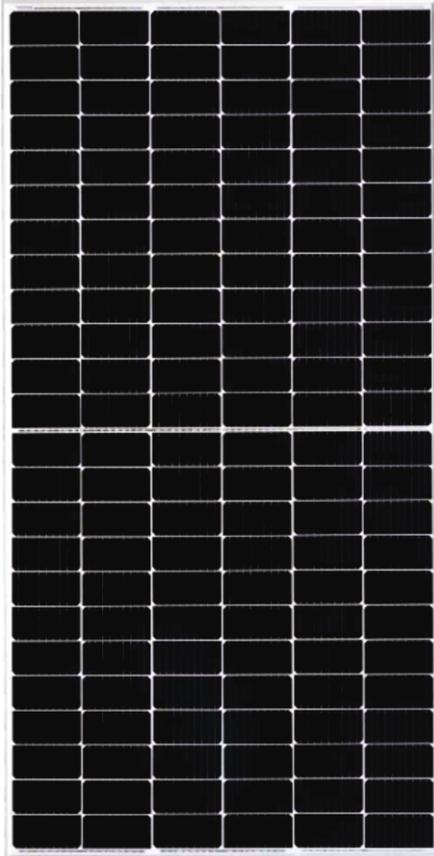


BIFACIAL - N TOPCon 144 CELLS (DUAL GLASS)

560Wp - 590Wp

SGE XXX-144 TGG (XXX : 560-590Wp)



Key Features

-  **N-Type with Very Low LID**
Resulting in higher power generation
-  **Positive Tolerance**
Power output is guaranteed with a positive tolerance of 0~+4.99Wp
-  **Excellent performance in low light**
Superior output in low irradiance Increased power production even in low-light environments.
-  **Better Temperature coefficient (-0.30%/°C)**
Higher power generation under higher ambient temperature conditions
-  **Higher Module Efficiency**
Module Eff. Up-to 22.5%
-  **10-30% more power generation**
When compared with the P-type module
-  **Advanced technology**
MBB-Multi Bus-bar (16BB)
Half-cut N-TOPCon cell
-  **Extended Wind and snow loads**
Wind Load (2400 Pascal) and
Snow Load (5400 Pascal)
-  **Withstanding a harsh environment**
Reliable quality leads to better sustainability, even in harsh environments such as deserts, Farms, coastal and the areas with ammonia exposure
-  **Rigorous testing criteria**
100% EL inspection, ensures defect-free modules
-  **Bifaciality factor 80±5%**
The ratio of the rear efficiency in relation to the front efficiency is subject to the same irradiance.

Certifications & Standards

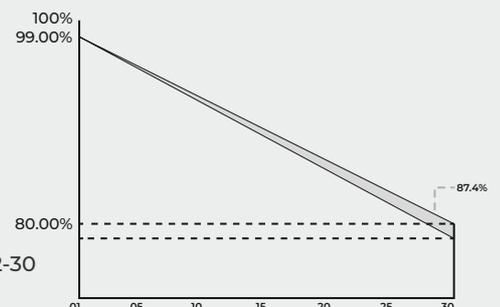
IEC 61215, IEC 61730,
IEC 61701, UL 61215, UL 61730,
IEC 61853-1&2, IEC 62804, IEC 62716,
IS 14286, IEC 60068-2-68

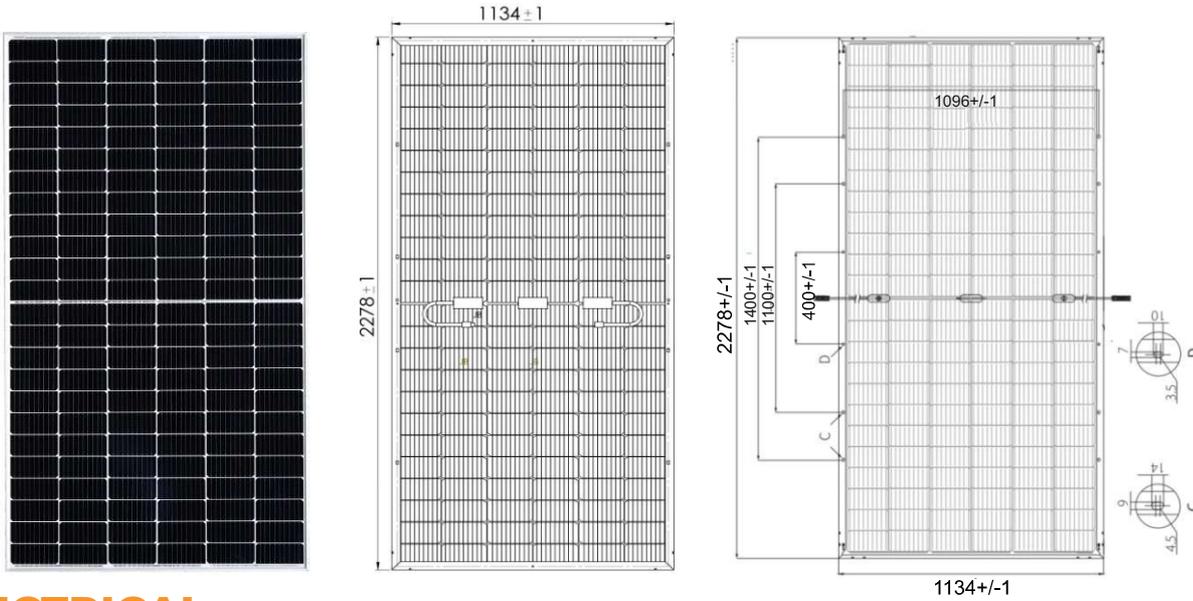
Certifications



Linear Performance Warranty

Product Warranty 12 Years :
Material & Processing First year
Degradation up-to -1.0%
Linear power output 30 Years: 2-30
Annual Degradation - 0.40%





