

- ▶ **Solar Panels with World Class Quality and Performance**
- ▶ **Manufactured with Leading Edge Technology Imported from the United States**

▶ **Main Specifications:**

- Nominal power output above 90 watts (P_{max})
- Panel size exceeds 1.5 square meter : 1100 mm X 1400 mm
- TÜV and UL Norms



- IEC Compliance :



IEC 61646: Thin-film terrestrial photovoltaic (PV) modules - design qualification and type approval
 IEC 61730: Photovoltaic module safety qualification (Safety Class II)

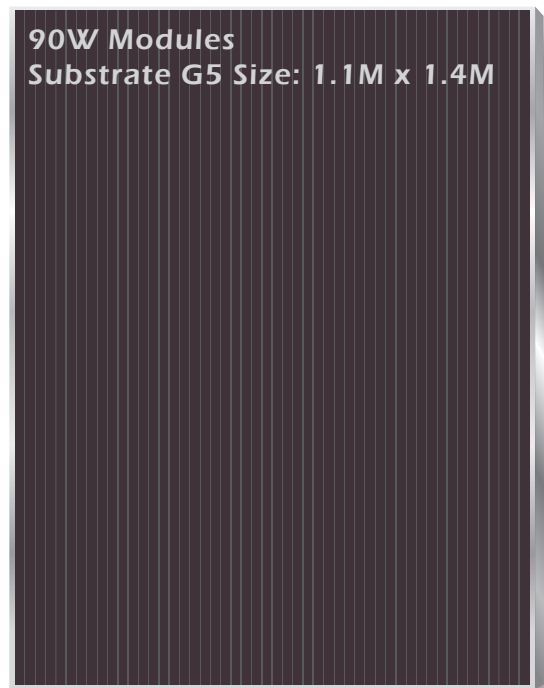
- Guaranteed 90% of specified min Power for 10 years, 80% for 25 years
- 5 Years guarantee on the product

▶ **Proven Manufacturing Quality and Capability**

- Since 1993
- ISO Certified Factory

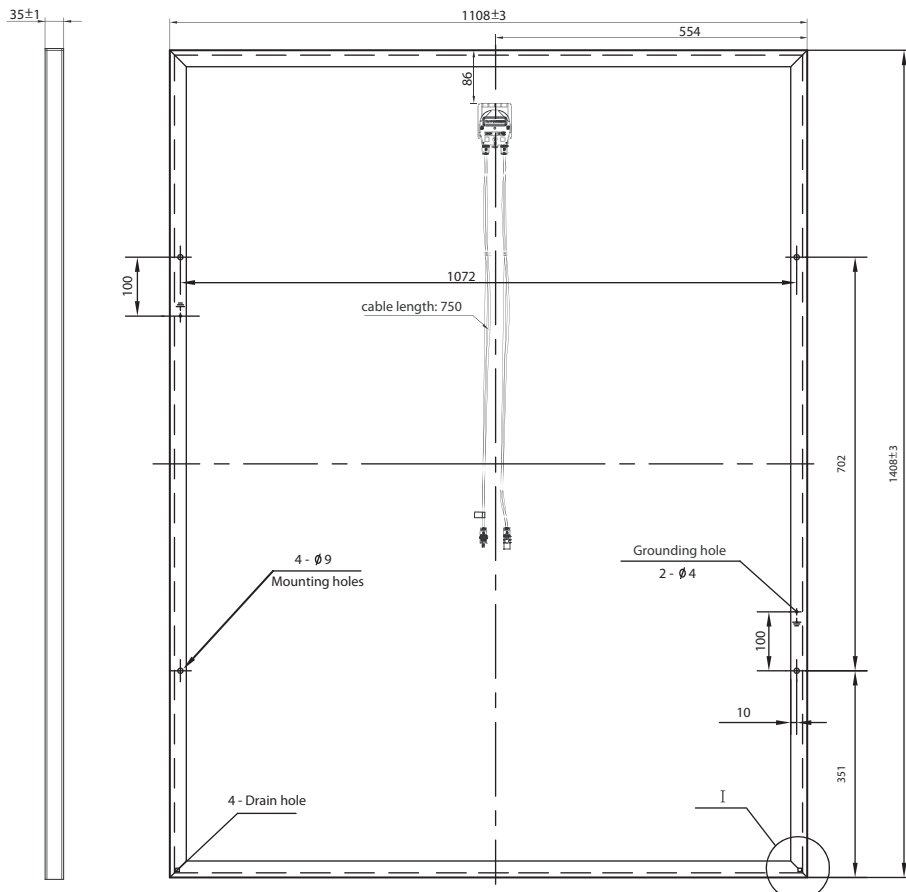
▶ **Global Standards for Esthetics and Ease of Installations**

- Anodized optional Aluminum frame
- Pre-installed connectors
- Integrated bypass diodes



Product Code:
QS90DGF (Framed)
QS90DGU (Unframed)

Unit: mm



Technical Datasheet

Electrical Data

The electrical specifications shown below are stabilized values measured at Standard Report Conditions: 1000W/m² irradiance, AM1.5 spectrum at 25 degrees °C, while Voc or Isc can be customized.

Specifications	Unit	Stabilized Values	Initial Values from Stock
Nominal Power (P_{max})	W	90.3	Approx. 106.2
Open Circuit Voltage (V_{oc})	V	115.4	Approx. 117.3
Short Circuit Current (I_{sc})	A	1.26	Approx. 1.30
Voltage at Pmax (V_{pm})	V	82.4	Approx. 89.6
Current at Pmax (I_{pm})	A	1.09	Approx. 1.19
Max. System Voltage	V	1000	
Dimensions	mm	(1408±3.0) x (1108±3.0) (framed)	
Thickness	mm	35±1 (framed) 25±2 (unframed)	
Weight	kg	26.6(framed) 24.2(unframed)	

The rated power may vary by $\pm 5\%$ and all other electrical parameters by $\pm 10\%$.

Product guarantee

5 years.

Warranty on output

90% of the specified minimum output of the module for a 10-year period, 80% of the specified minimum output of the module for a 25-year period after shipment from QS Solar.

Temperature coefficients

Power	- 0.19 %/K
Open-circuit voltage	- 0.28 %/K
Short-circuit current	+ 0.09 %/K

Limits

System voltage	1000 VDC
Maximum reverse current	3 A
Operating module temperature	-40°C to +85°C
Typical operation temperature	approx. 20°C to 25°C

Qualifications

According to IEC 61646, IEC61730. CE , TÜV and UL conformity.