

Photowatt®

PW60HT-CB-XF

NEW GENERATION BIFACIAL MODULE

With Photowatt's industry leading bifacial cell technology and extensive knowhow in double glass module manufacturing, we have now developed a new generation of high efficiency bifacial modules. Bifacial modules will greatly increase solar system power generation, reducing system BOS cost, hence, lower LCOE.

310-290 Wc

Typical power

23.95 %*

Typical efficiency

120 half-cells

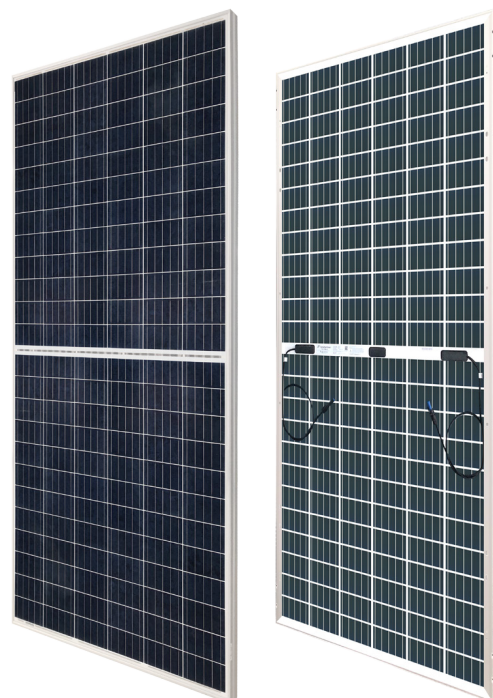
Multicrystalline module

CO₂

Low-carbon footprint

0/+5 Wc

Power tolerance



* 5BB and MBB modules will be provided



Environmental standards

- Priority over environmental requirements by limiting the carbon footprint
- Recycling of used panels (Photowatt is co-founder of Soren)



Durability and performance

- Modules certified by international organizations (VDE)
- Better performance thanks to anti-reflective glass
- Cells sorted by reverse current and shunt resistance
- Better power thanks to the spacing uniform and optimized between cells

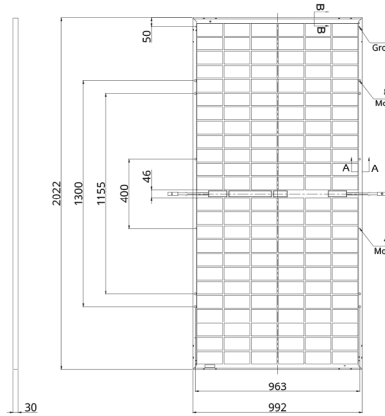


Highly resistant and light framing

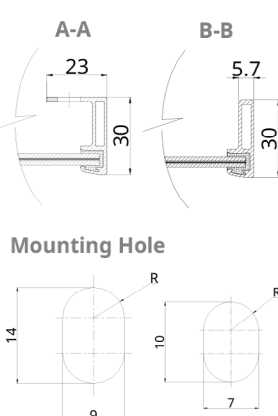
- Aluminum frame for resistance to extreme climatic conditions (5400Pa)
- Frost resistant frame
- Weight of module for easy handling

* with 30% more efficiency from the rear

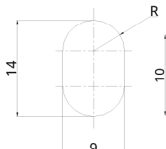
Rear View



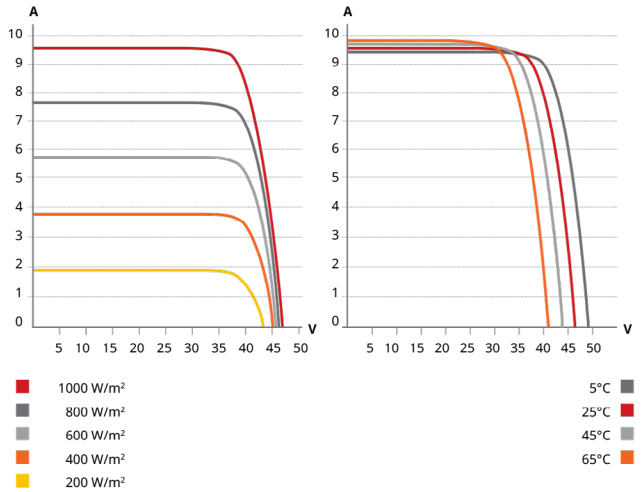
Frame Cross Section



Mounting Hole



I/V CURVES AT LOW IRRADIANCES AND DIFFERENT TEMPERATURES



MECHANICAL CHARACTERISTICS

Cell type	Multi-crystalline
Module size	1696 x 992 x 30 mm
Cells number	120 [2x (10 x 6)]
Module weight	22.1 kg
Front cover	2.0 mm heat-strengthened glass
Frame material	Anodized aluminum alloy
J-BOX	IP 68, 3 bypass diodes
Solar cables	4.0 mm ² (IEC), 12 AWG (UL)
Cable Length (Including Connector)	Portrait: 400 mm (15.7 in) (+) / 280 mm (11.0 in) (-), landscape: 1250 mm (49.2 in)
Connector type	Series T4 or MC4-EVO2 or H4 UTX
Per Pallet	35 pieces
Per Container (40'HQ)	910 pieces

