

**UNI T**
**UE450T-54HBD**

# 430~450W

## N-type TOPCon Bifacial Dual Glass Solar Module



**23.04%**  
Max Module Eff.



### N-Type MBB Cell

New circuit design N-type cells, can increase the output power of 10~20W.



### Low Light Features

Higher performance under low light environment.



### Bifacial with dual glass

Module adopts 182\*182mm half cells, bifacial module provide an additional 5%-25% output.



### PID Protection

Ensure the attenuation probability caused by PID phenomenon is minimized.



### Harsh Environmental Adaptability

Strict salt spray and ammonia corrosion test by TUV Nord.



### Load Capacity

Mechanical load tests including wind load 2400 Pa and snow load 5400 Pa done by TUV Nord.



## Quality Management System and Product Certification

IEC 61215, IEC 61730, UL 61730

ISO9001: 2015: ISO Quality Management System.

ISO14001: 2015: ISO Environmental Management System.

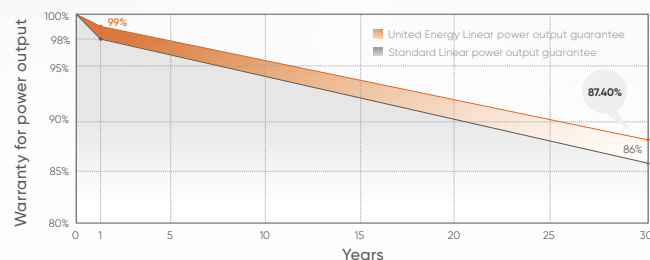
ISO45001: 2018: Occupation Health and Safety.

IEC62941: Guideline for module design qualification and type approval.

## Quality Guarantee

**15** year Materials Warranty

**30** year Power Warranty



## Electrical Parameters(STC\*)

| Module Type                      | 430   | 435   | 440   | 445   | 450   |
|----------------------------------|-------|-------|-------|-------|-------|
| Maximum power (Pmax/W)           | 430   | 435   | 440   | 445   | 450   |
| Open Circuit Voltage (Voc/V)     | 38.57 | 38.72 | 38.87 | 39.02 | 39.17 |
| Short Circuit Current (Isc/A)    | 14.09 | 14.18 | 14.27 | 14.36 | 14.44 |
| Voltage at Maximum power (Vmp/V) | 31.76 | 31.89 | 32.05 | 32.20 | 32.35 |
| Current at Maximum Power (Imp/A) | 13.54 | 13.64 | 13.73 | 13.82 | 13.91 |
| Module Efficiency(%)             | 22.02 | 22.28 | 22.53 | 22.79 | 23.04 |

1. Under Standard Test Conditions (STC) of irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.

## Electrical Parameters(NMOT\*)

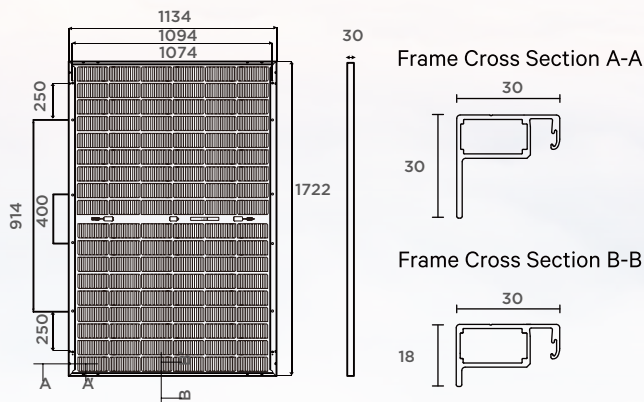
| Power (Pmax/W)                | 324   | 327   | 331   | 335   | 339   |
|-------------------------------|-------|-------|-------|-------|-------|
| Open Circuit Voltage (Voc/V)  | 36.63 | 36.78 | 36.39 | 37.08 | 37.23 |
| Short Circuit Current (Isc/A) | 11.36 | 11.38 | 11.45 | 11.52 | 11.58 |
| Maximum power Voltage (Vmp/V) | 29.65 | 29.78 | 29.93 | 30.08 | 30.24 |
| Maximum power Current (Imp/A) | 10.93 | 10.98 | 11.06 | 11.14 | 11.21 |

1. Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m<sup>2</sup>, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

## Electrical Parameters(At 10% Bifacial Power Output)

|                               |       |       |       |       |       |
|-------------------------------|-------|-------|-------|-------|-------|
| Output Power (Pmax/W)         | 473   | 479   | 484   | 490   | 495   |
| Open Circuit Voltage (Voc/V)  | 38.57 | 38.72 | 38.87 | 39.02 | 39.17 |
| Short Circuit Current (Isc/A) | 15.60 | 15.71 | 15.80 | 15.91 | 15.97 |
| Maximum power Voltage (Vmp/V) | 31.75 | 31.89 | 32.05 | 32.20 | 32.35 |
| Maximum power Current (Imp/A) | 14.90 | 15.02 | 15.10 | 15.22 | 15.30 |

## Design(mm)



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|                      |                                                                    |
|----------------------|--------------------------------------------------------------------|
| Solar Cells          | N-type Mono                                                        |
| No. of Cells         | 54*2 pcs                                                           |
| Dimensions           | 1722*1134*30mm                                                     |
| Weight               | 24kg                                                               |
| Glass                | Double glass, 2.0mm/1.6mm                                          |
| Frame                | Anodized aluminium alloy                                           |
| Junction Box         | Ip68 rated (3 Bypass Diodes)                                       |
| Output Cables        | 4mm <sup>2</sup> , 300mm (+) / 300mm (-), Length can be customized |
| Connectors           | Mc4 compatible                                                     |
| Mechanical load test | 5400Pa                                                             |
| Packaging            | 36pcs/box, 936pcs/40'HQ                                            |

## Operating Characteristics

|                              |                |
|------------------------------|----------------|
| Operating Module Temperature | -40°C to +85°C |
| Maximum System Voltage       | 1500V DC (IEC) |
| Maximum Series Fuse Rating   | 25A            |
| Power Tolerance              | 0/+5W          |

## Temperature Characteristics

|                                      |            |
|--------------------------------------|------------|
| Nominal Operating Temperature (NMOT) | 45±2°C     |
| Temperature Coefficient of Pmax      | -0.29%/°C  |
| Temperature Coefficient of Voc       | -0.25%/°C  |
| Temperature Coefficient of Isc       | +0.045%/°C |