

**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

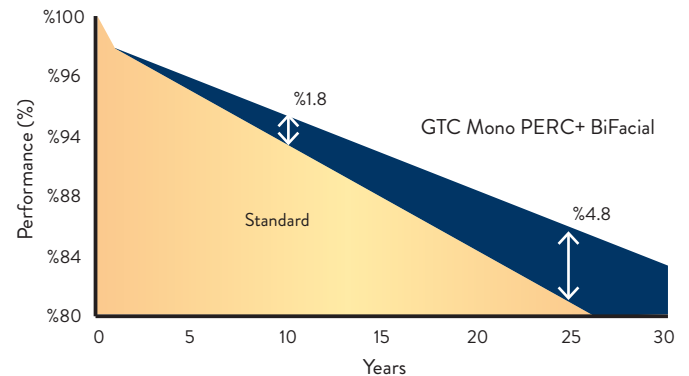
Better self cleaning



#### SUPERIOR AESTHETICS

Glass/Glass portable frame

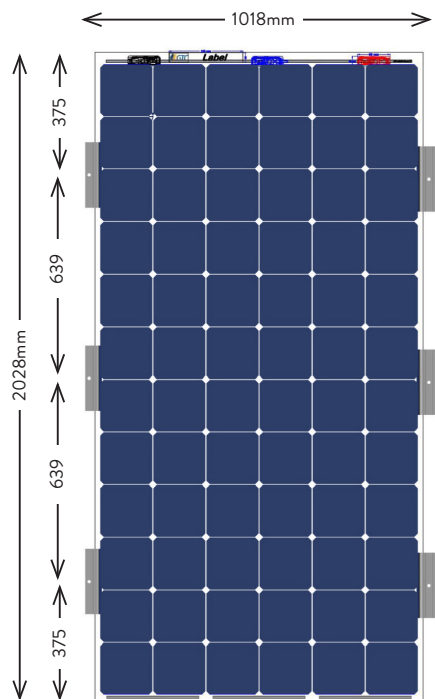
Transparent on request



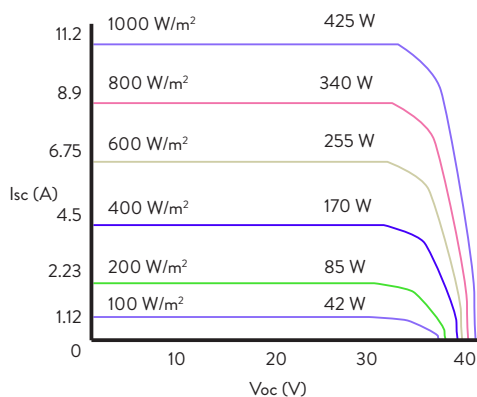
**ENGINEERED AND MADE IN TURKEY**

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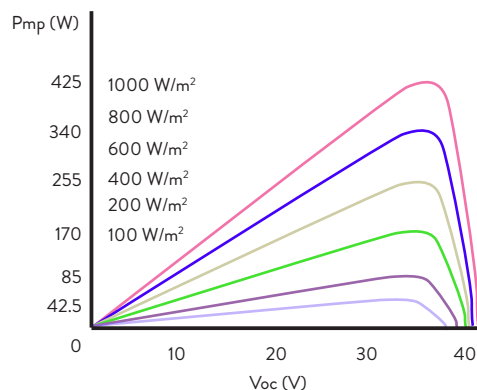
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#### I-V CURVE (PV MODULE 425W)



#### P-V CURVE (PV MODULE 425W)



#### 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 $\eta_m$ (%)	19.80	20.10	20.34	20.59

Standard Test Conditions (STC); 1000 W/m<sup>2</sup>, AM1.5, 25 °C, Power Tolerance (W) +/- 3%

#### BOOST FROM THE BACKSIDE

<b>+7%</b>	Power (W)	439	444	449	455
	Performance (%)	21.20	21.51	21.77	22.03
<b>+15%</b>	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/m<sup>2</sup> 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
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 <sup>2</sup> 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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