



## Solar Thermal or Solar Photovoltaic? ESW Says 'Both'

Solimpeks PV-T (Hybrid collector)  
generates your electricity and heats  
up your water simultaneously.

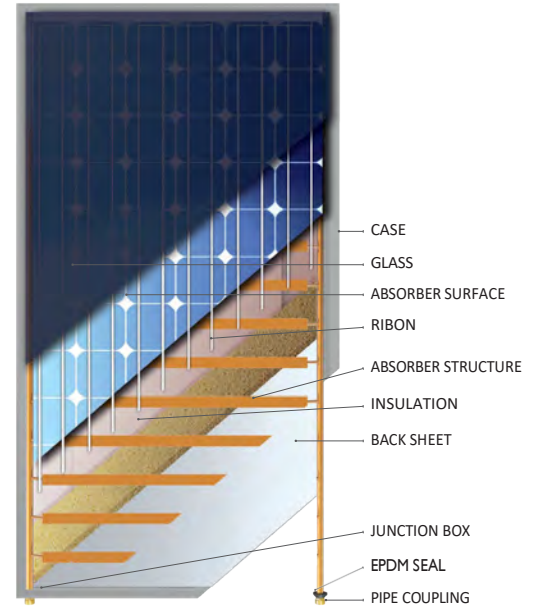
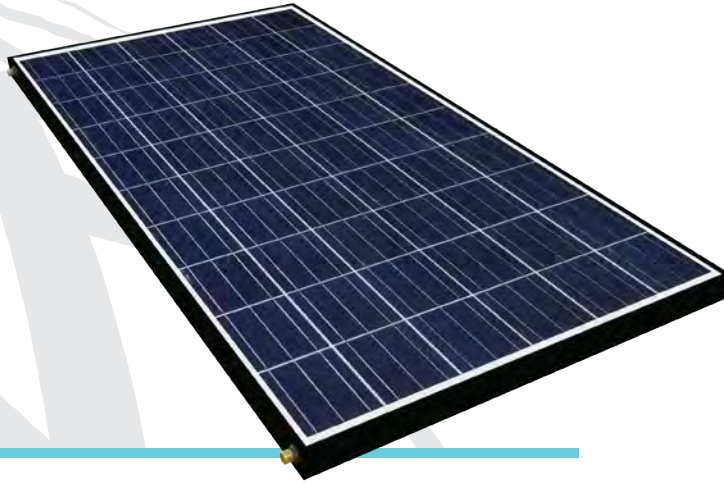


**VOLTHER**  
hybrid collectors



VOLTRER EXCELL

Electricity and usable thermal hot water at the same time from one panel.  
Extra-much electricity production per year with cooled PERC cells.



TECHNICAL SPECIFICATIONS OF HYBRID COLLECTORS

Specifications / Product Code:

WOLTRER EXCELL PVT

Dimensions	1670x 1005 x 60mm
Weight	28,44 kg
Gross Area	1,673 m <sup>2</sup>
Number Of Cells	60 (6x10)
Cell Dimensions (mm)	158,75x158,75
Nominal Power (Wp)	325 W
Glazing	Pv Glass
Absorber Surface (PV)	Mono
Absorber Surface (T)	Copper
Safety Class	II
Maximum over current protection rating	15A
Power tolerance, current tolerance and voltage tolerance	3%
Volume of heat transfer fluid	0,85 L
Imp (A) Nominal Current	9,62 A
Isc (A) Short Circuit Current (5%)	10,17 A
Vmp (A) Nominal Voltage	34,30 V
Voc (V) Open Circuit Current (5%)	41,67 V
Welding Type	Laser
Absorber Tube Diameter	8,0 mm
Absorber Tube Thickness	0,45 mm
Manifold Tube Diameter	18 mm
Manifold Tube Thickness	0,70 mm
Tube Number	7
Tube Distance	130 mm
Max. Operation Pressure	8,6 bar
Test Pressure	13 bar

