

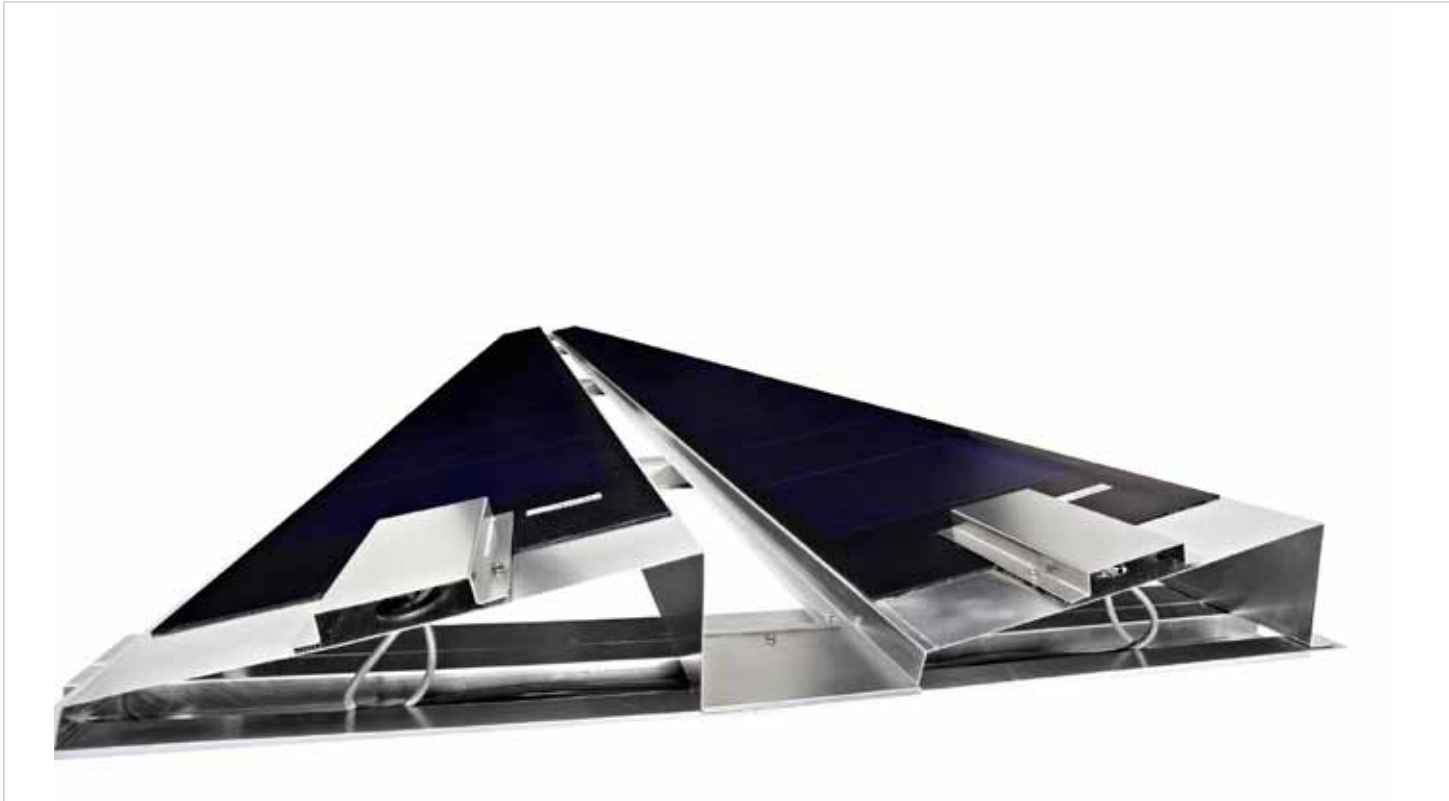


Module

TF Multi Professional

thin-film

144 Wp



The lightweight system without roof penetrations

TF Multi Professional, consisting of thin-film cells made by the leading manufacturer UNI-SOLAR®, applied to an aluminium plate canted by 11 degrees. The substructure for this lightweight system is an aluminium top-hat rail which can be mounted on every membrane roof with an innovative, patent pending buttstrap joint system.

