

Product Information Sheet SNG 440-465 Watt TOPCon Rectangle Technology

HC MONO 440-465 Watt

Highest quality with our cells
16 MBB TOPCon Rectangle
Technology

- ✓ **30 years**
Product Material & Workmanship
- ✓ **30 years**
Linear Performance Warranty
- ✓ **1 %**
1st-year Degradation
- ✓ **0.4 %**
Annual Degradation

Quality and Safety

① Industry-leading power output warranty
25 years / 89.4 %
30 years / 87.4 %

30-year warranty on materials & workmanship

Fire Test: Class 1

- ✓ **Anti-PID Guarantee**
Minimizes the risk of degradation caused by PID phenomena by optimizing cell production technology and material control.
- ✓ **Multi-busbar Technology**
Higher performance, higher reliability, and greater (electrical) resilience.



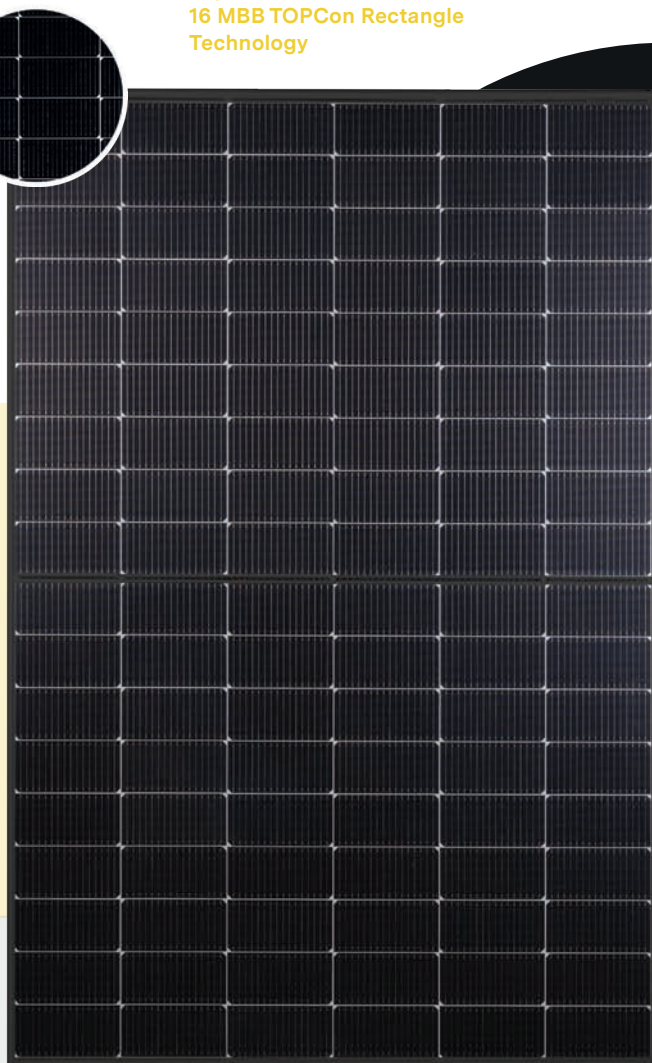
On-grid residential roof-tops



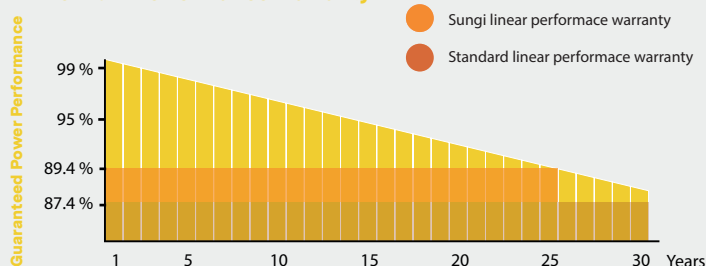
On-grid commercial Industrial roof-tops

Complete System and Product Certifications

IEC 61215 (2021), IEC 61730 (2023), IEC 61701, IEC 62716
ISO 9001:2015: Quality Management System
ISO 14001:2015: Environmental Management System
ISO 45001:2018: Occupational Health and Safety Management System
IEC 62941:2019: Quality System for PV Module Manufacturing



