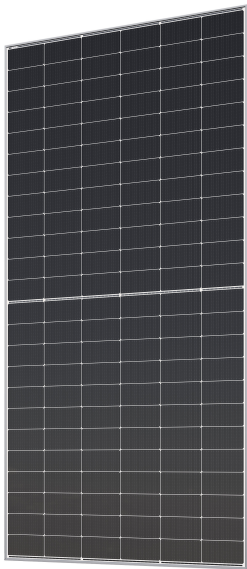


PRODUCT DATASHEET

M 445 N 48 RB -SF-F7

PV PANELS N-TYPE BIFACIAL SILVER | TopCon bifacial photovoltaic panels with silver frame



Areas of application

- Utility installations
- Commercial and industrial installations
- Residential installations

Product benefits

- TopCon technology provides higher efficiency due to better sunlight conversion than standard panels
- Glass-glass modules offer improved protection against moisture, mechanical loads and fire protection
- 25-years of product guarantee, 30-years of linear power output guarantee
- Limited PID-effect (potential induced degradation) thanks to strict quality control in production process
- Very low yearly degradation of the cells thanks to the better resistance to high temperatures
- Durable design and highest production standards guarantees operational reliability and quality

Product features

- Bifacial - both sides of the panel are absorbing the light
- Original Stäubli MC4 EVO 2 connectors
- Available in a long cable version
- Frame made of anodized aluminum alloy
- Multi-bus bar (MBB) technology
- Maximum static load up to 5400 Pa

TECHNICAL DATA

ELECTRICAL DATA STC

Maximum Power Pmax (STC)	445 W
Maximum Power Current Imp (STC)	14.89 A
Short Circuit Current Isc (STC)	15.99 A
Maximum Power Voltage Vmp (STC)	29.91 V
Open Circuit Voltage Voc (STC)	35.02 V
Module efficiency factor (STC)	22.27 %

ELECTRICAL DATA NMOT

Maximum Power Pmax (NMOT)	335 W
Maximum Power Current Imp (NMOT)	12.00 A
Short Circuit Current Isc (NMOT)	12.90 A
Maximum Power Voltage Vmp (NMOT)	27.90 V
Open Circuit Voltage Voc (NMOT)	33.10 V

ELECTRICAL DATA STC and NMOT

Power tolerance	3 %
-----------------	-----

MECHANICAL DATA

Type of Faciality	Bifacial
Cell material	Mono crystalline
Number of cells	96
Number of bypass diodes	3
With frame	Yes
Type of connection	Staubli MC4 EVO2
Width	1134 mm
Length	1762 mm
Height	30 mm
Product weight	24500.000 g
Cable length	1.2 m
Glass with anti-reflection coating	Yes
Colour cells	Dark blue
Colour frame	Silver
Front Glass	2.0 mm coated semi-tempered glass
Back Glass	2.0 mm glazed semi-tempered glass

TEMPERATURE RATINGS

Nominal operating cell temperature	45 °C
Temperature coefficient Isc	0.045 %/K

Temperature coefficient P _{mp}	-0.290 %/K
Temperature coefficient U _{oc}	-0.260 %/K




OPERATING CONDITIONS

Maximum series fuse rating	30 A
Temperature range in operation	-40...+85 °C
Front Side Maximum Static Loading	5400 Pa
Rear Side Maximum Static Loading	2400 Pa
Reverse current load	30 A

EQUIPMENT / ACCESSORIES

- Product is delivered as a whole, no assembly required from customer
- MC4 EVO 2 connectors are fitted to the panel
- 3 bypass diodes are already installed in the panel

DOWNLOAD DATA

Documents and certificates		Document name
	User instruction / safety instructions	PV MODULE
	Declarations of conformity	PV PANEL
	Product family datasheet	M440~445N48RB-SF-F7

References / Links

- For Guarantee see www.ledvance.com/guarantee

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.