

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

410 – 425W Front Side (STC)
20.59% 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



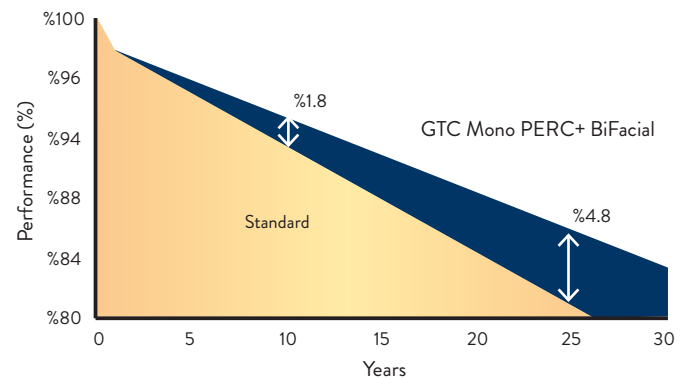
O&M COST REDUCTION

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



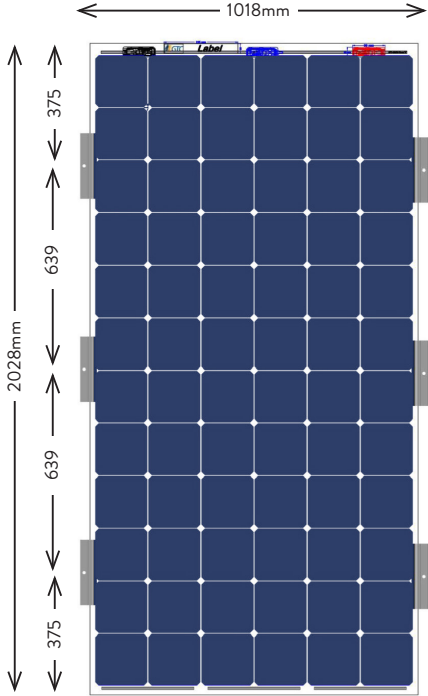
SUPERIOR AESTHETICS

Glass/Glass portable frame
Transparent on request



ENGINEERED AND MADE IN TURKEY

www.gtctrade.com - sales@gtctrade.com
+90 416 290 35 35 / +90 216 370 52 16



ELECTRICAL PERFORMANCE

Max. Power P_{max} (W)	410	415	420	425
Max. Power Voltage V_{MPP} (V)	40.65	40.74	40.82	41.08
Max. Power Current I_{MPP} (A)	10.09	10.19	10.29	10.35
Open-Circuit Voltage V_{oc} (V)	48.80	48.95	49.10	49.45
Short-Circuit Current I_{sc} (A)	10.29	10.60	10.90	11.15
Performance η_m (%)	19.80	20.10	20.34	20.59

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

BOOST FROM THE BACKSIDE

+7%	Power (W)	439	444	449	455
	Performance (%)	21.20	21.51	21.77	22.03
+15%	Power (W)	472	477	483	489
	Performance (%)	22.84	23.12	23.40	23.77

Bifaciality depends on Albedo

ELECTRICAL PARAMETERS AT NOMINAL OPERATING CELL TEMPERATURE (NOCT)

Power Output P_{MAX} (W)	305	309	312	316
Max. Power Voltage V_{MPP} (V)	37.65	37.77	37.88	38.00
Max. Power Current I_{MPP} (A)	8.10	8.17	8.24	8.32
Open-Circuit Voltage V_{oc} (V)	44.90	45.30	45.70	46.00
Short-Circuit Current I_{sc} (A)	8.65	8.76	8.86	8.94

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

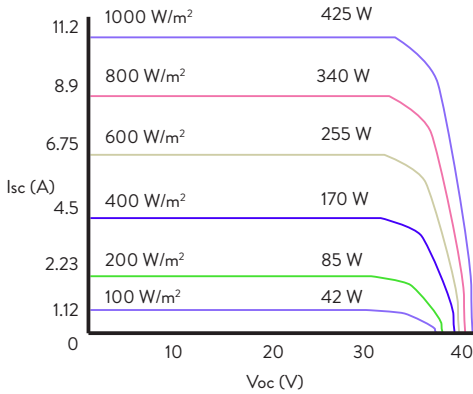
OPERATING CONDITIONS

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

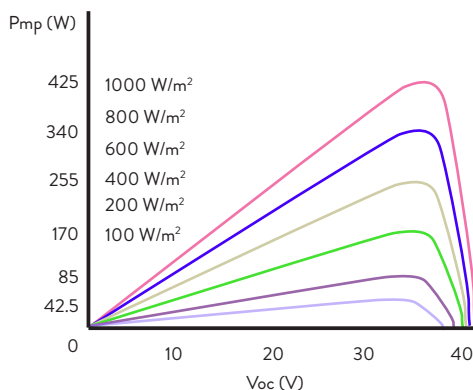
TEMP. CHARACTERISTICS

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

I-V CURVE (PV MODULE 425W)



P-V CURVE (PV MODULE 425W)



MATERIAL SPECIFICATION

Front Cover	2.5mm ARC Low Iron Tempered Solar Glass
Cell Type	Bifacial Mono PERC
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	2028 mm x 1018 mm x 6 mm (without J-box)
Module Weight	29.9 kg
Module Per Box	30
Box per Truck	24

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