OPERATING CONDITIONS

Operating temperature	-40°C to +85°C
High resistance to snow and wind load	5400 Pa (Snow) 2400 Pa (Wind)
Maximum system voltage	1000V or 1500V (IEC)
Fire resistance	Type 3/Type 13 (UL 1703) or Class A (IEC 61730)
Maximal serie fuse rating	25 A
Application classification	Class A
Bifaciality coefficient *	70%

* Bifaciality power = Pmaxrear / Pmaxfront, Pmaxrear and Pmaxfront are tested under STC, Bifaciality tolerance: ± 5%.

ELECTRICAL DATA (NMOT*)

	Maximum rated power (Pmax)	Voltage nominal power (Vmp)	Nominal power intensity (Imp)	Open circuit voltage (Voc)	Short circuit current (Isc)
PW60HT-CB-XF-290	216	30.1	7.18	36.6	7.65
PW60HT-CB-XF-295	220	30.3	7.26	36.8	7.72
PW60HT-CB-XF-300	224	30.5	7.34	37.0	7.78
PW60HT-CB-XF-305	228	30.7	7.42	37.1	7.85
PW60HT-CB-XF-310	231	30.9	7.49	37.3	7.91

* Below the nominal operating temperature of the module: NMOTz (energy illumination of 800 W / m², spectrum AM 1.5, ambient temperature 20 °C, wind speed 1 m / s)

TEMPERATURE COEFFICIENT*

Typical cells temperature NOCT	°C	41 (±3 °C)
Temperature coefficient Pmax	γ	-0,37%/°C
Temperature coefficient Voc	β	-0,29%/°C
Temperature coefficient Isc	α	+0,05%/°C

* 1000 W/m²; temperature 25°C; spectrum AM 1,5

TECHNICAL CHARACTERISTICS (STC*)

	Typical power (Pmax)	Voltage at the point of maximum power (Vmp)	Current at the point of maximum power (Imp)	Open circuit voltage (Voc)	Short circuit current (Isc)	Module Efficiency
PW60HT-CB-XF-290	290 W	32.3 V	8.98 A	38.9 V	9.49 A	17.24 %
Bifacial Gain**	5%	305W	32.3 V	9.43 A	38.9 V	18.13 %
	10%	319 W	32.3 V	9.88 A	38.9 V	18.96 %
	20%	348 W	32.3 V	10.78 A	38.9 V	20.68 %
	30%	377 W	32.3 V	11.67 A	38.9 V	22.41 %
PW60HT-CB-XF-295	295 W	32.5 V	9.08 A	39.1 V	9.57 A	17.53 %
Bifacial Gain**	5%	310 W	32.5 V	9.53 A	39.1 V	18.43 %
	10%	325 W	32.5 V	9.99 A	39.1 V	19.32 %
	20%	354 W	32.5 V	10.9 A	39.1 V	21.04 %
	30%	384 W	32.5 V	11.8 A	39.1 V	22.82 %
PW60HT-CB-XF-300	300 W	32.7 V	9.18 A	39.3 V	9.65 A	17.83 %
Bifacial Gain**	5%	315 W	32.7 V	9.64 A	39.3 V	18.72 %
	10%	330 W	32.7 V	10.1 A	39.3 V	19.61 %
	20%	360 W	32.7 V	11.02 A	39.3 V	21.40 %
	30%	390 W	32.7 V	11.93 A	39.3 V	23.18 %
PW60HT-CB-XF-305	305 W	32.9 V	9.28 A	39.5 V	9.73 A	18.13 %
Bifacial Gain**	5%	320 W	32.9 V	9.74 A	39.5 V	19.02 %
	10%	336 W	32.9 V	10.21 A	39.5 V	19.97 %
	20%	366 W	32.9 V	11.14 A	39.5 V	21.75 %
	30%	397 W	32.9 V	12.06 A	39.5 V	23.60 %
PW60HT-CB-XF-310	310	33.1 V	9.37 A	39.7 V	9.81 A	18.43 %
Bifacial Gain**	5%	326	33.1 V	9.84 A	39.7 V	19.38 %
	10%	341	33.1 V	10.31 A	39.7 V	20.27 %
	20%	372	33.1 V	11.24 A	39.7 V	22.11 %
	30%	403	33.1 V	12.18 A	39.7 V	23.95 %

* STC: 1000 W / m²; 1.5 AM spectrum; cell temperature 25 °C

** Bifacial gain: The additional gain at the rear compared to the power of the front panel under standard test conditions. It depends on the mounting (structure, height, tilt angle, etc.) and on the albedo of the ground.

WARRANTY

Product warranty	10 years
Linear power output warranty*	30 years

* See general warranty terms and conditions

QUALITY CERTIFICATES

MANAGEMENT



PRODUCT

