

GTC is a photovoltaic module producer based in Adiyaman, Turkey. Our automated production line of 135MW has been designed for the assembly of double glass modules, including automatic quality controls at all critical process steps. The new bifacial module developed by our accredited R&D Center maximizes the yield of any power plant at low cost. Another step to reduce LCOE for green energy producers!

The bifacial module can generate electricity from both sides. The backside uses the reflection of the ground depending on its Albedo factor and all potential diffused lights from the environment.

The module can be used in various applications like carport, fixed ground mount, trackers, rooftops, floating, sun breakers and more. The PV panel has been developed to resist to harsh environmental conditions beyond IEC standards (6X technology), such as salt mist.

MADE ACCORDING TO

IEC 61215, IEC 61730-1, IEC 61730-2, IEC Extended Tests DH6000, HF60, TC1200

TSE EN 61701 Salt Mist Corrosion Test - Severity 6

ISO 9001:2015

ISO 14001:2015

OHSAS 18001:2007



OPTIMIZED YIELD

435 – 450W Front Side (STC)

20.71% efficiency

Bifacial boost up to 30%, depending on Albedo

6X Durability Technology

Excellent low light performance

Better performance in hot climate



EXTREME ROBUST DESIGN

Double-Glass Portable Frame Design

Up to 50 years Service Time

Perfect to reduce LCOE

Fire Safe Class AA

100% PID free



GUARANTEED PERFORMANCE

84% power output after 30th year

12 years product warranty



INSTALLATION OPTIMIZATION

1500V - Longer String

Grounding free

Reduce space

Reduce BOS



O&M COST REDUCTION

Portable frame design, no dust/snow collection

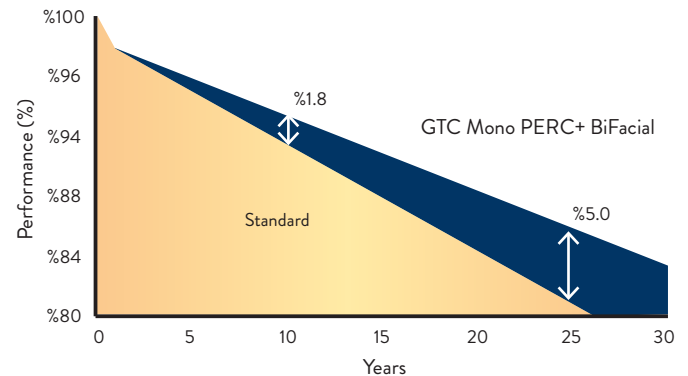
Better self cleaning



SUPERIOR AESTHETICS

Glass/Glass portable frame

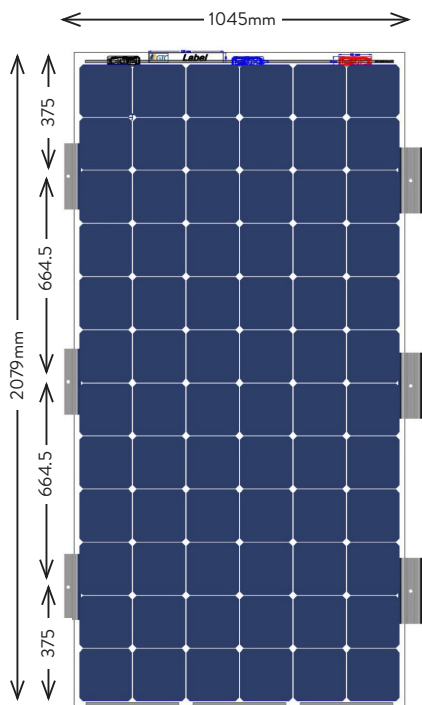
Transparent on request



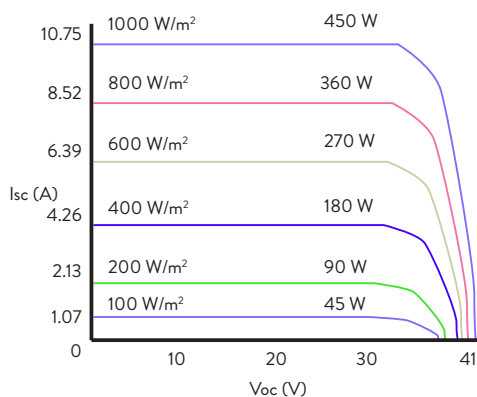
ENGINEERED AND MADE IN TURKEY

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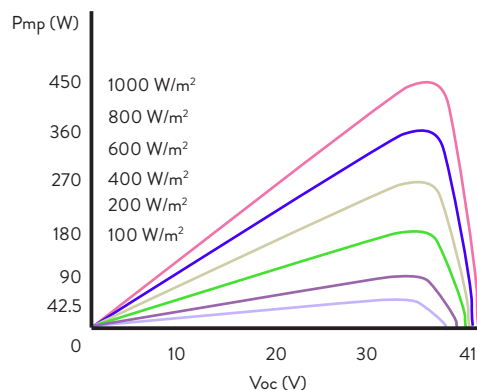
