



SYMN108TBD

N-TYPE DOUBLE GLASS BIFACIAL MODULE

440_W
Maximum Power Output

22.53%
Maximum Module Efficiency

80%
Bifaciality

0~+3%
Power Tolerance



Lower LCOE

N-TOPCon bifacial technology: lower degradation, higher bifaciality, ≥ 30 years life and lower BOS cost.



Better Temperature Coefficient

lower temperature coefficient and higher power generation under high-temperature conditions.



ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally which can increase power generation.



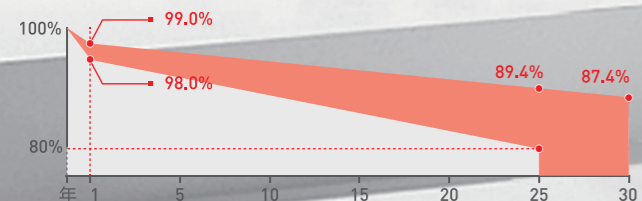
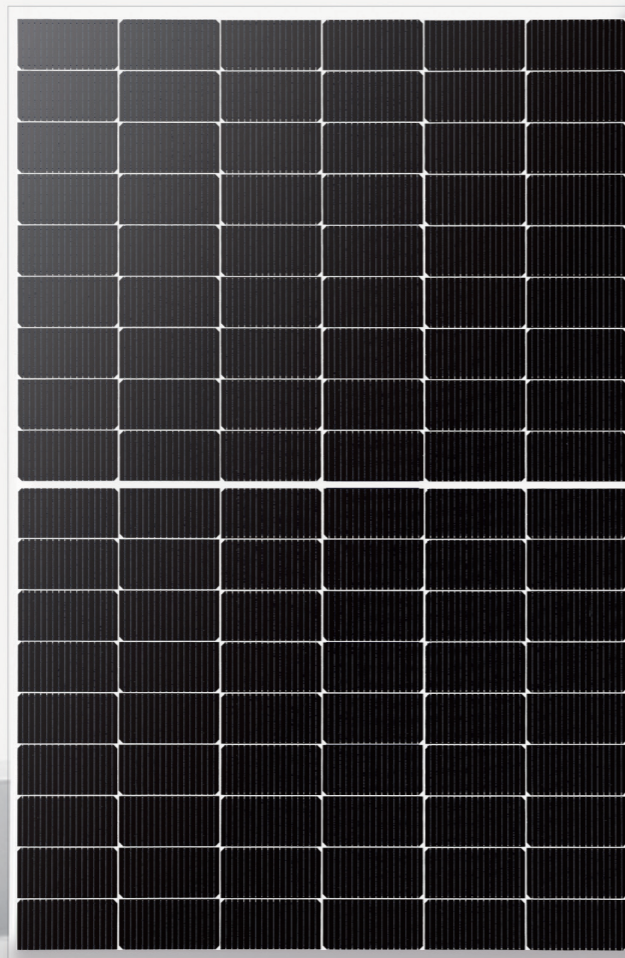
Better Low Light Performance

Higher power output even under low-light environments like on cloudy or foggy days.



Enhanced Mechanical Load

Heavy snow load up to 5400Pa, wind load up to 2400Pa.



Standard linear power guarantee 1.00% 1st-year Degradation 0.4% Annual Degradation
N-TOPCon linear power guarantee

12 Years Product Material & Workmanship 30 Years Linear Performance Warranty

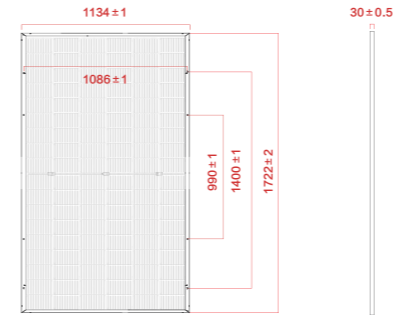


The TÜV certificate holder is Sany Silicon Energy (Zhuzhou) Co., Ltd. Made in China



SYMN108TBD

Engineering Drawing (unit: mm)



A- Long Frame



B- Short Frame

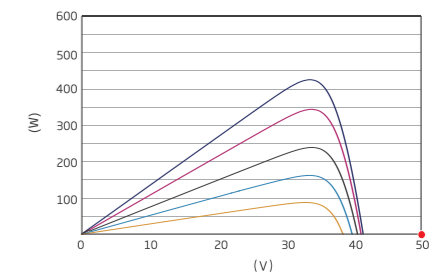
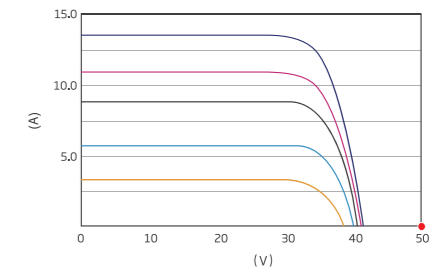