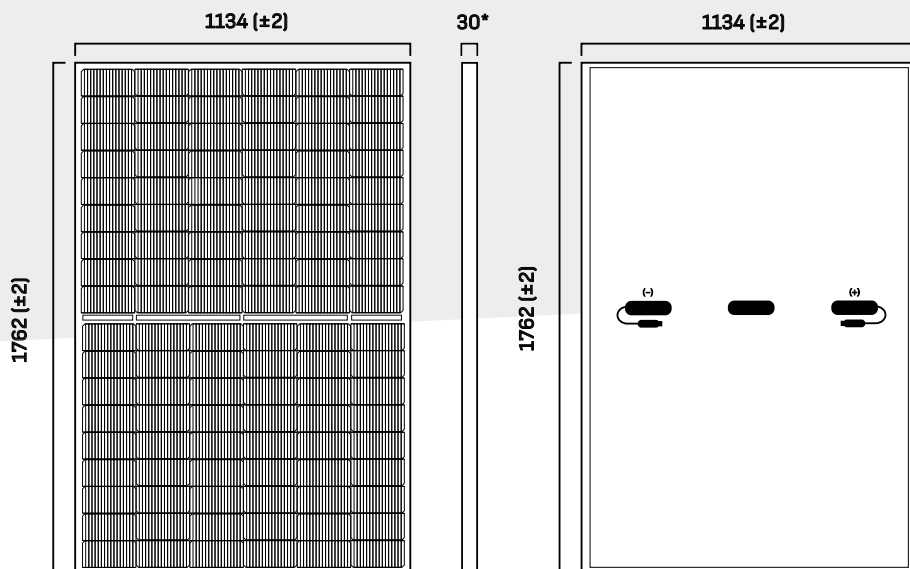
Premium Performance Warranty



23.27 %
Max Module Efficiency

30 Y Warranty
on materials & workmanship

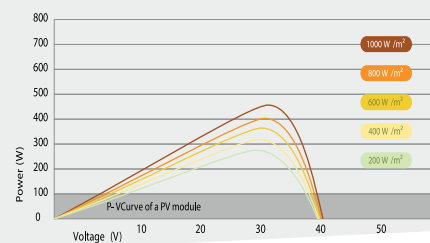
ENGINEERING DRAWINGS (mm)



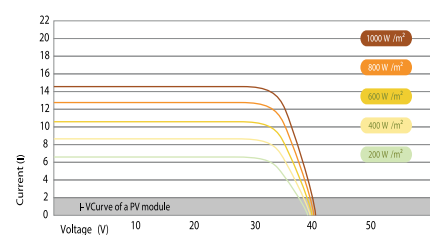
ELECTRICAL PERFORMANCE & TEMPERATURE

DEPENDENCE | SNG - 465

Power-Voltage Curves



Current-Voltage Curves



MODULE TYPE	SNG-440 W	SNG-445 W	SNG-450 W	SNG-455 W	SNG-460 W	SNG-465 W
Testing Conditions	STC ⁽²⁾ / NMOT ⁽³⁾	STC ⁽²⁾ / NMOT ⁽³⁾	STC ⁽²⁾ / NMOT ⁽³⁾	STC ⁽²⁾ / NMOT ⁽³⁾	STC ⁽²⁾ / NMOT ⁽³⁾	STC ⁽²⁾ / NMOT ⁽³⁾
Maximum Power at STC (Pmax)	440 Wp	445 Wp	450 Wp	455 Wp	460 Wp	465 Wp
Maximum Power Voltage (Vmp)	33.05 V / 31.11 V	33.22 V / 31.27 V	33.39 V / 31.43 V	33.56 V / 31.59 V	33.73 V / 31.75 V	33.90 V / 31.92 V
Maximum Power Current (Imp)	13.31 A / 10.64 A	13.40 A / 10.70 A	13.48 A / 10.77 A	13.56 A / 10.83 A	13.64 A / 10.90 A	13.75 A / 10.98 A
Open-Circuit Voltage (Voc)	39.00 V / 37.04 V	39.20 V / 37.23 V	39.40 V / 37.42 V	39.60 V / 37.61 V	39.80 V / 37.80 V	40.00 V / 37.99 V
Short-Circuit Current (Isc)	14.10 A / 11.38 A	14.19 A / 11.46 A	14.28 A / 11.53 A	14.36 A / 11.59 A	14.45 A / 11.66 A	14.54 A / 11.74 A
Module Efficiency (%)	22.02 %	22.27 %	22.52 %	22.77 %	23.02 %	23.27 %

