G SOLAR
energy solutions

# GSP6P 300-320W

# 300 W - 320 W POLY-CRYSTALLINE SOLAR MODULE

- ✔ Plus power tolerance to +3% to ensure the high reliability of power output
- ✔ PV glass design improves oblique irradiance performance and enhances module yield in low-light and medium-angle-light condition
- ✔ Junction box and by-pass diodes guarantee the modules free of overheating and “hot spot effect”
- ✔ 100% EL test before and after lamination, providing higher quality assurance
- ✔ Special PV Module Insurances by world leading insurance company guarantees the benefit to PV investors and PV module users
- ✔ Easy installation and minimal maintenance with compatibility to industry standard inverters and mounting systems
- ✔ Modules certified by TÜV Nord to withstand high level of wind and snow loads (2400 Pa / 5400 Pa), atmospheric impact (Salt-mist corrosion Test, Ammonia Resistance Test), potential induced degradation (PID) test and Carbon footprint assessment

## QUALIFICATIONS AND CERTIFICATES

CE-Compliant, IEC 61215 (Ed.1) application class A, TÜV Safety Class II, UL 1703

ISO IEC CE TÜV NORD Safety Class II UL

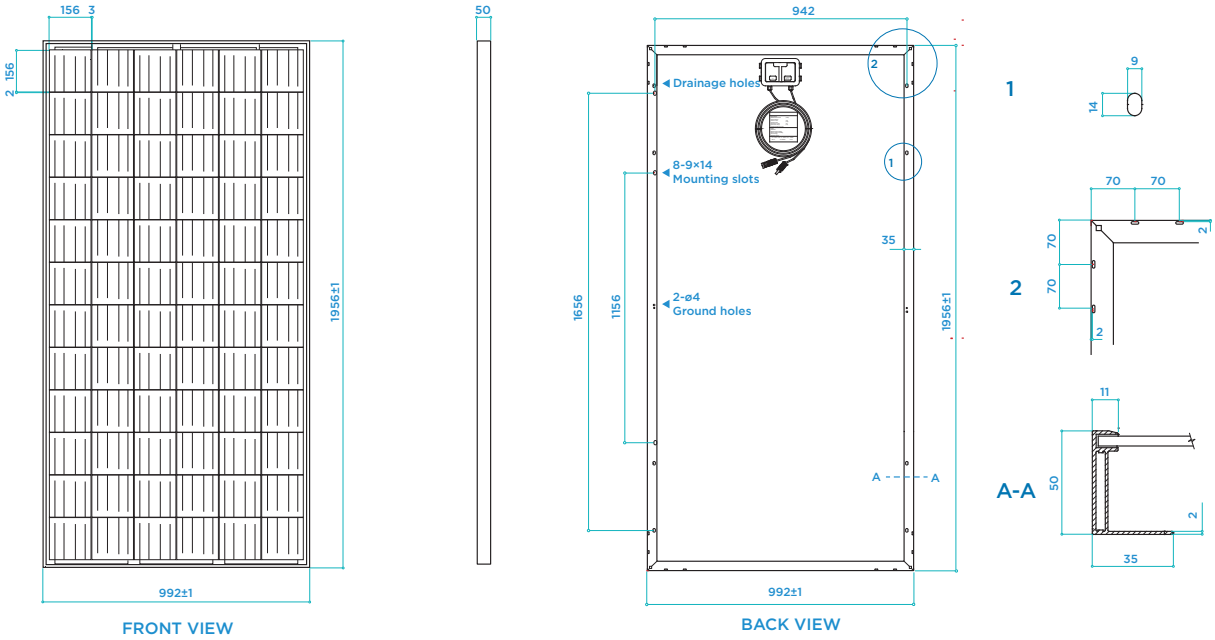
## WARRANTY

10 Years: Manufacturing Warranty
12 Years Warranty: 90% Power Output
25 Years Warranty: 80% Power Output

## MECHANICAL CHARACTERISTICS

| | |
|---|---|
| Solar cell type | Poly-crystalline 156 × 156 mm |
| Dimensions | 1956 × 992 × 50 mm |
| Weight | 23.20 kg |
| Glass | High transmission, low Iron, Tempered |
| Glass thickness | 3.2 mm |
| Encapsulation | EVA (ethylene vinyl acetate) |
| Back side | White |
| Frame | Clear anodized aluminum alloy 6063T5 |
| No of draining holes in frame | 16 |
| Type of connector | MC4 compatible |
| Junction box (Protection degree) | IP 67 |
| Cable type (Cross-sectional area / length) | 4 $mm^2$ / 900 ± 5 mm |

# ENGINEERING DRAWINGS

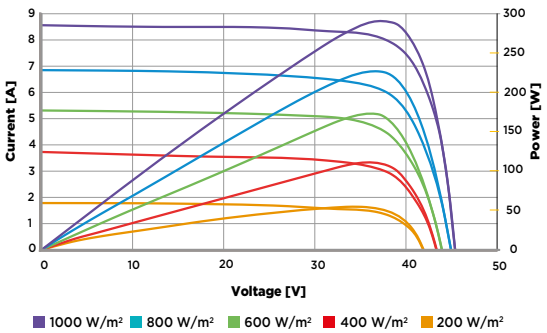



# ELECTRICAL CHARACTERISTICS

| SOLAR CELLS | POLY-CRYSTALLINE 156 × 156 MM 72 PCS. (6×12) - 4 BUS BARS | | | | |
|---|---|---|---|---|---|
| Maximum Power (Pmax) | 300 Wp | 305 Wp | 310 Wp | 315 Wp | 320 Wp |
| Voltage at Pmax (Vmp) | 37.23 V | 37.24 V | 37.32 V | 37.46 V | 37.62 V |
| Current at Pmax (Imp) | 8.06 A | 8.19 A | 8.31 A | 8.41 A | 8.51 A |
| Open-circuit Voltage (Voc) | 44.71 V | 44.72 V | 44.76 V | 44.82 V | 44.84 V |
| Short-Circuit Current (Isc) | 8.947 A | 9.094 A | 9.234 A | 9.371 A | 9.515 A |
| Maximum System Voltage (V DC) | 1000 V (iec), 600 V (UL) | | | | |
| Cell Efficiency | 17.46 % | 17.75 % | 18.05 % | 18.34 % | 18.63 % |
| Module Efficiency | 15.46 % | 15.72 % | 15.98 % | 16.23 % | 16.49 % |
| Number of By-pass Diodes | 6 | | | | |
| Maximum Series Fuse | 15 A | | | | |
| Temperature Coefficient of Pmax | - 0.45 % / °C | | | | |
| Temperature Coefficient of Voc | - 0.34 % / °C | | | | |
| Temperature Coefficient of Isc | - 0.05 % / °C | | | | |
| Nominal Operating Cell Temperature | 47 ± 2 °C | | | | |

# IV - CURVES

**Current-Voltage and Power-Voltage Curve (310)**




# TEST PARAMETERS

| | |
|---|---|
| Dielectric Insulation Voltage | 6,000 V DC max |
| Operating Temperature | -40 °C to 85 °C |
| Max Load | 5,400 Pa |
| Hailstone Impact | 25 mm (1 inch) at 23 m/s (50mph) |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