WIOSUN®

COMBINED MODULE

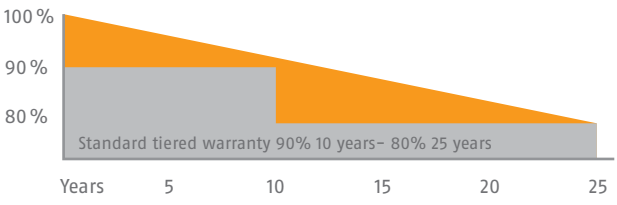
"The next Generation"

PV-Therm 2.0

MONOCRISTALLINE

MADE IN EUROPE

10 YEAR WARRANTY



Added Value - Linear performance warranty from WIOSUN®

Hightech from Germany

The WIOSUN® PV-Therm combination modules are engineered in Germany and are subject to our strict quality standards. With over 25 years of experience in photovoltaics, we offer high-tech products at fair prices. In all WIOSUN® modules only selected high-quality individual components are used.

Positive-only tolerance

You can count on our quality, because WIOSUN® delivers only modules with positive tolerance up to +5 Wp.

Efficiency of up to 30%

This combined module, with a surface temperature of up to 80° C, can be cooled down to a tempera-ture below 20° C in a very short period of time using water at a temperature of 12° C. This equals an increase in effi ciency of up to 30 percent.

Heat for free

In addition to the very easy installation, the combined engine by the association of photovoltaic and solar thermal energy is space-saving and economically advantageous. Aditionally the thermal yield is fi nanced by the feed-in remune-ration for the photovoltaic.

10 year product warranty

With the 10 year product warranty on the PVT-SERIES, as well as a 25 year performance guarantee, WIOSUN® photovoltaic modules are among the most reliably calculable components for efficient PV systems.

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Solarzentrum Allgäu solar solutions

ECOGREEN Securing a sustainable future

COMBINED MODULE PV-Therm 2.0 monocrystaline

General

Cells	60 (6x10) monocristalline	Cellsize	156 x 156 mm
Frame	aluminium, black anodized	Front glass	3.2 mm Solarglass
Connection	power optimizer solaredge	Wire	4 mm² Solar cabel, 1000 mm length
Connector	MC4 compatible	Power tolerance	0 to + 5 Wp

Electrical Datas (STC*)

MODULETYPE			PVT-280M	PVT-285M	PVT-290M
Nominal Power	P_{MPP}	Wp	280	285	290
MPP-Voltage	U_{MPP}	V	31.49	31.75	32.01
MPP-Current	I_{MPP}	A	8.89	8.98	9.06
Open-circuit voltage	U_{OC}	V	38.74	39.06	39.38
Short-circuit current	I_{SC}	A	9.50	9.59	9.68
Module efficiency	η%		17.00	16.51	16.80

Electrical Datas (NOCT**)

Nominal Power	P_{MPP}	Wp	203	207	210
MPP-Voltage	U_{MPP}	V	28.18	28.41	28.64
Open-circuit voltage	U_{OC}	V	35.21	35.51	35.80
Short-circuit current	I_{SC}	A	7.69	7.77	7.84

Thermal Datas

Absorber area	1.58 m²
Connections	DN 16
Liquid capacity	3.88 l
System pressure	max. 1.5 bar
Test pressure	max. 2.5 bar
Flow rate per module	30-150 l/h
Delta T	ca. 5K bei STC
Operating temperature	-20 °C bis 75 °C
Stagnation temperature	75 °C
Efficiency (η_0)	63 %
Collector energy output (η_0)	ca. 995 W_{th}
Thickness heat exchanger	0.8 / 1.0 mm

Thermal Datas II

	not insulated	insulated
Collector efficiency (η_0)	63 %	63 %
Heat loss coefficient b_1 (T_m=T_a)	22.89 $\frac{W}{m^2K}$	7.98 $\frac{W}{m^2K}$
Collector power output (T_m-T_a =5K)	815 W_{th}	932 W_{th}

Temperature coefficients

Temperature coefficients I_{SC}	+ 0.04 % / K
Temperature coefficients U_{OC}	- 0.367 % / K
Temperature coefficients P_{MPP}	- 0.46 % / K
NOCT	48 °C ± 2 °C

Limits

System voltage max.	600 V / 1000 V
Reverse current max.	15 A
Operating temperature	- 40 °C – 85 °C
Maximum load	5400 Pa/m² = 550 kg/m² (75 lbs/ft²)
Safety class	II

Certifications and warranty

TÜV	IEC 61215, IEC 61730, 1703 i. p.
Product warranty	5 years
Performance warranty	linear 25 years

Mechanical Datas

Dimensions	1655 x 1010 (995) x 45 mm ±1 mm
	65.16 x 39.76 x 1.77 inch ±0.03 inch
Weight	36 kg | 79 lbs

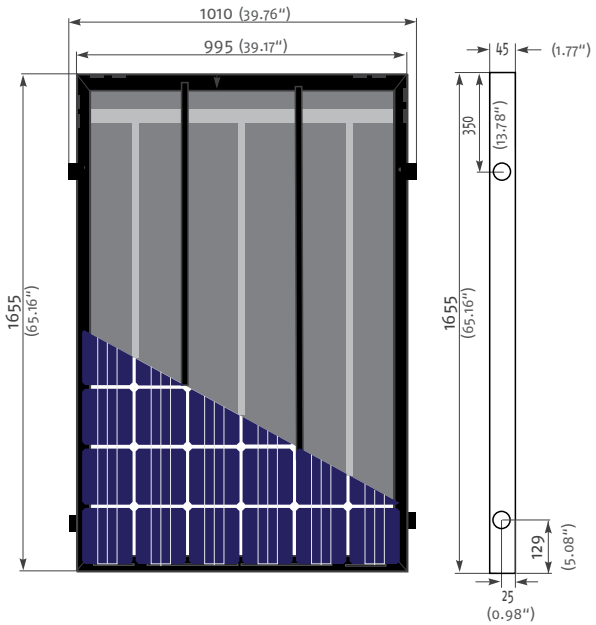
All figures are according to DIN EN 50380.
Tolerance at rated power 0 to +4.99 Wp. All other specifications ± 3%.

At a low irradiation intensity of 200 W/m² (AM 1.5, cell temperature 25 °C)
96 % of the STC module efficiency will be archived.

* Standard Test conditions (1000 W/m², AM 1.5, cell temperature 25 °C)

** Normal Operating Cell Temperature (800 W/m², AM 1.5,
windspeed 1 m/s, ambient temperature 25 °C)

Technical drawing



Your WIOSUN® Dealer