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I-V CURVE (PV MODULE 450W)



P-V CURVE (PV MODULE 450W)



ELECTRICAL PERFORMANCE

Max. Power P_{max} (W)	435	440	445	450
Max. Power Voltage V_{MPP} (V)	41.05	41.26	41.61	41.95
Max. Power Current I_{MPP} (A)	10.59	10.67	10.72	10.75
Open-Circuit Voltage V_{oc} (V)	48.26	48.54	48.83	49.08
Short-Circuit Current I_{sc} (A)	11.16	11.23	11.26	11.29
Performance η_m (%)	20.02	20.25	20.48	20.71

Standard Test Conditions (STC); 1000 W/m², AM1.5, 25 °C, Power Tolerance (W) +/- 3%

BOOST FROM THE BACKSIDE

+7%	Power (W)	465	471	476	482
	Performance (%)	21.40	21.68	21.91	22.19
+15%	Power (W)	500	506	512	517
	Performance (%)	23.01	23.29	23.52	23.80

Bifaciality depends on Albedo

ELECTRICAL PARAMETERS AT NOMINAL OPERATING CELL TEMPERATURE (NOCT)

Power Output P_{MAX} (W)	350	355	359	365
Max. Power Voltage V_{MPP} (V)	39.08	39.28	39.62	40.02
Max. Power Current I_{MPP} (A)	8.96	9.03	9.07	9.12
Open-Circuit Voltage V_{oc} (V)	45.85	46.12	46.40	46.73
Short-Circuit Current I_{sc} (A)	9.27	9.33	9.38	9.52

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature, 1m/s wind speed

OPERATING CONDITIONS

Operating Temperature	-40°C/+85°C
Max. System Voltage	1500V
Max. Series Fuse Rating	20A
Wind Load	2400 Pa
Snow Load	5400 Pa

TEMP. CHARACTERISTICS

Temp. coefficient P_{MAX}	-0.38%/K
Temp. coefficient V_{oc}	-0.29%/K
Temp. coefficient I_{sc}	0.04%/K
Nominal Operating Temperature (NOCT)	46°C

MATERIAL SPECIFICATION

Front Cover	2.5mm ARC Low Iron Tempered Solar Glass
Cell Type	Bifacial Mono PERC BigCell
Cell Matrix	72 Cells (6 x 12)
Lamination material	EVA
Back Glass	2.5mm ARC Low Iron Tempered Solar Glass
Junction Box	IP67 rated, 1500V Compatible, 3 Diodes
Cables and connectors	DC Cable 4 mm ² MC4 compatible, 1500 V Cable length 15cm male - 40cm female
Frame	Portable Frame
Module Dimensions	2079 mm x 1045 mm x 6 mm (without J-box)
Module Weight	31.5 kg
Module Per Box	30
Box per Truck	24

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