

# QS Solar **Semi-Transparent** QS50W

## Semi-Transparent Amorphous Silicon Thin-Film Module



## Product Information Sheet

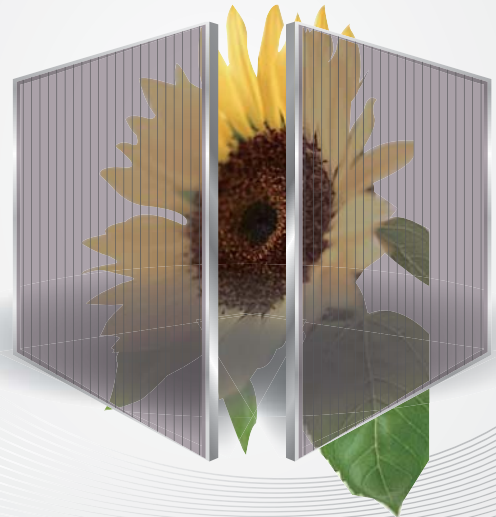
### General

- Transparent a-Si thin film module developed through CVD technology
- Designed & produced for BAPV, BIPV projects
- Applied for ecological buildings & agricultural green houses

### About QS Solar

- QS Solar has his own unique manufacturing process giving the lowest sustainable production cost & reliable product quality
- QS Solar has fully committed to an environmentally friendly production cycle
- QS Solar is ISO 9001 and ISO 14001 Certified

50W Semi-transparent Module



### Limited Warranties

- 5 Years product warranty
- 90% of the specified minimum output of the module for a 10 years period
- 80% of the specified minimum output of the module for a 25 years period

### Installation Cables

Two solar grade UV stable cables compatible with MC4 standard can facilitate a variety of mounting schemes and permit easy field wiring

### Benefits

- Generate more power at dawn, during twilight or cloudy days due to higher low light sensitivity. In the same location, thin film panels can generate 10% to 15% more electricity per year than crystalline silicon panels
- Better performance at higher temperature compared to Crystalline Silicon Cells due to lower temperature coefficient. Outdoor panels normally operate at much higher temperature than the standard test temperature 25°C (77 °F). Under most real operating temperature, electricity generated by crystalline modules decrease substantially more than the power generated by Amorphous Silicon modules. This makes Amorphous Silicon Modules the best choice for higher temperature applications
- Less sensitivity to exact mounting angle makes the Amorphous Silicon panels also suitable for none perfect mounting angles on existing buildings and often reduces installation costs because of less complicated mounting structures
- Amorphous Silicon thin film panels require far less silicon materials than traditional crystalline technology, need far less energy during production and do not use any polluting material like other types of thin film panels, thereby saving costs and protecting the environment today and in the future

[www.qssolar.com](http://www.qssolar.com)



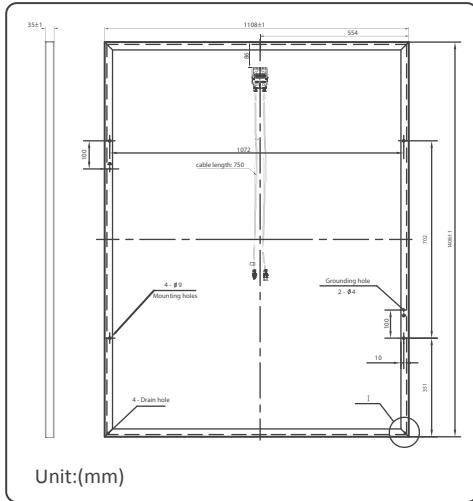
ELECTRICAL EQUIPMENT,  
CHECK WITH YOUR INSTALLER

# QS Solar Semi-Transparent QS50W

## Semi-Transparent Amorphous Silicon Thin-Film Module

### Mechanical Specifications

High reliable glass to glass laminate withstanding standard mechanical loads. Optional aluminum frame for increasing strength and with predrilled mounting holes for easy installation. Aluminum frame has special dripholes to prevent moisture build up.



	Framed	Unframed
Outside length (mm)	1408±1	1400±1
Outside width (mm)	1108±1	1100±1
Thickness (mm) (incl. junction box)	35+1	25+2
Thickness (mm) (excl. junction box)	35±1	7.6±1
Weight (kg)	30.5	27.5

For detailed installation instructions information, please refer to the **Installation Manual** from QS Solar

### Electrical Characteristics

Data at Standard Test Conditions (STC)

STC: irradiance level 1000W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature 25°C

Rated power	Pr	50.0W
Peak power	Pmpp	50.0W
Peak power voltage	Vmpp	72.4V
Peak power current	I <sub>mp</sub>	0.69A
Open circuit voltage	Voc	110.5V
Short circuit current	Isc	0.84A
Series fuse rating		3A
Minimum peak power	Pmpp min	47.5W
Transparency percentage		≥30%

The abbreviation 'mpp' stands for Maximum Power Point

### Typical data at Nominal Operating Cell Temperature (NOCT) conditions

NOCT: 800W/m<sup>2</sup> irradiance level, AM 1.5 spectrum, wind velocity 1m/s, Tamb 20°C

Temperature	TNOCT	45°C
Mpp power	Pmpp	39.4W
Mpp voltage	Vmpp	69.7V
Mpp current	I <sub>mp</sub>	0.56A
Open circuit voltage	Voc	103.2V
Short circuit current	Isc	0.68A

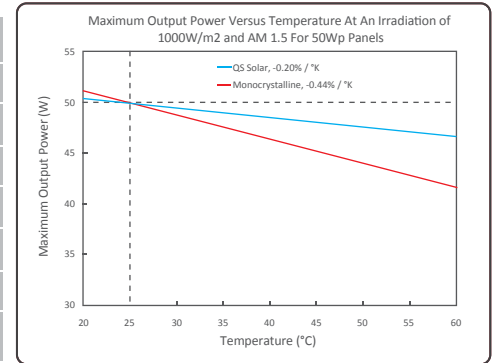
### Temperature coefficients

α P <sub>mp</sub>	-100mW/°C
α V <sub>mp</sub>	-130mV/°C
α I <sub>mp</sub>	0.9mA/°C
α Voc	-331mV/°C
α Isc	0.6mA/°C

Maximum system voltage: 1000V

### Typical Characteristics

The graph below shows the typical performance of the solar module at various levels of temperature



References in this QS SOLAR product information sheet are aiming to provide our professional analytic datas to our customers and companies that are involved in the photovoltaic solar energy business. QS group was set up in 1992 and has offices in Asia and Europe and also has a warehouse in France



For further information on all QS Solar products contact:

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