

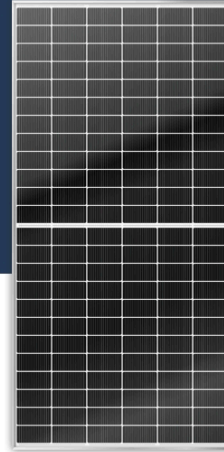


SUNGOLD POWER

# N-Type High efficiency

Bifacial Dual Glass Module

SGN-590-BDG1



Bifacial technology allows for the harvesting of up to an additional 30% energy from the rear side of the module.



30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module.



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



Excellent low irradiance performance.



Enhanced light trapping and optimized current collection contribute to the improvement of both output and reliability.



Industry leading lowest thermal coefficient of power.



Design optimized for lower operating current, resulting in minimized hot spot loss and improved temperature coefficient.

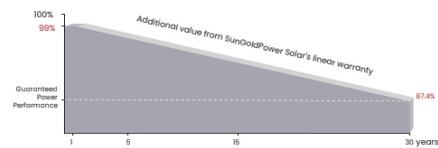


Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



100% triple EL test enables remarkable reduction of module hidden crack rate.

## LINEAR PERFORMANCE WARRANTY

**12** years

Product quality &amp; process warranty

**30** years

Linear power warranty

**0.40** %

Annual degradation Over 30 years

## COMPREHENSIVE CERTIFICATES



ISO 9001: Quality Management System

ISO 14001: Environmental Management System Standard

ISO 45001: International Occupational Health and Safety Assessment System Standard

\* Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

## ELECTRICAL CHARACTERISTICS

**2x72<sub>cells</sub>**

| Model of modules                     | SGN-590-BDG1 |       |
|--------------------------------------|--------------|-------|
|                                      | STC          | NMOT  |
| Peak power - $P_{mp}$ (W)            | 590          | 452   |
| Open circuit voltage - $V_{oc}$ (V)  | 52.35        | 50.12 |
| Short circuit current - $I_{sc}$ (A) | 13.90        | 11.20 |
| MPP voltage - $V_{mp}$ (V)           | 44.40        | 42.51 |
| MPP current - $I_{mp}$ (A)           | 13.29        | 10.63 |
| Module efficiency - $\eta_m$ (%)     | 22.8         |       |

**STC** (Standard Testing Conditions): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25 °C, Spectra at AM1.5

**NMOT** (Nominal Module Operating Temperature): Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/s

## ELECTRICAL CHARACTERISTICS WITH DIFFERENT POWER BIN (REFERENCE TO 13.5% IRRADIANCE RATIO)

|                           |     |
|---------------------------|-----|
| Peak power - $P_{mp}$ (W) | 654 |
|---------------------------|-----|