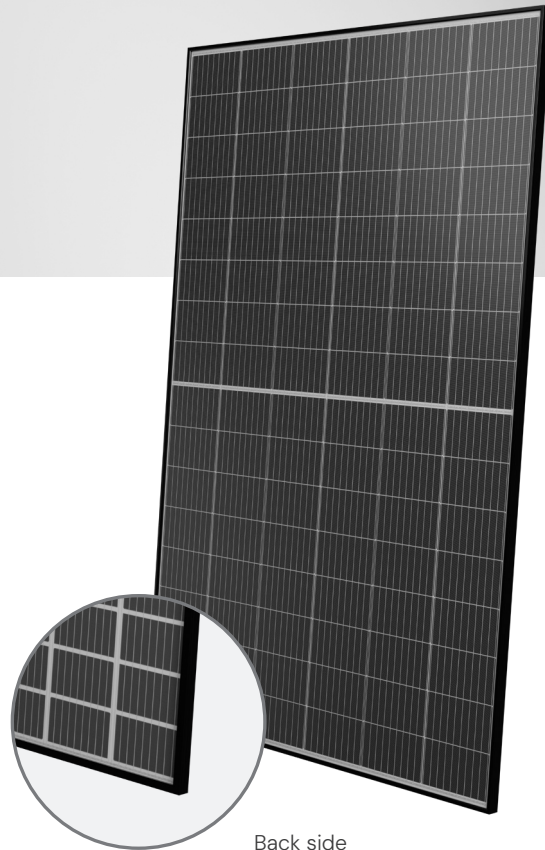


OR10E460MNDB (BF)

OR Series – 460 W

96 cells
MONO M10 | N-TYPE



Extra-EU module
Manufactured in our production factory



TOPCon bifacial technology



Anti-reflective double glass
Maximum efficiency and high performance



Compact and sturdy frame
Anchorable also on the short side ⁽⁵⁾



Class of reaction to fire
Class 1 (UNI 9177),
B-s1, d0 (EN 13501-1)
B_{ROOF}(t1) (EN 13501-5)



RoHS compliance
(Restriction of Hazardous Substances Directive 2011/65/UE)



30 years
Linear power warranty

25 years
Product warranty



QBE insurance
QBE Product Liability Insurance

QBE is a global leader in the insurance sector, offering comprehensive solutions for business risk management. With a worldwide network, it protects clients against a wide range of risks and provides flexible insurance solutions tailored to various industries, including the energy sector.

Electrical Characteristics (STC) ⁽¹⁾

Nominal Output (Pmax) ⁽²⁾	460 W
Sorting Tolerance	0/+5 W
Voltage at Pmax (Vmp)	31,57 V
Current at Pmax (Imp)	14,57 A
Open Circuit Voltage (Voc) ⁽²⁾	37,58 V
Short Circuit Current (Isc) ⁽²⁾	15,30 A
Maximum System Voltage	1500 V
Maximum Series Fuse Rating	30 A
Module Efficiency	23,02%
Protection class against electric shock	Class II

1. STC: (Standard Test Condition) Irradiance 1000 W/m²; Module Temperature 25 °C; Air Mass 1,5

2. Pmax, Voc, Isc measurement tolerance: ±3%

Electrical Characteristics with rear side power gain

Pmax gain	5%	10%	15%	20%	25%
Nominal Output (Pmax)	483 W	506 W	529 W	552 W	575 W
Voltage at Pmax (Vmp)	31,57 V	31,57 V	31,57 V	31,57 V	31,57 V
Current at Pmax (Imp)	15,30 A	16,03 A	16,76 A	17,48 A	18,21 A
Open Circuit Voltage (Voc)	37,58 V	37,58 V	37,58 V	37,58 V	37,58 V
Short Circuit Current (Isc)	16,07 A	16,83 A	17,60 A	18,36 A	19,13 A

Mechanical Characteristics

Solar Cells	96 M10 CUT monocrystalline N-TYPE
Solar Cells Size	182,2 x 105 mm / 7,17 x 4,13"
Front Cover	2,0 mm / 0,08" thick, low iron tempered glass
Back Cover	2,0 mm / 0,08" thick, low iron tempered glass
Encapsulant	EVA / POE
Frame	Anodized aluminium alloy, double wall
Frame finishing	Black
Diodes	3 Bypass diodes
Junction Box	IP68 rated
Connector	MC4 or compatible connector
Cables Length	1100 mm / 43,30"
Cables Section	4,0 mm ² / 0,006 in ²
Dimensions	1762 x 1134 x 30 mm / 69,37 x 44,64 x 1,18"
Weight	23,77 kg / 52,4 lbs
Max Load (Test Load) - SF	5400 Pa - 1,5 ⁽⁵⁾

5. Consult the installation manual for the relative mounting configurations

Temperature Characteristics

NMOT ⁽³⁾	43±2 °C
Temperature Coefficient of Pmax	-0,29 %/°C
Temperature Coefficient of Voc	-0,25 %/°C
Temperature Coefficient of Isc	0,046 %/°C
Operating Temperature	-40 °C ~ +85 °C

3. NMOT: Nominal Module Operating Temperature; Irradiance 800 W/m²; Air 20 °C; Wind speed 1 m/s

Packaging ⁽⁴⁾

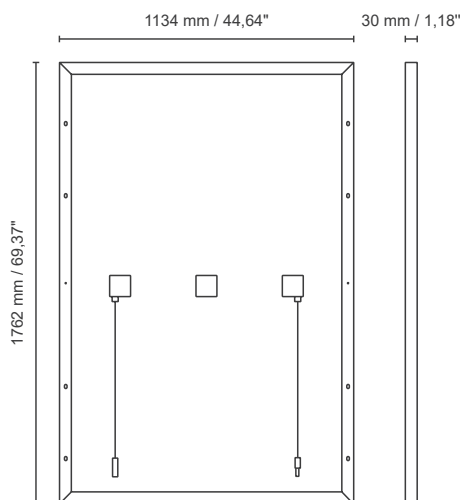
Pallet dimensions	Pieces per pallet - Weight
1790 x 1130 x 1265 mm / 70,1 x 44,5 x 49,8"	37 - 908 kg / 2001,79 lbs

4. Pallets can be stacked up to two

Certifications

Reaction to fire	Class 1 (UNI 9177), B-s1, d0 (EN 13501-1), B _{ROF} (t1) (EN 13501-5)
Product Certificate	IEC 61215-1, IEC 61215-1-1, IEC 61215-2, IEC 61730-1, IEC 61730-2
PID free	IEC 61215-2 MQT21
Salt mist	IEC 61701:2020
Ammonia	IEC 62716:2013
Dust and Sand	IEC 60068-2-68:1994
RoHS - Directive 2011/65/EU	EN 62321

Dimensions



Current/Voltage Characteristics

