

Roltec TOPLine

BIFACIAL HALFCUT M10 PV MODULE

TYPE: BIJTHER PWR

SERIES NUMBER: BIJTHER-YYWWNNNN

Generation 2.0 | Power: 440 – 480Wp

Main Features

- ❖ **Increased Efficiency**
Module efficiency of up to 22% for higher energy gains
- ❖ **Perfect Fit**
Each cell is tested and matched to the rest reducing the risk of hot-spots
- ❖ **High efficiency in all conditions**
High degree of bifaciality performance ensures optimal energy yields regardless of lighting conditions
- ❖ **Low operating temperature**
Unique design guarantees lower operating temperature and resistance to overheating
- ❖ **High mechanical resistance**
Fully tempered 3.2mm front glass guarantees unprecedented mechanical resistance to static (5400 Pa) and dynamic (2400 Pa) loads
- ❖ **Quality Control**
Quality control of all components at every stage of production
- ❖ **Certified Quality**
Manufactured according to the international standards and norms: IEC61215-2021, IEC61730-2023, IEC 62941

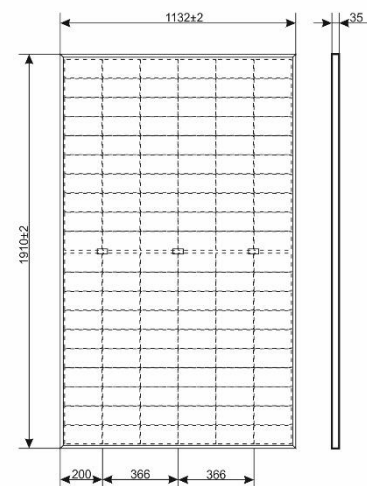


10 years product warranty
25 years power warranty

Technical Specifications

Height	1910 (±2) mm
Width	1135 (±2) mm
Thickness	35.0 (±0.2) mm (3.2 mm glass)
Weight	22.3 (±0.5) kg
Front glass	3.2 mm tempered glass, C-edge
Backsheet	0.32 mm transparent TDT TDT
Cell type	182 x 182 mm. M10 halfcut, Si mono
Cell number	60x2
Junction box	IP68. 3 bypass diodes 20A
Cable	Solar DC cable 4 mm ² (+) 300 mm. (-) 300 mm length Or length according to individual requirements
Connector	MC4
Packaging	Packaging (mm): 2020x1200x1020 Mass per pallet (kg): 600 25 modules per pallet

Technical Drawing



Electrical Specifications

PARAMETERS IN STANDARD TEST CONDITIONS (1000 W/m². 25°C. AM1.5G)¹, BSI: front 1000W/m², rear 300W/m², BNPI: front 1000W/m²

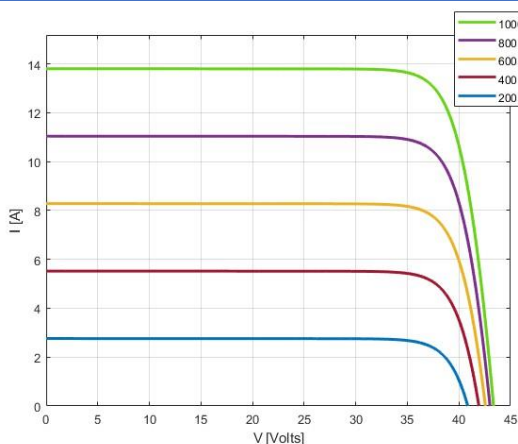
Power Class (+10/-0)	[W]	440	455	465	480
Maximum Power Point	P _{MPP}	440	455	465	480
Maximum Power Point BSI	P _{BSI}	518	535	547	565
Short circuit current	I _{SC}	13.05	13.27	13.58	13.85
Short circuit current BNPI	I _{SC_BNPI}	15.17	15.43	15.79	16.10
Short circuit current BSI	I _{SC_BSI}	15.35	15.61	15.98	16.29
Open circuit voltage	U _{OC}	42.64	42.88	43.03	43.11
Working current	I _{MPP}	12.47	12.68	12.93	13.24
Working voltage	U _{MPP}	35.32	35.87	35.96	36.37
Module efficiency	η	≥19.8	≥20.5	≥21.0	≥21.6
Bifaciality coefficient		φ _{Voc} = 0.99 φ _{Isc} = 0.84 φ _{Pmax} = 0.84			

PARAMETERS IN NORMAL OPERATING CONDITIONS (800 W/m². NMOT. SPECTRUM AM1.5G)¹

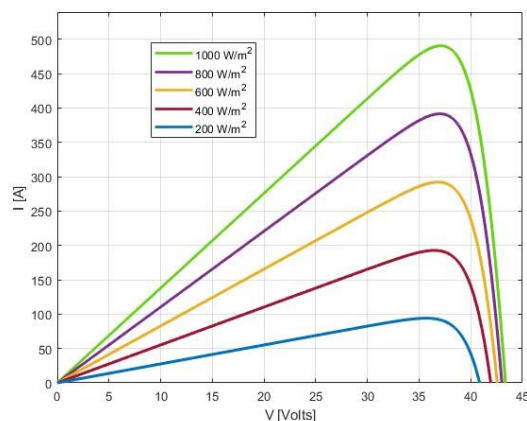
Power class (+10/-0)	[W]	440	455	465	480
Maximum Power Point	P _{MPP}	353	364	373	385
Short circuit current	I _{SC}	10.44	10.61	10.86	11.07
Open circuit voltage	U _{OC}	42.29	42.54	42.68	42.77
Working current	I _{MPP}	9.97	10.14	10.38	10.60
Working voltage	U _{MPP}	35.47	35.97	35.97	36.27

¹Measurement tolerances P ± 5%, I_{SC}, U_{OC}, I_{MPP}, U_{MPP} ± 10%

IV characteristic



Power characteristic



Temperature characteristics

Nominal working temperature	42±2°C
Temp. coefficient P _{MPP}	-0.30%/°C
Temp. coefficient V _{OC}	-0.25%/°C
Temp. coefficient I _{SC}	0.045%/°C
System voltage V _{sys}	1000V
Module [T98] _{max}	70°C

