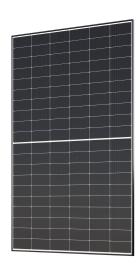


PRODUCT DATASHEET M 450 P 60 LM-BF-F7

PV PANELS P-TYPE MONOFACIAL BLACK | PERC monofacial photovoltaic panels with black frame



Areas of application

- 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

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	Black	
Front Glass	2.0 mm coated semi-tempered glass	

TEMPERATURE RATINGS

Nominal operating cell temperature	45 °C
Temperature coefficient lsc	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
PDF	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
4099854270871	Shipping box 36	1,954 mm x 1,130 mm x 1,144 mm	876800.00 g	2525.97 dm ³

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.