40 |

\*STC: Irradiance 1000 W/m<sup>2</sup>, cell temperature 25°C, AM=1.5. Tolerance of Pmax is within +/- 3%.

**Electrical characteristics with 10% rear side power gain**

|                                  |       |       |       |       |       |
|----------------------------------|-------|-------|-------|-------|-------|
| Total Equivalent power -Pmax(Wp) | 550   | 556   | 561   | 567   | 572   |
| Maximum Power Voltage-Vmpp(V)    | 34.36 | 34.49 | 34.62 | 34.75 | 34.88 |
| Maximum Power Current-Impp(A)    | 16.01 | 16.10 | 16.20 | 16.30 | 16.40 |
| Open Circuit Voltage-Voc(V)      | 41.68 | 41.84 | 41.98 | 42.14 | 42.17 |
| Short Circuit Current-Isc(A)     | 16.93 | 17.01 | 17.06 | 17.12 | 17.61 |

**Mechanical Characteristics**

|                                        |                                                           |
|----------------------------------------|-----------------------------------------------------------|
| Solar cells                            | n-type HJT                                                |
| Cell configuration                     | 108cells (6×18)                                           |
| Module dimensions                      | 1960×1134×30mm                                            |
| Weight                                 | 27.6kg                                                    |
| Superstrate                            | 2.0mm,High Transmission,AR Coated Heat Strengthened Glass |
| Substrate                              | 2.0mm,Heat Strengthened Glass                             |
| Frame                                  | Anodized Aluminium Alloy                                  |
| J-Box                                  | IP68                                                      |
| Cables                                 | 4.0mm <sup>2</sup> ,300mm, or customized length           |
| Connector                              | MC4-EVO 2A                                                |
| Packing Configuration                  |                                                           |
| 36PCS per pallet , 792PCS per 40ft(HQ) |                                                           |

**Application Environment&Temperature Characteristics**

|                                    |                |
|------------------------------------|----------------|
| Operating Module Temperature       | -40~+85°C      |
| Maximum System Voltage             | 1500V DC (IEC) |
| Maximum Series Fuse                | 30A            |
| Power Tolerance                    | 0~+5W          |
| Bifaciality                        | 85%±5%         |
| Safety Class                       | Class II       |
| Nominal Operating Cell Temp.(NOCT) | 45±2°C         |
| Temperature Coefficient of Pmax    | -0.24%/°C      |
| Temperature Coefficient of Voc     | -0.24%/°C      |
| Temperature Coefficient of Isc     | 0.04%/°C       |