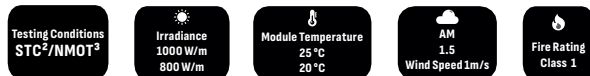
ALL MODULES DATA

Operating Temperature (DC)	- 40 °C to + 85 °C
Maximum System Voltage	1500 VDC
Maximum Series Fuse Rating	30 A
Power Output Tolerance ⁽¹⁾	± 3 %
Temperature Coefficients of Pmax	- 0.29 % / °C
Temperature Coefficients of Voc	- 0.25 % / °C
Temperature Coefficients of Isc	+0.045 % / °C
Nominal Operating Cell Temperature (NOCT)	41 ± 2 °C

TECHNICAL SPECIFICATION

Cell type	TOPCON Rectangle Technology (182x93 mm)
Number of cells	108 (2x54)
Dimensions	1762x1134x30* mm
Weight	21.5 kg
Front Glass	3.2 mm anti-reflection
Frame	Anodized Aluminum Alloy Black Frame*
Junction Box	IP68 Rated
Output Cables	TUV 1x4.0 mm² / UL 12 AWG*
Output Cables Length	1200 mm*
Connectors	HCB40 (Standard) / MC4-EVO2A (Optional)

PACKAGING CONFIGURATION



⁽¹⁾ Measurement Tolerances : Pmax (± 3 %), Isc & Voc (± 3 %)

⁽²⁾ STC (Standard Testing Condition) : Irradiance : 1000 W/m², Cell Temperature: 25 °C, AM : 1.5

⁽³⁾ NMOT (Nominal Operating Module Temperature) : Irradiance : 800 W/m², NMOT Ambient Temperature: 20/25 °C, AM : 1.5, Wind Speed : 1 m/s

*or customized

Not applicable for installations in transition 5.0/ feed in tariff for italian market

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40' Container

- 36 pcs per pallet
- 26 pallets
- 936 total pcs



20' Container

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- 10 pallets
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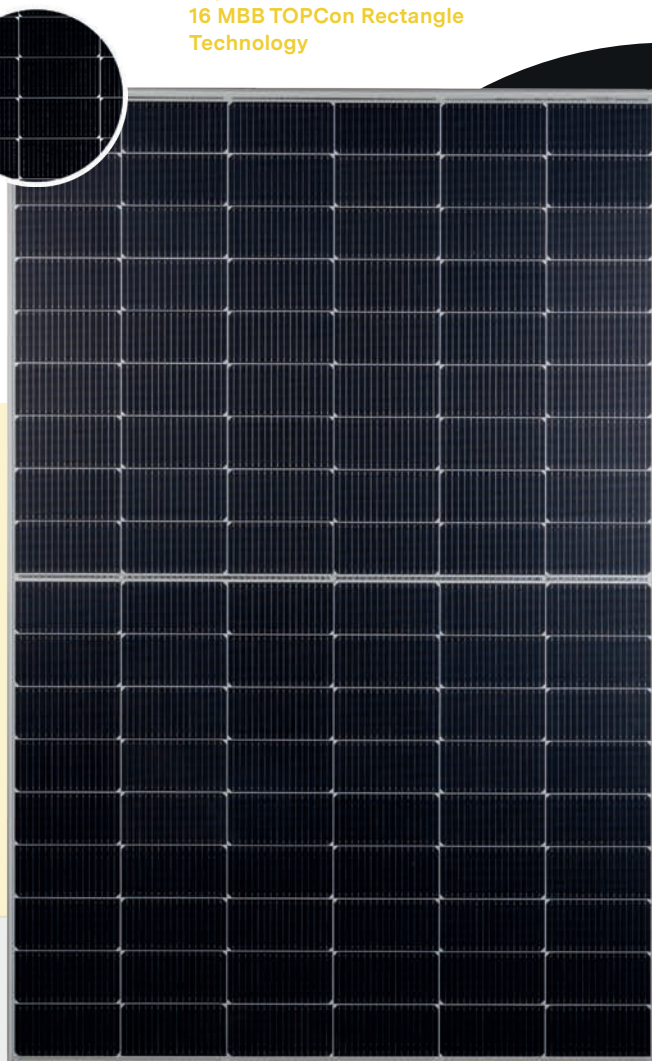
On-grid residential
roof-tops



