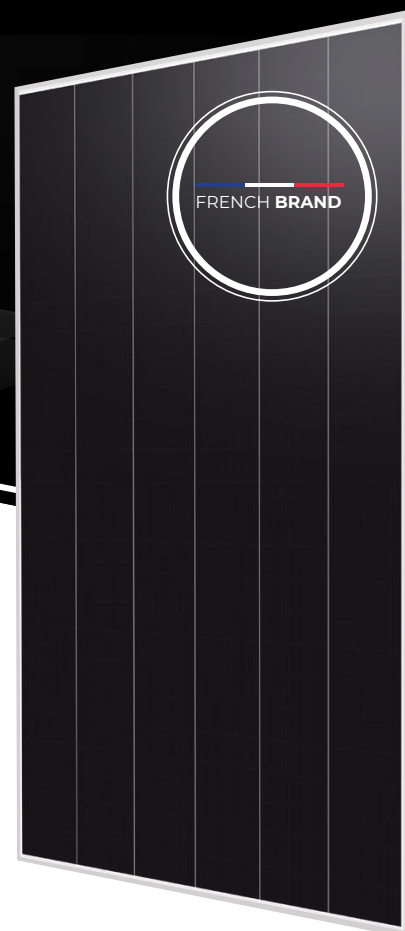


N-TYPE MONOCRYSTALLINE HALF-CUT MODULE -BACKCONTACT TECHNOLOGY

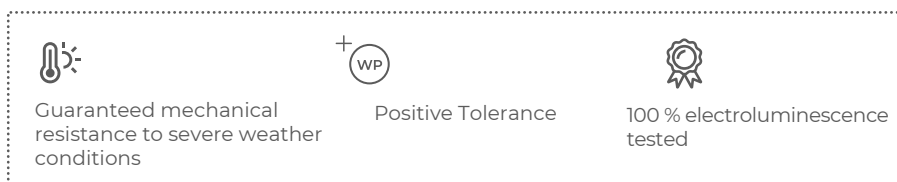
470 / 475 / 480 / 485 / 490 / 495 Watts



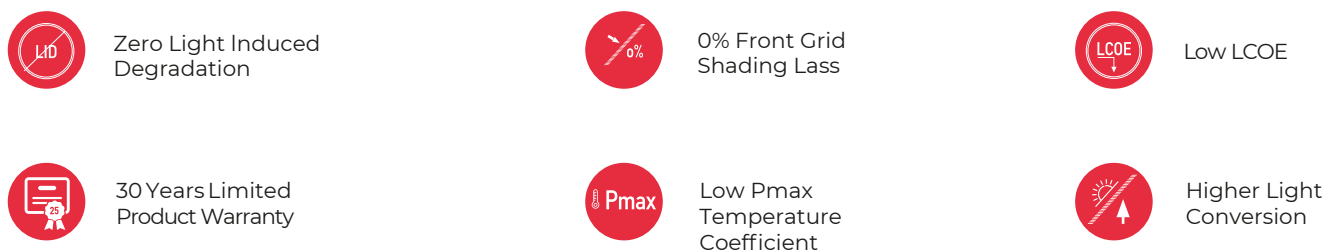
Half-Cut BackContact Series

Overview

BackContact modules provide numerous benefits to customers seeking a high-quality product with exceptional performance and aesthetic, captivating design. The "BackContact" module utilizes N-Type cell technology in conjunction with a rear connection method known as BackContact. As a result, there is 0% front grid shadow loss, which increases the PV module's yield. Due to reduced shading on the front of the cell, the module maximizes total cell area realizing higher efficiency and resulting in a fast return on investment.



Key benefits



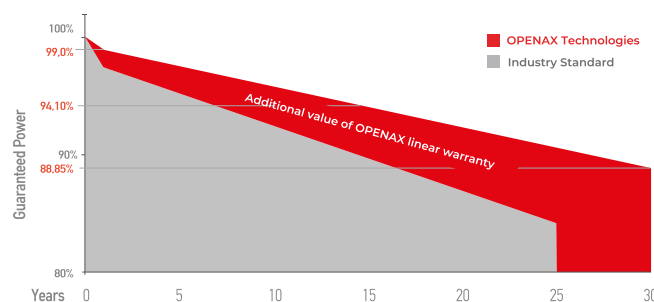
Tests, Certifications and Guarantees

Standard tests	IEC 61215, IEC 61730
Factory quality testing	ISO 9001: 2015, ISO 14001: 2015
Certifications	Conformity to CE, PV CYCLE Fire safety Class C according to UL790
Wind and Snow Loads Testing	Module certified to withstand extreme wind [2400 Pascal] and snow loads [5400 Pascal]
Withstanding Hail	Maximum Diameter of 25 mm with impact speed of 23 m/s

Power Tolerance	Guaranteed +0/+5W [STC condition]
------------------------	-----------------------------------

