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Solar Panel Guide Specification Data Sheet

ILB Helios Group

ILB-TF

ILB50W-TF

Also available on the web at
EnergyPal.com/ilb-helios-group-solar-panels/ilb50w-tf

PHOTOVOLTAICS



ILB-TF THIN-FILM MODULES

Quality criteria and certificates

IEC Certificates

- IEC 61646: Thin-film terrestrial photovoltaic (PV) modules design and qualification and type approval
- IEC 61730: photovoltaic module safety qualification (IEC 61730 includes SKII)
- CE-Certification, ISO 9001 and ILB-ISO 14001
- Junction Box with IP67

Warranty

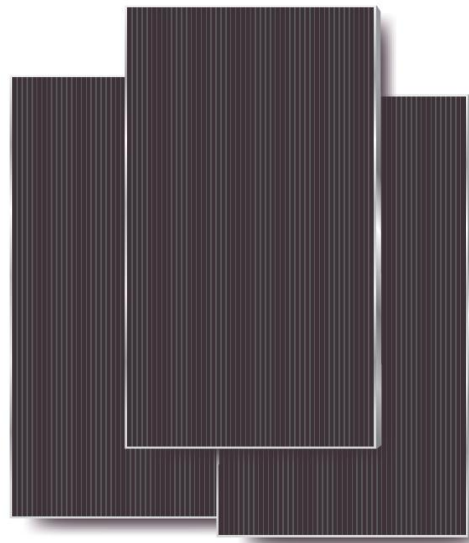
- 5 years product-warranty
- Guaranteed 10 years 90% of nominal power and 25 years 80% of nominal power.

Performance Tolerance

- $\pm 5\%$ of rated Power

Product Code

- Without Frame : ILB50W-TF; ILB55W-TF; ILB60W-TF
- With Frame : ILB50W-TF-F; ILB55W-TF-F; ILB60W-TF-F

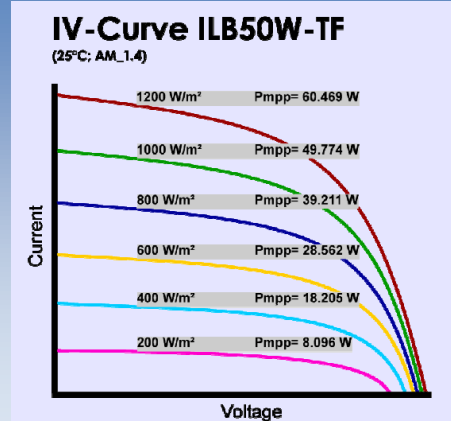


Electrical Specifications

Type	ILB50W-TF	ILB55W-TF	ILB60W-TF
Electrical Specification at STC ^{*12}			
Peak Power (Pmpp)	50 W	55 W	60 W
Open Circuit Voltage (Voc)	78.50 V	79.00 V	80.30 V
Short Circuit Current (Isc)	1.16 A	1.18 A	1.22 A
Maximum Power Voltage (Vmpp)	59.50 V	60.20 V	62.30 V
Maximum Power Current (Impp)	0.84 A	0.91 A	0.96 A

Type	ILB50W-TF	ILB55W-TF	ILB60W-TF
Electrical Specification at 800W/m² ^{*13}			
Peak Power (Pmpp)	39.20 W	43.10 W	47.10 W
Open Circuit Voltage (Voc)	77.10 V	77.50 V	78.10 V
Short Circuit Current (Isc)	0.89 A	0.90 A	0.95 A
Maximum Power Voltage (Vmpp)	57.60 V	59.04 V	60.38 V

Characteristics ILB-TF Series ^{1 **}



¹The rated power Pmpp may vary by $\pm 5\%$ and all other ratings by $\pm 10\%$
²Standard test conditions: 1000W/m²; module temperature 25°C; AM=1.5
³Test condition low radiation: 800W/m²; module temperature 25°C; AM=1.5
^{*}The electrical data's are typical figures based on our production experience
^{**}All Drawings and illustrations are not in true scale.



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Limits ^{12*}

Maximum System Voltage (V _{sys}):	1000 VDC
Maximum Reverse Current (I _r):	3 A
Maximum Circuit Fuse (I _{cf}):	10 A
Maximum Number of Modules in a String:	12
Working Temperature:	-40°C to +85°C
Storage Temperature:	-40°C to +85°C

Temperature Coefficients ^{12*}

NOCT	48°C (±2°C)
Temperature Coefficient VOC (β ₂)	-0.28 %/K (r ² 0.9999)
Temperature Coefficient I _{sc} (α ₂)	0.09 %/K (r ² 0.9967)
Temperature Coefficient P _{mp} (γ ₂)	-0.19 %/K (r ² 0.9971)

Materials

Aluminium Frame

- Donghua

Backside Glass

- Pilkington
- 3.2mm tempered back glass

Front Glass

- AGC (USA)
- 32.mm heat strength front glass

EVA Film

- DNP (Japan)

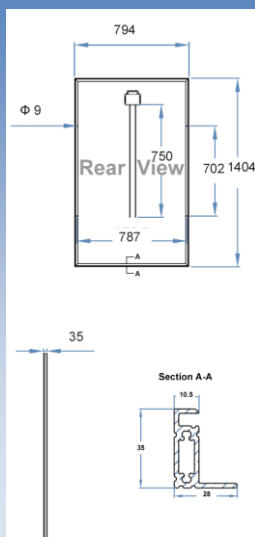
Cell

- Amorphous Silicon

Junction Box with diode, cable, and connectors

- Yukita (Japan)
- TUV, Safety Class II and IP67
- Diodes from SEMYCRON (Germany)
- Maximum System Voltage.....1000 VDC
- Rated Impulse Voltage.....8 KV
- r.m.s withstand Voltage..... 6 KV

Technical Drawing **



Mechanical Specifications

Dimension (AxBxC) mm (unframed):	1404x794x6.5 (±3mm)
Dimension (AxBxC) mm (framed):	1404x794x35 (±3mm)
Weight (unframed):	17.5 kg
Weight (framed):	19.4 kg
Weight-Loading:	2400 PA
Cable:	Ø 2.5mm ² ; length: 750 mm
Connector (MC3 compatible):	YS-246 (Male);YS-237 (Female)
Diodes	1
Container Capacity:	Framed : 20 feet 520 pcs / 40 feet 1040 pcs Unframed: 20 feet 960 pcs / 40 feet 1920 pcs
Cell:	Amorphous Silicon

¹The rated power P_{mp} may vary by ±5% and all other ratings by ±10%
²Standard test conditions: 1000W/m²; module temperature 25°C; AM=1.5
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