Dimensions	1670x 1005 x 60mm
Weight	28,44 kg
Gross Area	1,673 m <sup>2</sup>
Number Of Cells	60 (6x10)
Cell Dimensions (mm)	158,75x158,75
Nominal Power (Wp)	325 W
Glazing	Pv Glass
Absorber Surface (PV)	Mono
Absorber Surface (T)	Copper
Safety Class	II
Maximum over current protection rating	15A
Power tolerance, current tolerance and voltage tolerance	3%
Volume of heat transfer fluid	0,85 L
Imp (A) Nominal Current	9,62 A
Isc (A) Short Circuit Current (5%)	10,17 A
Vmp (A) Nominal Voltage	34,30 V
Voc (V) Open Circuit Current (5%)	41,67 V
Welding Type	Laser
Absorber Tube Diameter	8,0 mm
Absorber Tube Thickness	0,45 mm
Manifold Tube Diameter	18 mm
Manifold Tube Thickness	0,70 mm
Tube Number	7
Tube Distance	130 mm
Max. Operation Pressure	8,6 bar
Test Pressure	13 bar

Typical Electrical Parameters

Nominal power at STC, Pmax	W	325
Power Tolerance at STC	%	± 3
Voltage at Pmax, Vmp	V	34,30
Current at Pmax, Imp	A	9,62
Open Circuit Voltage, Voc (± 3%)	V	41,67
Short Circuit Current, Isc (± 3%)	A	10,17
Maximum System Voltage	V DC	1000
Temperature Coefficient of Pmp	%/°C	0,048
Temperature Coefficient of Voc	%/°C	-0,255
Temperature Coefficient of Isc	%/°C	-0,0331
Class of Protection		II
Maximum Series Fuse	A	15

Unit

MIR325M-60C/M

Nominal power at STC, Pmax	W	325
Power Tolerance at STC	%	± 3
Voltage at Pmax, Vmp	V	34,30
Current at Pmax, Imp	A	9,62
Open Circuit Voltage, Voc (± 3%)	V	41,67
Short Circuit Current, Isc (± 3%)	A	10,17
Maximum System Voltage	V DC	1000
Temperature Coefficient of Pmp	%/°C	0,048
Temperature Coefficient of Voc	%/°C	-0,255
Temperature Coefficient of Isc	%/°C	-0,0331
Class of Protection		II
Maximum Series Fuse	A	15

Maximum Dimensions

Cell Type	
Cell Size	mm
No. Of Cells (Matrix)	pcs
Module Overall Dimensions (LxWxT)	mm
Weight (Approx.)	Kg
Design Load	Pa
Fire Performance Type	

MIR325M-60C/M

MIR325M-72C/M

Mono Crystalline	
Cell Size	158,75 x 158,78
No. Of Cells (Matrix)	60   72
Module Overall Dimensions (LxWxT)	1665 x 1002 x 35   1982 x 1002 x 40
Weight (Approx.)	19   23,5
Design Load	1600
Fire Performance Type	1

\*Under normal conditions, a photovoltaic module is likely to experience conditions that produce higher current and/or voltage than reported at standard test conditions. Accordingly, the values of Isc and Voc, marked on this PV module should be multiplied by a factor of 1,25 when determining component voltage ratings, conductor current ratings, and size of controls (e.g. inverter) connected to the PV output.

- \* Type or model number designation for PV: MIR310-335W
- \* Nominal module operating temperature (NMOT): 36,9 °C
- \* Performance at NMOT (MOT 06.2): 242,5 W
- \* Performance at low irradiance (MOT 07) is specified: 63,2 W
- \* Temperature coefficient for voltage at open-circuit: Beta [%/°C] -0,255 Vd = -0,28%/°C
- \* Temperature coefficient for maximum power: alpha [%/°C] 0,048 Vd = -0,37%/°C
- \* Temperature coefficient for short-circuit current: Gamma [%/°C] -0,331 Vd = +0,048%/°C
- \* The type and ratings of bypass diode to be used (if applicable): = 15A, IP68
- \* Fire rating: Class C

• Manufacturer uses one types of junction boxes in the panels it produces. PV-Junction Box model is PV-ZH011-3D (Manufacturer: Zhejiang Zhonghuan Sunter) PV-Connector model is PV-JM601 (Manufacturer: Zhejiang Jianning Tianheyuan) 4mm<sup>2</sup>, the connector cables size = 1 x 4mm<sup>2</sup> Temperature Rating = 90°C, 1000VDC (according to IEC 62852:2014)

\*Country of Manufacturer : Turkey

\*All electrical data shall be shown as relative to standard test conditions (STC) (1000 W/m<sup>2</sup>, (25 ± 2) °C, AM 1,5 according to IEC 60904-3 and IEC TS 61863).

\*Stagnation temperature at 1000W/m<sup>2</sup> and 30°C → 70°C

