

## Polycrystalline Solar Module

VS-P48



Modules designed for residential and utility applications, rooftop or ground mount.



The latest module manufacturing technology, high power output and highest conversion efficiency.



Anti-reflective and anti soiling surface reduces power loss from dirt and dust.



Original photovoltaic Connector MC4 which reliability.



The module can withstand snow loads up to 5400Pa and wind loads up to 2400Pa.



High performance in low light conditions Cloudy days, sunrises and sunsets.



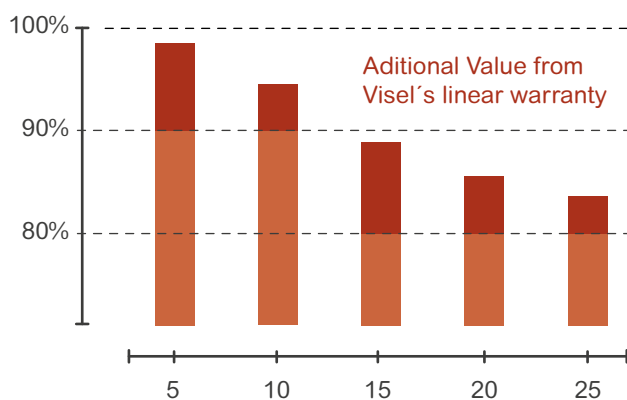
IP67 junction box for long-term weather endurance.

3Wp+

Positive power tolerance up to 3W.

## Linear Performance Warranty

10 year product warranty | 25 year line power warranty



Visel

Industry Standar

\* Warning : read the manual for installation and use before handing or installing VISEL modules.

\* The values, characteristics and parameters listed in this document are subject to change without notice.

## Product Certificates



# Polycrystalline Solar Module

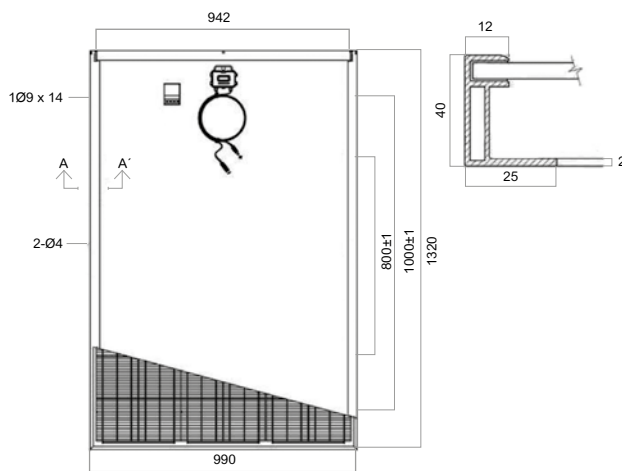
## VS-P48

### Electrical Characteristics

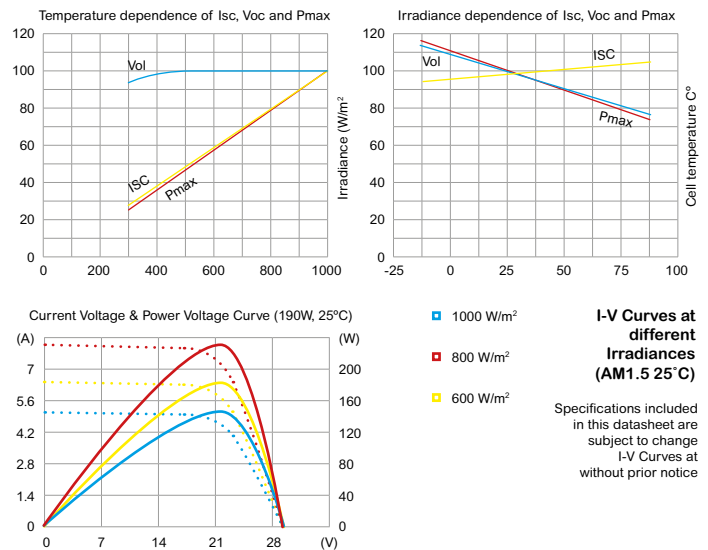
Type	VS170-P48	VS175-P48	VS180-P48	VS185-P48	VS190-P48	VS195-P48	VS200-P48
Max-Power Pm (W)	170	175	180	185	190	195	200
Power Tolerance (W)	0/+3%	0/+3%	0/+3%	0/+3%	0/+3%	0/+3%	0/+3%
Max-Power Voltage Vm (V)	23.52	23.75	24.00	24.23	24.48	25.67	24.96
Max-Power Current Im (A)	7.23	7.45	7.50	7.71	7.77	7.97	8.02
Short - Circuit Current Isc (A)	7.86	8.04	8.17	8.27	8.46	8.65	8.74
Open Circuit Voltage Voc (V)	28.80	29.28	29.48	29.76	29.97	30.24	30.41
Max-System Voltage (VDC)	1000	1000	1000	1000	1000	1000	1000
Cell Efficiency (%)	15.99	16.31	16.92	17.35	17.86	18.43	18.89
Module Efficiency (%)	14.66	15.02	15.47	15.93	16.30	16.81	17.22
Max. Series Fuse (A)	15	15	15	15	15	15	15
PM Temperature Coefficients (%/°C)	-0.450	-0.450	-0.450	-0.450	-0.450	-0.450	-0.450
Isc Temperature Coefficients (%/°C)	+0.062	+0.062	+0.062	+0.062	+0.062	+0.062	+0.062
Voc Temperature Coefficients (%/°C)	-0.330	-0.330	-0.330	-0.330	-0.330	-0.330	-0.330
NOCT Nominal Operating Cell Temperature	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C	45±2°C

All specified parameters at STC 25 °C ambient, 1000 W/m<sup>2</sup> irradiance and AM 1.5

### Mechanical Specifications



### I-V Curve



### Mechanical Characteristics

Cable Type	4mm <sup>2</sup> , TUV certified, 0.9m lenght, MC4
Junction Box	IP67, 1000VDC, TUV certify 6 by-pass diodes
Frame	Clear anodized aluminum alloy silver color
Solar Cell	48 units (6x8) in series, 156x156mm poly crystalline
Dimension (mm)	1320x990x40
Weight (Kg)	15.0
Glass	Low-iron tempered glass, thickness 3.2mm

### Absolute Ratings

Dielectric Insulation Voltage	3000V
Operating Temperature (°C)	-40~+85
Storage Temperature (°C)	-40~+85

### Load Rating

Maximum snow load	5400Pa
Maximum wind load	2400Pa
Hail impact test	Iceball diameter 25mm at 23m/s