ELECTRICAL DATA PERFORMANCE

| Conditions | Unit | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT | STC | NOCT |
|----------------------------------|------|-------------|-------|--------|-------|---|-------|--------|-------|------------|-------|--------|-------|--------|-------|
| Peak Power, Pmax (Wp) | W | 560 | 421 | 565 | 425 | 570 | 429 | 575 | 432 | 580 | 436 | 585 | 440 | 590 | 444 |
| Voltage at Maximum power, Vmp | V | 42.41 | 40.20 | 42.53 | 40.32 | 42.65 | 39.69 | 42.82 | 39.89 | 42.94 | 39.98 | 43.06 | 40.82 | 43.18 | 40.93 |
| Current at maximum power, Imp | A | 13.22 | 10.47 | 13.3 | 10.54 | 13.37 | 10.80 | 13.43 | 10.84 | 13.51 | 10.91 | 13.59 | 10.78 | 13.67 | 10.84 |
| Open circuit voltage, Voc | V | 50.68 | 48.04 | 50.86 | 48.22 | 51.04 | 48.39 | 51.22 | 48.56 | 51.41 | 48.74 | 51.59 | 48.91 | 51.77 | 49.08 |
| Short circuit current, Isc | A | 13.88 | 11.21 | 13.96 | 11.27 | 14.04 | 11.34 | 14.10 | 11.38 | 14.19 | 11.46 | 14.26 | 11.51 | 14.33 | 11.57 |
| Fill Factor | % | 80% | 78% | 80% | 78% | 80% | 78% | 80% | 78% | 80% | 78% | 80% | 78% | 80% | 78% |
| Module Efficiency (%) | | 21.68% | | 21.87% | | 22.07% | | 22.26% | | 22.45% | | 22.65% | | 22.84% | |
| Operating Temperature (°C) | | -40°C~+85°C | | | | Temperature coefficients of Isc | | | | +0.046%/°C | | | | | |
| Maximum system voltage | | 1500 VDC | | | | Nominal operating cell temperature (NOCT) | | | | 45±2°C | | | | | |
| Maximum series fuse rating | | 30A | | | | Fire Safety | | | | Class-C | | | | | |
| Power tolerance (Wp) | | 0~+3% | | | | Protection Class II | | | | Class-A | | | | | |
| Temperature coefficients of Pmax | | -0.30%/°C | | | | Safety Class | | | | Class-II | | | | | |
| Temperature coefficients of Voc | | -0.26%/°C | | | | | | | | | | | | | |

STC: Irradiance 1000W/m² module temperature 25°C, AM =1.5; NOCT: Irradiance 800W/m², ambient temperature 20°C, AM=1.5, Wind Speed 1m/s. Average power reduction of 4.5% at 200W/m² as per IEC 60904- 1. Measuring Uncertainty +/-3% Power gain from the rear side depends on the ground reflectance (Albedo) & Bifaciality factor.

| Bifacial Gain | Measurement | Unit | 560 | 565 | 570 | 575 | 580 | 585 | 590 |
|---------------|-------------------|------|-------|-------|-------|-------|-------|-------|-------|
| 5% | Max. Power (Pmax) | Wp | 588 | 593 | 599 | 604 | 609 | 614 | 620 |
| | Module Efficiency | % | 21.04 | 21.23 | 21.42 | 21.42 | 21.08 | 21.98 | 22.17 |
| 10% | Max. Power | Wp | 616 | 622 | 627 | 633 | 638 | 644 | 639 |
| | Module Efficiency | % | 22.05 | 22.24 | 22.44 | 22.64 | 22.83 | 23.03 | 23.23 |
| 15% | Max. Power | Wp | 644 | 650 | 656 | 661 | 667 | 673 | 679 |
| | Module Efficiency | % | 23.05 | 23.25 | 23.46 | 23.67 | 23.87 | 24.08 | 24.28 |

MODULE MECHANICAL DATA

SPECIFICATION DATA

| | |
|-----------------------------|------------------------------------|
| Cell Type | N-TOPCon, 144 Cells |
| Dimensions | 2278x1134x30 mm |
| Weight | 32 Kgs |
| Front Cover | 2.00 mm |
| Rear Cover | 2.00 mm |
| Frame Material | "Silver Anodized Aluminum Profile, |
| J-Box | IP68, 3 diodes |
| Cable | 350 mm, 4 mm ² |
| Connectors | Mc4 Compatible Connector |
| Standard Packaging | 36 Pieces/Pallet |
| Module Pieces per Container | 720 pieces (40*HQ) |

I-V Characteristics At Different Irradiations

