

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



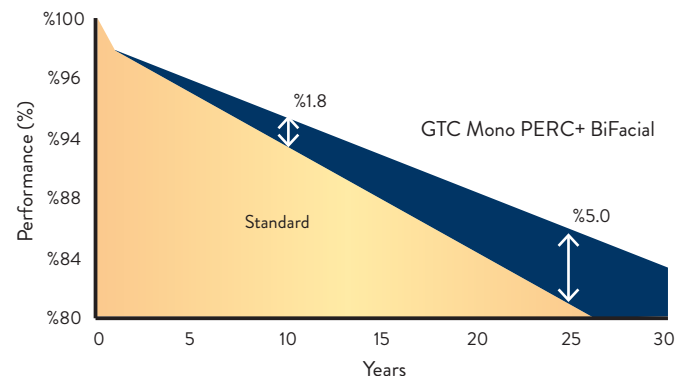
O&M COST REDUCTION

Portable frame design, no dust/snow collection
Better self cleaning



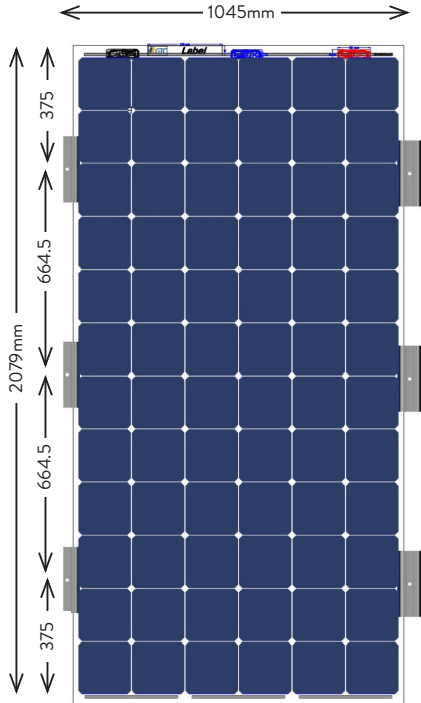
SUPERIOR AESTHETICS

Glass/Glass portable frame
Transparent on request

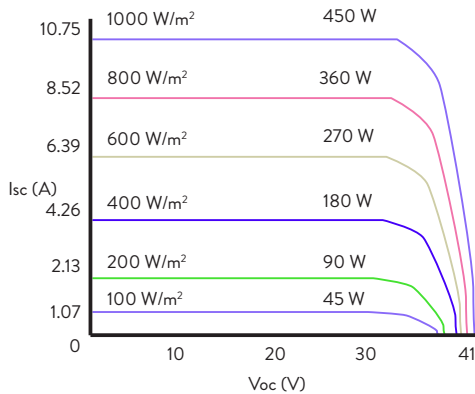


ENGINEERED AND MADE IN TURKEY

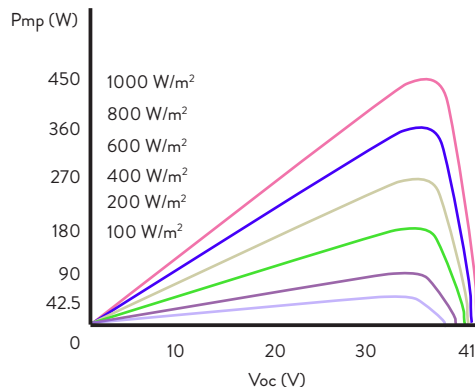
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I-V CURVE (PV MODULE 450W)



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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