



UKSOL ORGANIC THIN FILM FLEXIBLE SOLAR TECHNICAL DATASHEET :

Our film is an innovative organic solar film with unique features, that enables solar power generation, where conventional photovoltaic solutions cannot be used. The solarfilm is ultra-light, flexible, ultra-thin and comes with an integrated backside adhesive to be easily applied to various surface materials. This film has the lowest carbon footprint of all solar technologies with less than 10 g CO₂e/kWh, making it a truly green product.



Ultra-Light

Weight of less than 2 kg/m². Perfect for lightweight buildings with low rooftop load-bearing capacity.



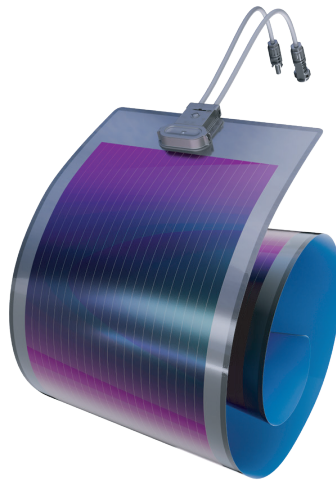
Flexible

Minimum bending radius of 50 cm. Ideal for all curved or non-straight surfaces



Ultra-Thin

Thickness of less than 2 mm. Seamless integration into application surface.



Truly Green

Carbon footprint of less than 10 g CO₂ e/kWh. No toxic heavy metals like lead or cadmium, no rare earths, no scarce raw materials.



Easy-to-install

Integrated backside adhesive. Simply gluing on various surfaces. No mounting structure. No rooftop penetration.

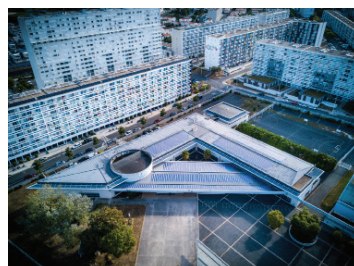


Temperature Independent

No performance loss at high temperatures till >65 °C. +/- 0 temperature coefficient.

GENERAL DATA

Configuration	Junction box located on front side of module, integrated backside adhesive on rear side
Cell Type	Organic triple-junction solar cells in serial connection
Back Sheet	Opaque black film with UV and weather protection with self-adhesive backside tape, delivered with protection liner
Front Sheet	Polymeric film with optimized UV and weather protection
Fixation	Self-adhesive tape sticks durably on glass, metal/steel, concrete, or other materials on request
Packaging	12 rolled modules per box, 8 boxes per pallet, 96 modules per pallet



ELECTRICAL DATA AT STC

	Panel 1 436-2000-50	Panel 2 436-2000-55
Nominal Power	50 W	55 W
Sorting of PMPP	+5/-0 W	+5/-0 W
Aperture Efficiency	7.2 %	8.0 %
Voltage at P _{mpp} (V _{MPP})	42.6 V	44.1 V
Current at P _{mpp} (I _{MPP})	1.24 A	1.31 A
Open Circuit Voltage (V _{oc})	55.7 V	55.7 V
Short Circuit Current (I _{sc})	1.62 A	1.65 A
Overcurrent Protection Rating	2.1 A	2.1 A

STC Irradiance 1000 W/m², Module Temperature 25 °C, AM1.5 spectrum. Measurement tolerance of P_{MPP}, I_{sc} and V_{oc} does not exceed ±10%.

MECHANICAL SPECIFICATIONS

Module Width	436 mm
Module Length	2000 mm
Module Thickness	1.8 mm (solar film) 18.3 mm (solar film plus junction box)
Min. Bending Radius	50 cm (unidirectional curved surfaces only)
Module Weight	1.6 kg
Load Rating	Design load: ±1600 Pa Test load: ±2400 Pa Safety factor: 1.5


THERMAL CHARACTERISTICS

Operating Temperatures	-40 ... +85 °C
Temperature Coefficient P _{MPP}	+0.00 %/°C, from 25°C up to 65 °C -0.11 %/°C, from 65°C to 85 °C
Temperature Coefficient I _{sc}	+0.07 %/°C
Temperature Coefficient V _{oc}	-0.20 %/°C

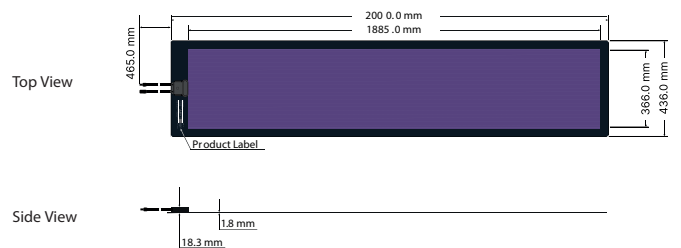
INSTALLATION

Installation Conditions	Dry and clean conditions, temperature above 8 °C
Max. Altitude	2000 m
Mounting Surface	Flat or bent in one axis (radius ≥ 50 cm) Slope min. 1° and max. 90°

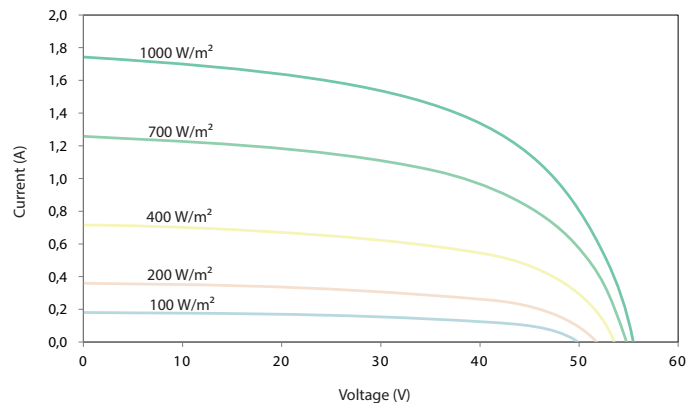
SYSTEM INTEGRATION

Max. System Voltage	1000 V
Bypass Diodes	1 per module
Electrical Connection	TE Connectivity PV4-S connector 46 cm cable length
Class	II (IEC 61140) 
Junction Box	IP 67
Inverter Recommendation	Compatibility with most commercially available inverters

TECHNICAL DRAWING



I-V CURVES



STANDARDS AND NORMS

PV Standards	IEC 61730 compliant
Fire Classification	EN 13501-01 class E in combination with metal, concrete or polymeric waterproofing sheet with Fire class E acc. EN 13501-1 or higher. See the User Guide for more details. Fire tests were performed at the Fire laboratory of MPA Dresden GmbH.
Compliances	CE conform; WEEE compliant
Warranty	According to Terms & Conditions