



DUOSOLIS 1800W

More efficient together: one solar module, two technologies: photovoltaic and thermal; 850 W of power per square metre and up to 1800 W per module.

TECHNOLOGY

Through the use of a micro-channelled aluminium meander acting as a heat absorber, our DuoSolis hybrid solar module is created. It consists of a photovoltaic sheet inside a low-emissivity double-glazed unit, where solar energy is converted into electrical and thermal energy (Solar Cogeneration), with an average efficiency of over 70% of the total incident energy.

THERMAL RECOVERY

The principle is simple: solar energy that is not converted into electrical energy is recovered by the heat absorber to heat the heat-transfer fluid circulating in the module. Special rear insulation eliminates thermal losses to the environment.

TOTAL EFFICIENCY

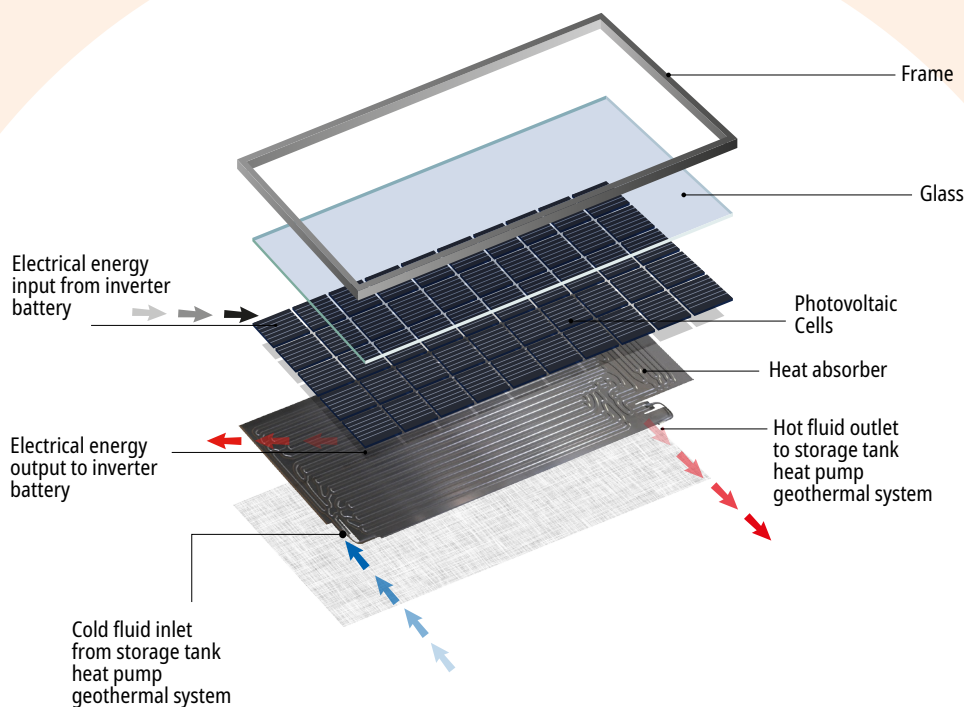
Thanks to the DuoSolis module, solar energy is used to the fullest: one panel and one system simultaneously produce electrical and thermal energy, ensuring high coverage of the building's energy needs. The reduction in the operating temperature of the photovoltaic cell ensures greater electricity production throughout the year.

INCREASED HEAT PUMP YIELD

DuoSolis can naturally be used as a large outdoor unit for a heat pump, increasing its seasonal performance (SCOP). In other cases, it can operate as solar recharge for deep geothermal probes or compact surface probes.



DUOSOLIS FUNCTIONAL CONCEPT



THERMAL OPERATING PARAMETERS

According to UNI EN 12975

Optical efficiency	60 %	Collector volume	1.2 L
A1 coefficient	6 W/m ² K	Module weight	45 kg
Stagnation temperature	90°C	Collector area	2.13 m ²
Nominal flow rate	120 L/h	Pipe connection diameter	1/2" F
Pressure drop (100 L/h)	80 mbar	Nominal thermal power	1300 W

ELECTRICAL OPERATING PARAMETERS

Measured under standard test conditions (STC) I=1000 W/m² • AM=1.5 • T_{cell}=25°C

P _{max} Nominal power	460 Wp	I _{mpp} Current at P _{max}	13.32 A
V _{oc} Open-circuit voltage	42.49 V	Module efficiency Overall module efficiency	21.53 %
V _{mpp} Voltage at P _{max}	34.54 V	P _{max} coefficient P _{max} temperature coefficient	-0.29 %/K
I _{sc} Short-circuit current	14.13 A	V _{oc} coefficient V _{oc} temperature coefficient	-0.28 %/K

MODULE DIMENSIONS

1.13 x 1.88 x 0.05 m