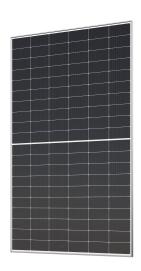


# PRODUCT DATASHEET M 450 P 60 LM -SF-F7

PV PANELS P-TYPE MONOFACIAL SILVER | PERC monofacial photovoltaic panels with silver frame



# Areas of application

- Utility installations
- Commercial and industrial installations
- Residential installations



#### **Product benefits**

- 12-years of product guarantee, 25-years of linar 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

- 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)	450 W
Maximum Power Current Imp (STC)	12.98 A
Short Circuit Current Isc (STC)	13.87 A
Maximum Power Voltage Vmp (STC)	34.67 V
Open Circuit Voltage Voc (STC)	41.33 V
Module efficiency factor (STC)	20,79 %

## **ELECTRICAL DATA NMOT**

Maximum Power Pmax (NMOT)	340 W
Maximum Power Current Imp (NMOT)	10.38 A
Short Circuit Current Isc (NMOT)	11.10 A
Maximum Power Voltage Vmp (NMOT)	32.76 V
Open Circuit Voltage Voc (NMOT)	38.68 V

## **ELECTRICAL DATA STC and NMOT**

Power tolerance	3 %

#### MECHANICAL DATA

Type of Faciality	Monofacial
Cell material	Mono crystalline
Number of cells	120
Number of bypass diodes	3
With frame	Yes
Type of connection	Staubli MC4 EVO2
Width	1134 mm
Length	1909 mm
Height	30 mm
Product weight	23800.000 g
Cable length	1.2 m
Glass with anti-reflection coating	Yes
Colour backsheet	White
Colour cells	Dark blue
Colour frame	Silver

# **TEMPERATURE RATINGS**

Nominal operating cell temperature	45 °C
Temperature coefficient Isc	0.045 %/K
Temperature coefficient Pmpp	-0.335 %/K

Temperature coefficient Uoc	-0.265 %/K		
OPERATING CONDITIONS			
Maximum series fuse rating	25 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	25 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	
POF	User instruction / safety instructions	PV MODULE	
PDF	Declarations of conformity	CE Certificate PV Panels	

#### LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4099854270789	Shipping box 36	1,954 mm x 1,130 mm x 1,144 mm	876800.00 g	2525.97 dm <sup>3</sup>

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

## **DISCLAIMER**

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