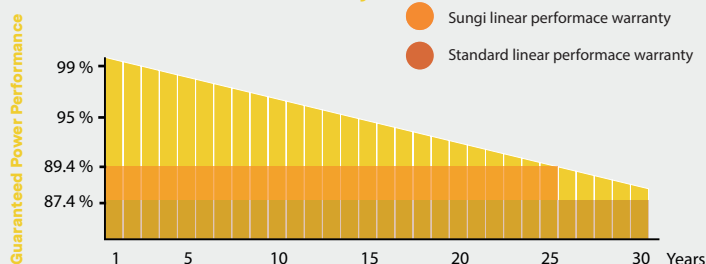
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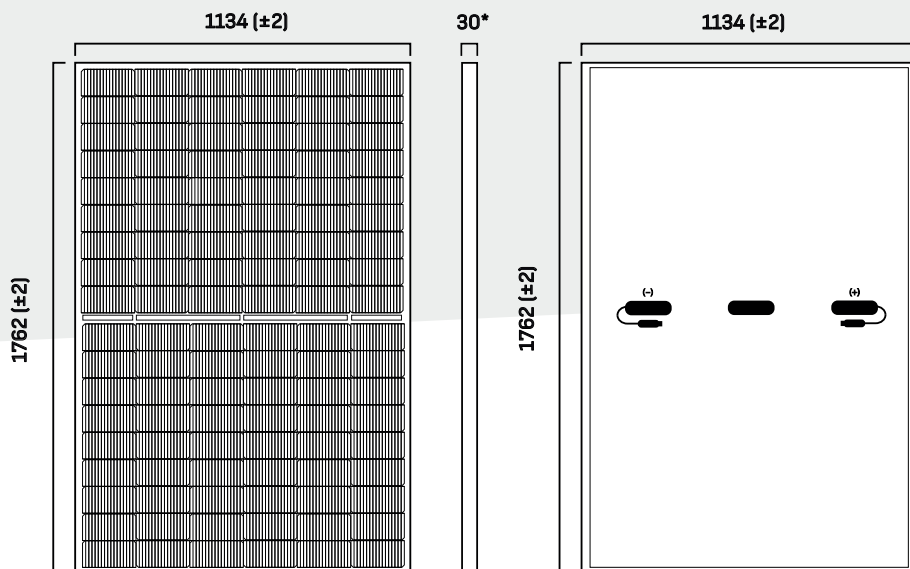
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23.27 %
Max Module Efficiency

30 Y Warranty
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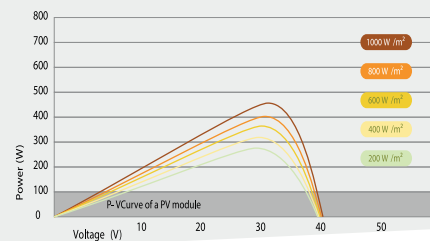
ENGINEERING DRAWINGS (mm)



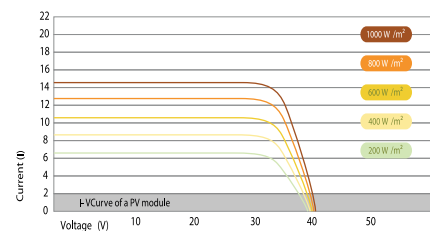
ELECTRICAL PERFORMANCE & TEMPERATURE

DEPENDENCE | SNG - 465

Power-Voltage Curves



Current-Voltage Curves



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Dimensions	1762x1134x30* mm
Weight	21.5 kg
Front Glass	3.2 mm anti-reflection
Frame	Anodized Aluminum Alloy Silver Frame*
Junction Box	IP68 Rated
Output Cables	TUV 1x4.0 mm ² / UL 12 AWG*
Output Cables Length	1200 mm*
Connectors	HCB40 (Standard) / MC4-EVO2A (Optional)