System advantage:

Mounting system without requiring roof penetration in roofs with low load reserves.

- Mounting without roof penetrations
- Minimal surface load (6 kg/m²)
- Complete system with top-hat rail
- System inclination of 11 degrees
- Short installation times
- Optimal yields due to the advanced triple junction technology
- Safe and simple electrical connection with plug connector system
- Ideal for use on large industrial roof surfaces

TF Multi Professional

Electrical data*

Module type	TF 144 Professional	
Nominal power (P_{MPP})	144	Wp
Voltage (U_{MPP})	33	V
Current (I_{MPP})	4.36	A
Open circuit voltage (U_{OC})	46.2	V
Short circuit current (I_{SC})	5.3	A
Power coefficient (ΔP_{MMP})	-0.3	W/K
Voltage coefficient (ΔU_{OC})	-102	mV/K
Current coefficient (ΔI_{SC})	4.36	mA/K
Voltage coefficient (ΔU_{OC})	-176	mV/K
Current coefficient (ΔI_{SC})	5.3	mA/K
NOCT	46	°C

At standard test conditions (1,000 W/m², spectrum AM 1.5, cell temperature 25 °C). During the first 8-10 weeks of operation, electrical output exceeds specified ratings: Power PMPP +15%, Open Voltage Uoc +11%, Short Circuit Isc +4%.

Dimensions and weight

Length	5600	mm
Width	455	mm
Weight	6	kg/m ²
Height	118	mm

Quality characteristics

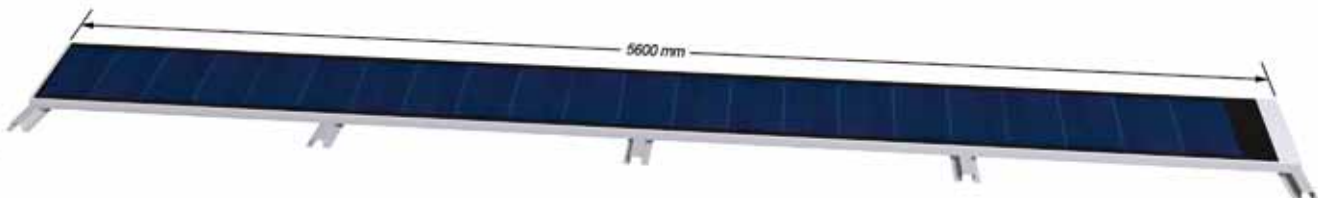
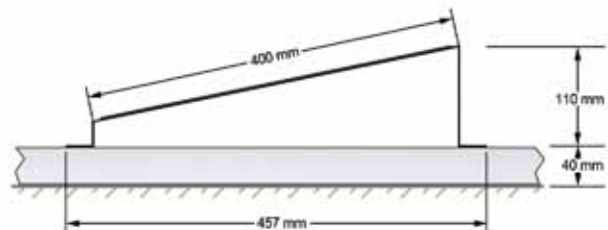
Performance tolerance	±5%
Power output warranty**	10 years at 92% nominal output, 20 years at 84% nominal output, 25 years at 80% nominal output
Product warranty**	5 years
Max. system voltage	1000 V

** According to the Centrosolar guarantee conditions (incl. product and performance guarantee). The power output warranties in this document are only effective if the installation has been registered at www.uni-solar.com.

Construction characteristics

Cells	Amorphous silicon Triple Junction cells
Construction	Laminates fused onto aluminium sheets
Front	Highly transparent ETFE fluorine polymer
Junction Box	Protection class IP65
Bypass diodes	Integrated bypass diodes
Connecting cables	2 x 0.5 m, pin-and-socket connector system
System application	Membrane roofs

Specifications subject to change without notice, 07/2010



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