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Solar Panel Guide Specification Data Sheet

Sunpreme Maxima GxB 490-510 Frameless GxB 490

Also available on the web at
EnergyPal.com/sunpreme-solar-panels/gxb-490



MAXIMA GxB 500 Bifacial Module

A Trusted Quality Brand in Solar



High Performance

Bifacial technology generates power from both the front and back faces of the module, resulting in up to 20% higher energy harvest (kWh). Our HCT bifacial cells packaged in frameless double glass modules yield higher power and do not suffer from light-induced degradation (LID) or potential induced degradation (PID).



Robust Quality & Reliability

Double glass modules designed for durability. Certified to international certification body standards: IEC, UL, and CEC listed. Manufactured according to the International Quality Management System ISO9001.



Extreme Climate Performance

As temperatures rise, our patented hybrid cell technology produces more power [kW] than conventional crystalline silicon solar panels at the same elevated temperature.



Guaranteed Performance

All modules have a 15 year product warranty and 30 year power output warranty.



Superior Aesthetics

Thin profile double-glass construction provides superior aesthetics that are a perfect complement to roofs, carports, and canopies.

About Sunpreme

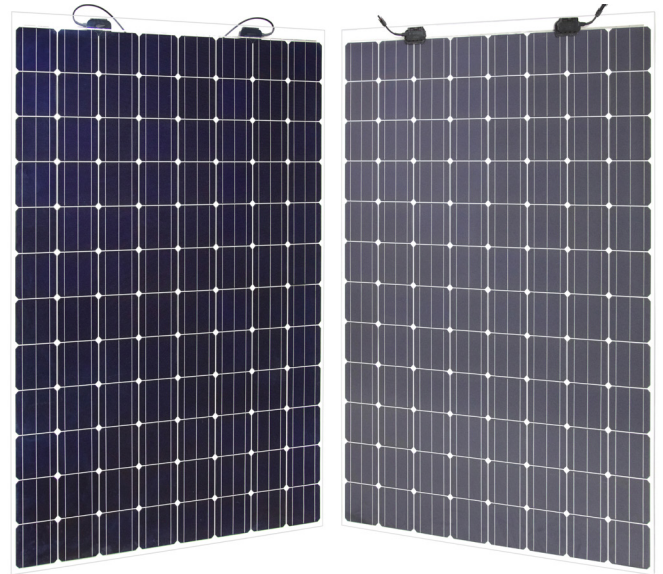
Sunpreme is an innovative solar PV module manufacturer headquartered in Sunnyvale, California with manufacturing facilities in the United States and China. We provide high quality, reliable and aesthetically superior modules to residential, commercial, and utility customers globally. Sunpreme solar systems are delivering clean energy on 5 continents.

Sunpreme solar panels are designed and engineered in Silicon Valley, CA, USA.

Hybrid Cell Technology

Sunpreme modules use our patented Hybrid Cell Technology platform that utilizes enabling thin-film materials on surface engineered Silicon substrate to achieve high-efficiency power output and reliable energy production for increased project returns.

Unlike conventional crystalline silicon cell technologies, Sunpreme uses highly scalable process to deliver high output solar power at very competitive Levelized Cost of Energy (LCOE).



Front view

Back view

High Efficiency

19.3 % Module Efficiency (STC),
21.2 % efficiency with 10% Backside Power Boost,
23.1 % with 20% Backside Power Boost

Bifacial Energy Boost

Harvests sun from the backside to increase power output up to 20%

Dual-Glass Frameless Design

Sunpreme Design is more robust, and does not require module grounding

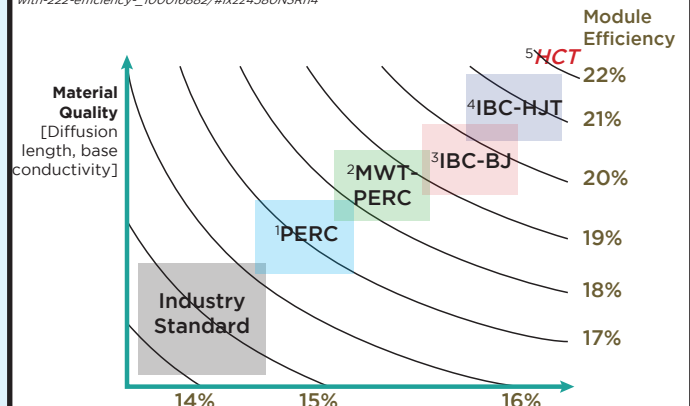
15 YEAR

PRODUCT WARRANTY

30 YEAR

POWER WARRANTY

"At 22%, Sunpreme HCT Bifacial Double Glass modules move to the top of the class in effective efficiency" Dr. Eicke Weber quoted in:
http://www.pv-magazine.com/news/details/beitrag/sunpreme-unveils-500-w-bifacial-double-glass-module-with-22-efficiency-_100016882/#ixzz4580N3Rh4