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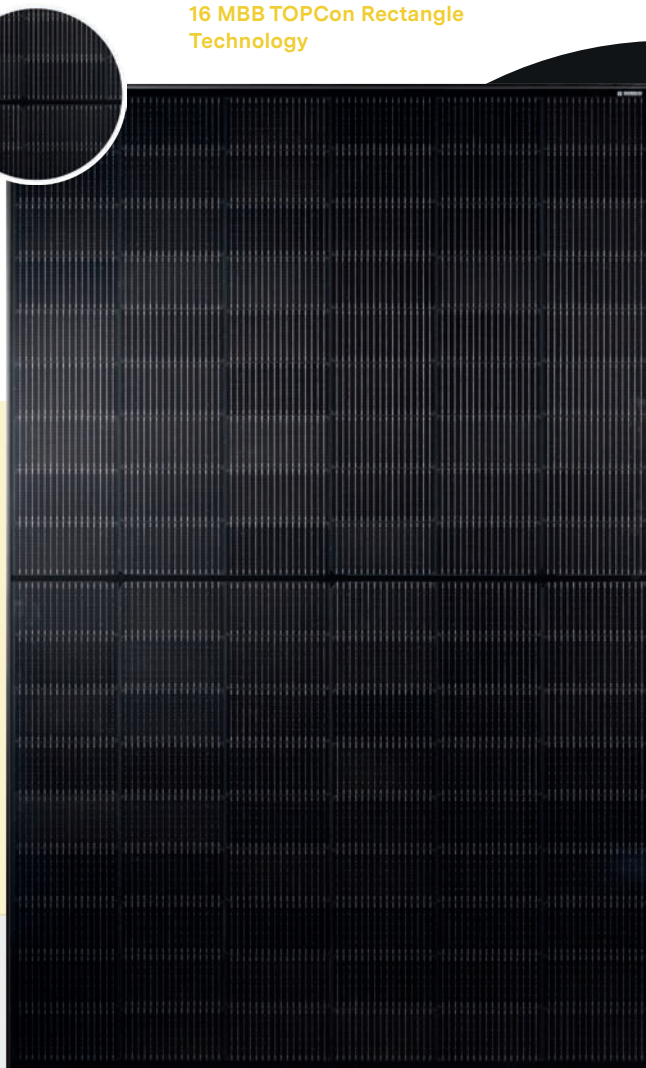
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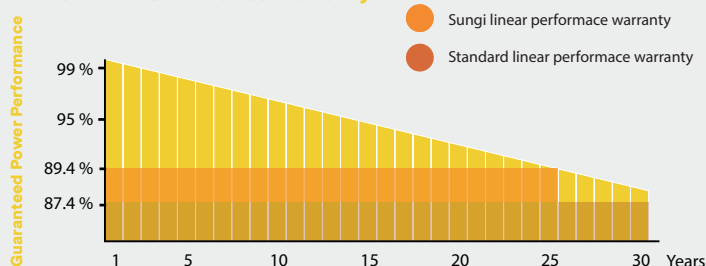
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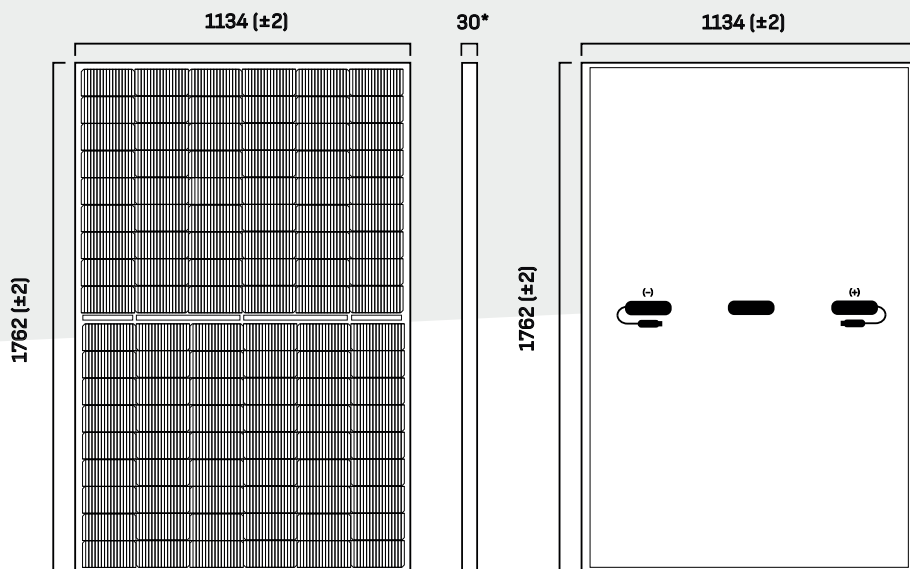
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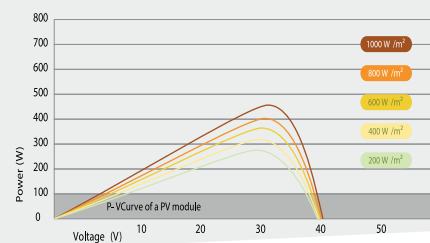
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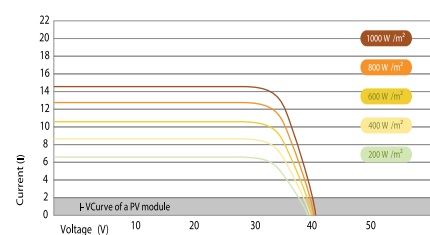
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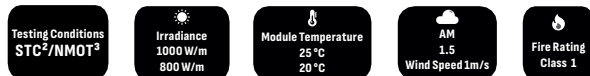
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