



# OpalSolar

## QSA-60M Series MONOCRYSTALLINE PERC MODULE

### Key Features



Up To 18.4 Module Efficiency



Monocrystalline Modules Designed For Residential, Commercial And Utility Applications - Rooftop Or Ground Mount



Positive Power Tolerance: 0 ~+5W



10 Year Product Warranty



Designed For IEC DC 1000V Applications

OPAL Solar is a premium product made by Tier 1 manufacturer on the basis of the local support, independent quality control, independent factory acceptance testing and technical support in Australia.

OPAL Solar is locally supported through Solar Juice Pty Ltd, the leading supplier of PV products in the Australian market. You can be assured that it is a trusted brand that does not compromise on quality.

The panels are produced by ISO 9001 and ISO 14001 certified production facilities. Back to back warranty agreements are in place to provide peace of mind.

For more information, please visit:

[www.opalsolar.com.au](http://www.opalsolar.com.au)



### HEAD OFFICE

**Solar Juice Pty Ltd**  
Unit 1, 10-12 Forsyth Close  
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Phone: 02 9725 1111  
[solarjuice.com.au](http://solarjuice.com.au)

### COMPREHENSIVE CERTIFICATES

#### Certificates

IEC 61215, IEC 61730

#### Manufacturing Under

ISO 9001: 2008: Quality management systems

ISO 14001: 2004: Environmental management systems

### CEC APPROVED

#### Certificate Holder: Solar Juice Pty Ltd

Model number:  
QSA285M-60-S  
QSA290M-60-S  
QSA295M-60-S  
QSA300M-60-S



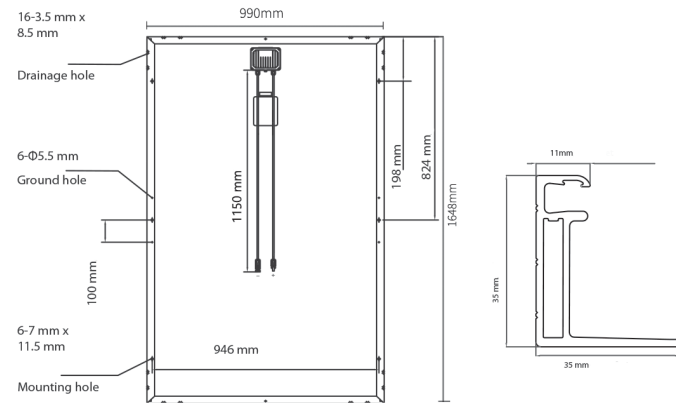
For more information, please scan the QR code or visit [www.opalsolar.com.au](http://www.opalsolar.com.au)



## MECHANICAL PARAMETERS

Cell	Monocrystalline
Weight(kg)	18.3kg (Pallet: 616kg)
Dimensions (LxWxH) (mm)	1648x990x35
No. of Cells and Connections	60 (60x10)
Frame	Aluminium, Silver Anodized
Junction Box/ Output Connectors	IP67, MC4 Genuine
Cable Length(mm)	1150
Front Glass Thickness(mm)	3.2
Packaging Configuration	31 Modules per Pallet

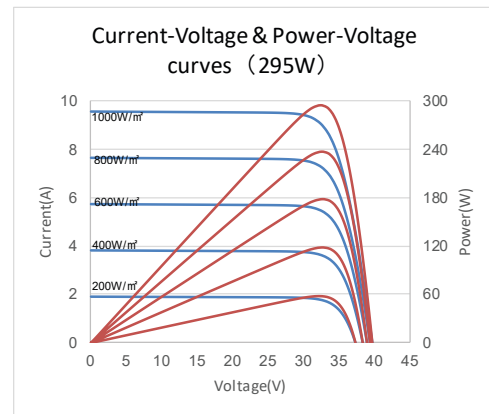
## ENGINEERING DRAWINGS



## WORKING CONDITIONS

Maximum System Voltage	1000Vdc
Operating Temperature	-40 °C ~+ 85°C
NOCT	46±2 °C
Power Tolerance	0/+5 Wp
Mechanical Loading	5400Pa
Max. Fuse Current Rating	15A
Temperature Coefficient of Isc	+0.042%/°C
Temperature Coefficient of Voc	-0.284%/°C
Temperature Coefficient of Pmax	-0.380%/°C

## I-V CURVE



## ELECTRICAL PARAMETERS (STC)

Model Number	QSA285M-60-S	QSA290M-60-S	QSA295M-60-S	QSA300M-60-S
Rated Power in Watts-Pmax (Wp)	<b>285</b>	<b>290</b>	<b>295</b>	<b>300</b>
Open Circuit Voltage-Voc (V)	39.15	39.45	39.81	39.90
Short Circuit Current-Isc (A)	9.46	9.54	9.59	9.68
Maximum Power Voltage-Vmpp (V)	31.80	32.15	32.38	32.59
Maximum Power Current-Impp (A)	8.97	9.03	9.12	9.21
Module Efficiency	17.5%	17.8%	18.1%	18.4%

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## ELECTRICAL PARAMETERS (NOCT)

Model Number	QSA285M-60-S	QSA290M-60-S	QSA295M-60-S	QSA300M-60-S
Maximum Power-Pmax (Wp)	209.4	213.1	216.8	220.5
Open Circuit Voltage-Voc (V)	36.32	36.60	36.93	37.01
Short Circuit Current-Isc (A)	7.61	7.67	7.71	7.79
Maximum Power Voltage-Vmpp (V)	29.27	29.58	29.79	30.00
Maximum Power Current-Impp (A)	7.16	7.20	7.28	7.35

NOCT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s  
Power Production Tolerance ±3%