Warranties	<ul style="list-style-type: none"> ✓ 30-year limited product warranty ✓ 15-year manufacturer warranty on 94, 10% of the nominal performance ✓ Linear power output guarantee over 25 years
-------------------	--

Linear performance guarantees



Production 1st year	≥ 99.0%	Power between 2 and 25 years	≤ 0.35%	Power output at 25 years	≥ 88.85%
---------------------	---------	------------------------------	---------	--------------------------	----------

Electrical performance

POWER CLASS ⁽¹⁾			470		475		480		485		490		495	
Measurement condition			STC ⁽²⁾	NMOT ⁽³⁾	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum power	Pmax	[Wp]	470	356	475	360	480	364	485	367	490	371	495	375
Voltage at Pmax	Vmp	[V]	34,00	32,26	34,10	32,35	34,20	32,45	34,30	32,54	34,40	32,64	34,50	32,73
Current at Pmax	Imp	[A]	13,83	11,05	13,94	11,14	14,04	11,22	14,15	11,31	14,25	11,39	14,35	11,48
Open Circuit Voltage	Voc	[V]	40,60	38,52	40,70	38,61	40,80	38,71	40,90	38,80	41,00	38,90	41,10	38,99
Short circuit current	Isc	[A]	14,70	11,88	14,76	11,93	14,82	11,97	14,88	12,02	14,94	12,07	15,00	12,12
Surface efficiency	Eff	[%]	23,5		23,8		24,0		24,3		24,5		24,8	
Max. Reverse Current	Ir	[A]	25											
System voltage max	Vsys	[V]	1500V CD (IEC)											

(1) Measurement tolerances: P_{max} (± 3%), I_{sc} & V_{oc} (± 3%) - Power classification 0/+5W

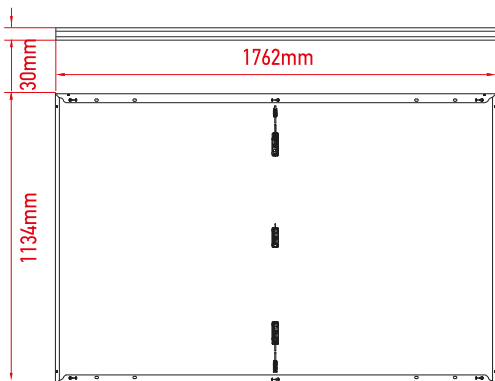
(2) STC (Standard Test Conditions): Irradiance 1000W/m² Cell Temperature 25°C, AM 1.5

(3) NMOT (Nominal Module Operating Temperature): Irradiance 800W/m² Ambient Temperature 20°C, AM

Mechanical characteristics

Dimensions	1762mm x 1134mm x 30mm
Weight	21.0 Kg
Cells	N-Type 182mm x 91mm (2x54 Pcs) - G10
Front panel	3.2mm Tempered and low iron glass + ARC
Rear panel	High water resistant backsheet (Black)
Frame	Anodized aluminum alloy
Junction box	IP68 - 3 Bypass Diodes
Connectors	Compatible MC - EVO2
Cables	4mm ² - Length: 1200mm or can be customized

Dimensions



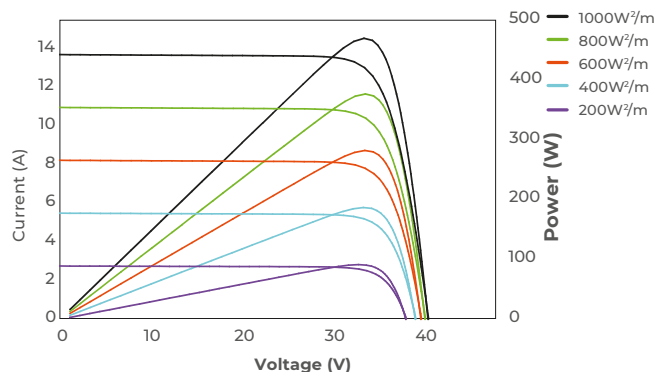
OPENAX assumes no responsibility for any typographical, formatting, misinformation, or any other errors or omissions contained herein.

www.openax.com

Specifications and key features described in this data sheet may vary slightly and are not guaranteed. Due to continuous product innovation, research and improvement, OPENAX reserves the right to make adjustments to the information described herein at any time and without notice. Please always obtain the most recent version of the technical data sheet, which must be duly incorporated into the contract.

I-V curve

Power loss in low-light environments: 200W/m² is less than 3%.



Thermal coefficients

Coeff./ P _{max}	-0.26% / °C
Coeff./ V _{oc}	-0.22% / °C
Coeff./ I _{sc}	+0.05% / °C
Operating temperature	-40~+85 °C
Nominal module operating temperature (NMOT)	42 ± 2 °C

Packaging configuration

Container	40' (HC)
Pieces per Pallet	37
Pallets per Container	26
Pieces per Container	(37+37)x13=962 pcs