¹PERC: Passivated Emitter and Rear Cell

²MWT: Metal Wrap Through

³IBC - BJ - Interdigitated Back Contact - Back Junction

⁴HJT: Hetero Junction Technology

⁵HCT: Hybrid Cell Technology

** Graph adapted from Preu et al., EU-PVSEC

Device Quality
[Passivation of surfaces, low series resistance, light confinement]

ELECTRICAL SPECIFICATIONS¹	490	500	510
STC rated output P_{MPP} (W)	490	500	510
Cell Efficiency	21.2%	21.5%	21.8%
Module Efficiency STC	18.9%	19.3%	19.7%
Standard sorted output	-3%/+5%	-3%/+5%	-3%/+5%
Open Circuit Voltage V_{OC} (V)	70.0	70.5	71.0
Short circuit current I_{SC} (A)	9.2	9.3	9.4
Rated Voltage V_{MPP} (V)	56.5	57.1	57.6
Rated Current I_{MPP} (A)	8.7	8.8	8.9

¹: Standard Test Conditions for front-face of panel: 1000 W/m², 25°C.

BI-FACIAL OUTPUT*

With 10% Backside Power Boost

Power Output (W)	539	550	561
Module Efficiency	20.8%	21.2%	21.7%

With 20% Backside Power Boost

Power Output (W)	588	600	612
Module Efficiency	22.7%	23.1%	23.6%

*Backside boost for flush mount configuration is ≤5%, resulting in I_{sc} ≤9.56 - 9.77 A

TEST OPERATING CONDITIONS

Operating Temperature	- 40 to + 85°C
Storage Temperature	- 40 to + 85°C
Maximum Series Fuse	20 A
Maximum System Voltage	1,000VDC (UL & IEC)
Power/Sq.Ft. w/ 20% backside power boost	21.5 W / Sq. Foot
Maximum load capacity	3,600 Pa (snow load) 125 mph (wind rating)
Fire Class	Class A - Type 3

TEMPERATURE COEFFICIENTS

Temperature coefficient P_{MPP}	-0.30%/C
Temperature coefficient I_{SC}	+0.04%/C
Temperature coefficient V_{OC}	-0.24%/C
Normal operating cell temperature (NOCT)°C	45C +/- 2

WARRANTY

15 year product warranty
97.5% power warranty first 5 years
-0.5% per year degradation for the following 25 years

CERTIFICATION

Certified to IEC 61646, IEC 61730-01, IEC 61730-02, IEC 61701, UL 1703, ISO 9001, ISO 14001, CEC, CE Mark, FSEC, MCS, and TUV



MECHANICAL SPECIFICATIONS

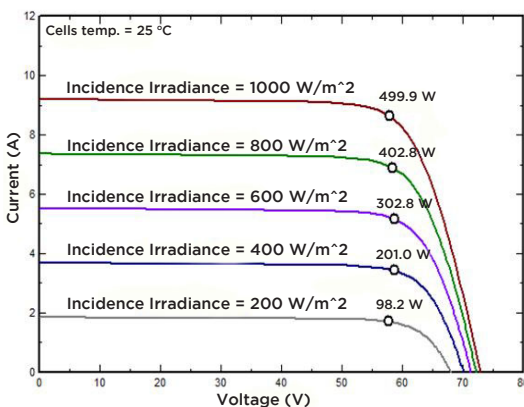
Dimensions	1,981 x 1,308 x 6 mm (6.50 x 4.29 x 0.02 ft)
Weight	36.3 kg (80.0 lbs)
Area	2.59m ² (27.90 ft ²)
Cell type	Bifacial Hybrid Cell Technology (HCT)
Module type	96 Cells, Frameless double glass design with tempered glass, no grounding required
Glass	Tempered 2.9mm anti-reflective coating, low-iron
Junction Box	Tyco IP-67 rated; 1,000V UL/IEC, 3 diodes (2 units)
Cables	4mm ² x 1.2 m cable: MC4 or MC4 compatible Tyco connectors
Clamps	Recommended Sunpreme 200mm

PACKAGING

Modules per crate	20
Crate per shipping container	16

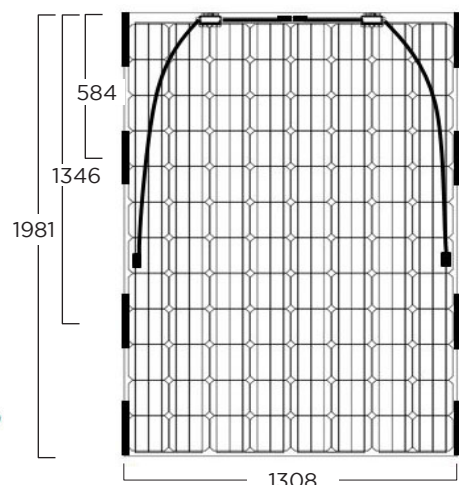
Imax - Vmax (96 cell Version)

Multi-Irradiance Curve for Maxima GxB - 500



Covered by one or more of the following U.S. patents:
7,951,640; 7,956,283; 7,960,644

Rear & Side View (mm)



Clamp Profiles

