

ETFE+PCB flexible solar panel

**ANTI-GLARE,
INCREASE OUTPUT
15°BEND THE LIGHTER**



Features

- 1、 Less reflection leading to more power per square inch.
- 2、 Better light absorbing
- 3、 Highly stain-resistant and easily gets cleaned by the rain.
- 4、 Highly resistant to seawater corrosion.
- 5、 Waterproof and highly resistant to the harsh operating conditions of a marine environment.

The ETFE material bonded with the fiberglass back sheet makes a stronger panel than a cheaper PET film one with less chance of cracking or water intrusion.

Performance of ETFE vs.PET

Material	ETFE(Ethylene Tetrafluoroethylene)	PET (Polyethylene terephthalate)
Combination	Ultra lightweight and durable the combination between ETFE and back sheet is much stronger than PET	Combination of PET and back sheet cracks easily, is not durable, and also not waterproof.
Thickness	Includes a 0.025mm thin, UV resistant, layer of protection. Total thickness less than 0.1mm	0.15mm thick. Solar cells break easily due to low hardness.
Light transmission	95% transparency offers excellent efficiency in terms of light to electricity conversion.	90% to 93% transparent results in lower efficiency in terms of light to electricity conversion.
Surface adhesion	ETFE has non-adhesive surface properties. Highly stain-resistant and easily gets cleaned by the rain.	Adhesive surface often gets covered with dust or other debris, significantly affecting the output of solar panel.
Lifetime	Lifetime of 10 years. Resists aging, deteriorates slowly.	Lifetime of at most 5 years. Easily forms air pockets and peels off.
Corrodibility	Highly resistant to seawater corrosion.	Not acid and alkali resistant, making it totally unsuitable for use in marine environment.
Flammability	Highly flame retardant. Suitable for use in temperatures ranging from -65°C to +150°C. Can be installed safely in hot climates.	Not suitable for use in high temperature regions due to short-term heat resistance.
Applicative effects	Absorbs sunlight. Does not reflect it.	Reflects a large amount of sunlight, producing glare and creating traffic risks to cars and airplanes

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Electrical Characteristics

Product code	SGLW-E-80W	SGLW-E-100W	SGLW-E-160W
Maximum power(Pmax)	80W	100W	160W
Voltage at Pmax(Vmp)	17.8	17.8	17.8
Current at Pmax(Imp)	4.49	5.62	8.98
Open-circuit voltage(Voc)	21.3	21.3	21.3
Short -circuit current(Isc)	4.85	6.07	9.71
Cells Efficiency(%)	22.60%	22.60%	22.60%
The maximum system voltage	60VDC(IEC)	60VDC(IEC)	60VDC(IEC)
Power temperature coefficient	-0.38%/°C	-0.38%/°C	-0.38%/°C
Voltage temperature coefficient	-0.27%/°C	-0.27%/°C	-0.27%/°C
Current temperature coefficient	0.05%/°C	0.05%/°C	0.05%/°C
Output power tolerance	±3%	±3%	±3%
NOCT	45±2°C	45±2°C	45±2°C

Specifications

Cells	Monocrystalline silicon solar		
No.of cells and connections	36(4X9)	36(4X9)	36(4X9)
Module dimension	785*670*3mm	960*670*3mm	1495*670*3mm
Weight	2.36KG	2.9KG	4.5KG
Junction Box	Ip 65/ Ip 67 Rated		