

Semi-Transparent PV Modules

λ Product features

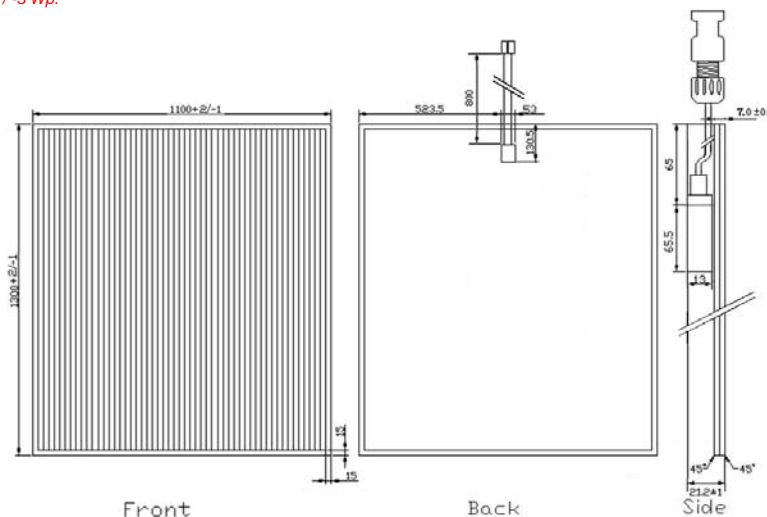
Sun Well Solar presents you with our latest semi-transparent PV products. By the usage of semi-transparent amorphous silicon and transparent conductive oxide (TCO) films as two electrodes of the sub-cells in the solar module, our PV module is characterized of semi-transparency. Unlike other see-through thin-film PV products, which are made with opaque electrodes (e.g. silver) and opaque active layer (e.g. microcrystalline silicon, CdTe, or CIGS films) which are partially removed by laser drilling. You can find our products' advantages as following:

- ◆ The mandarin color and semi-transparent characteristic provide wonderful visual comfort.
- ◆ PV module absorbs 99.9% UV light and is a perfect block to harmful UV light.
- ◆ Without active area loss by laser drilling, Sun Well Solar PV module features high power conversion efficiency than other see-through thin-film PV modules.
- ◆ The high transmittance of red light is favorable to plant growth and crop cultivation.
- ◆ The high light transmission in the infra-red region creates a greenhouse effect favorable to the cultivation of particular plants.
- ◆ Among all thin-film PV technologies, silicon thin-film PV is the only one technology containing without heavy metals.
- ◆ No opaque back electrode, thus extra power can be generated for receiving light at both front and rear sides.

λ Specifications

Model	Physical Spc.				Electrical Spc.						Light Spc.	
	Dimensions (mm)	Weight (kg)	Glass (front+back)	Wind Pressure (Pa)	V _{mpp} [V]	I _{mpp} [A]	V _{oc} [V]	I _{sc} [A]	Rated Power (Wp)	Power density (W/m ²)	Transparency (%) average transmittance at 400-800 nm	UV cut (%)
^a WD-A-GE-0771	1300x1100x7 (not inc. junction box)	24	F+TS	+7000 & -7000	103	0.90	137	1.15	90 ²	63	13.5±3.5	99
^a WD-A-GE-0772					103	0.85	137	1.11	85 ²	59		
^a WD-A-GE-0773					99	0.83	136	1.09	80 ²	56		
^a WD-A-GE-0774					95	0.81	135	1.08	75 ²	52		
^a WD-A-GE-0851					103	0.85	137	1.11	85 ³	57		
^{a-d} WD-C-GF-0901	1300x1100x26 (inc. junction box)	24	F+F	+4600 & -4600	103	0.90	137	1.15	90 ²	63	20.0±3.5	99
^{a-d} WD-C-GF-0902					103	0.85	137	1.11	85 ²	59		
^{a-d} WD-C-GF-0903					99	0.83	136	1.09	80 ²	56		
^{a-d} WD-C-GF-0904					95	0.81	135	1.08	75 ²	52		

Note:
 1. F+TS: float glass +thermally strengthened glass; F+F: float glass + float glass
 2. Rated power sorting tolerance is +4.99 / -0 Wp.
 3. Rated power sorting tolerance is +3 / -3 Wp.

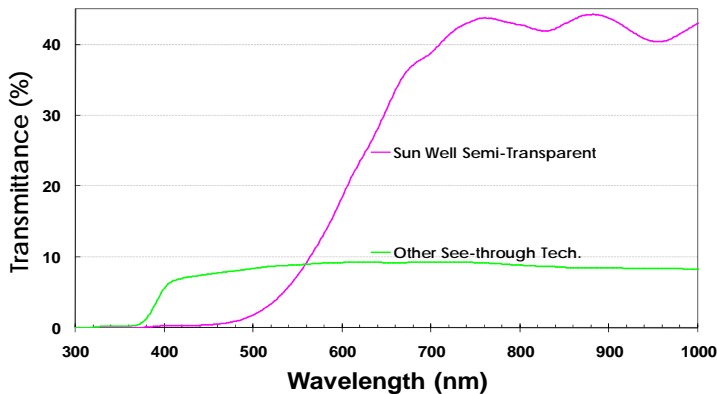


Remark:
^a: Positive & Negative pressures applied up to the indicated pressures of Wind Pressure Resistance Test (ASTM E330/CNS 13972) for BIPV applications.
^b: PV certifications for TUV(EU), CGC(China), and MCS(UK) were listed.
^c: Salt Mist Test (IEC 61701/CNS 15159) is passed.
^d: Fir Tests (UL 790:2004, IEC 61646:2008, IEC 61730-2/CNS 15118-2) are passed.

Solar heat characteristics

Product	Visible		UV Trans. (%)	Solar Heat							U-Value		Shading Coefficient
	Trans. (%)	Reflec. Outdoor (%)		Reflec. (%)	Absorb. %			Direct Trans. (%)	Total Heat Trans. (%)	Relative Heat Gain (W/m ²)	Winter Nighttime (W/m ² K)	Summer Daytime (W/m ² K)	
					Absorb.	Rerad. to Outdoors	Rerad. to Indoors						
Air	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100	N/A	N/A	N/A	N/A
Blank (single piece glass)	90	8	64	8	8	5	3	84	87	671	5.9	5.32	1
Reference (laminated glass-glass)	89	11	< 1	8	15	11	4	77	81	629	5.66	5.11	0.93
WD-A-GE-077	7	6	< 1	9	73	49	24	18	42	342	5.65	5.11	0.48
WD-A-GE-085													
WD-C-GF-090	9	7	< 1	10	67	46	21	23	44	359	5.65	5.11	0.51

Spectra & Appearance



References for Building Integrated PV Applications

BIPV Greenhouse & BIPV Plant Factory



BIPV Facades & Sky Garden & Motor-driven Windows



BIPV Bus Stop & Shelter & Car/Bicycle Port