C- Mounting Hole



D- Mounting Hole

Characteristic Curves (SYMN108TBD-440W)



Mechanical Properties

| | | | |
|-----------------------------------|---|------------------------|--|
| Cell Size | 182.00mm*91.00mm | Front Glass/Back Glass | Heat-strengthened glass 2mm/2mm |
| Number of Cells | 108 (2*54) | Frame | Anodized Aluminium Alloy |
| Module Dimension | 1722mm*1134mm*30mm (67.80*44.65*1.18inch) | Junction Box | IP68 |
| Weight | 23.5kg(51.8 lbs) | Connector | QC4.10-cds from QC Solar PV-XT101.2 from Suzhou XTong |
| Length of Cable | TUV 1×4.0mm ² (+): 410mm (-): 290mm (Or Customized Length) | | |
| Fire rating (According to UL 790) | Class A | | |

SPECIFICATIONS

| Testing Condition | STC* | | | | | NOCT* | | | | |
|--------------------------------|------------|--------|--------|--------|--------|--|-------|-------|-------|-------|
| | Front Side | | | | | Front Side | | | | |
| (Pmax) (W) Peak Power(Pmax)(W) | 420 | 425 | 430 | 435 | 440 | 316 | 320 | 323 | 327 | 331 |
| MPP Voltage(Vmp)(V) | 32.22 | 32.42 | 32.62 | 32.82 | 33.02 | 29.92 | 30.07 | 30.23 | 30.38 | 30.53 |
| MPP Current(Imp)(A) | 13.05 | 13.12 | 13.19 | 13.26 | 13.33 | 10.56 | 10.63 | 10.70 | 10.76 | 10.83 |
| Open Circuit Voltage(Voc)(V) | 38.14 | 38.34 | 38.54 | 38.74 | 38.94 | 36.23 | 36.42 | 36.61 | 36.80 | 36.99 |
| Short Circuit Current(Isc)(A) | 13.66 | 13.72 | 13.78 | 13.84 | 13.90 | 11.03 | 11.07 | 11.12 | 11.17 | 11.22 |
| Module Efficiency(%) | 21.52% | 21.77% | 22.03% | 22.28% | 22.53% | *STC: Irradiance 1000 W/m ² , Cell Temperature 25°C, AM1.5 *NOCT: Irradiance 800 W/m ² , Ambient Temperature 20°C, Wind Speed 1 m/s | | | | |

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

| | | | | | | |
|-----|---------------------------|--------|--------|--------|--------|--------|
| 5% | Maximum Power (Pmax) | 441 | 446 | 452 | 457 | 462 |
| | Module Efficiency STC (%) | 22.60% | 22.86% | 23.13% | 23.39% | 23.66% |
| 15% | Maximum Power (Pmax) | 483 | 489 | 495 | 500 | 506 |
| | Module Efficiency STC (%) | 24.75% | 25.04% | 25.33% | 25.62% | 25.91% |
| 25% | Maximum Power (Pmax) | 525 | 531 | 538 | 544 | 550 |
| | Module Efficiency STC (%) | 26.91% | 27.22% | 27.53% | 27.85% | 28.17% |

| Operating Properties | Temperature Coefficient | Packaging Configuration | | | |
|--------------------------------|-------------------------|---|------------|------------------|--------------------------|
| Operating Temperature (C) | -40°C~+85°C | Temperature Coefficient of Pmax | -0.30%/°C | Packing Type | 40'HQ Container |
| Maximum System Voltage (V) | 1500V (IEC) | Temperature Coefficient of Voc | -0.25%/°C | Pcs/Pallet | 36 pcs |
| Maximum Series Fuse Rating (A) | 30A | Temperature Coefficient of Isc | +0.046%/°C | Pallet/Container | Pal26 trayslet/container |
| Power Sorting | 0~+4.99W | Nominal Operating Cell Temperature (NOCT) | 45±2°C | Pcs/Container | 936 pcs |
| Bifaciality * | 80±5% | | | | |

*Bifaciality=Pmaxrear (STC) /Pmaxfront (STC)