


## BIFACIAL N-TYPE MONO CRYSTALLINE HALF-CUT MODULE - DOUBLE GLASS

695 / 700 / 705 / 710 / 715 / 720 Watts


### TOPCon Series

#### Overview


N-type solar cells (TOPCon) are seen as the technology of the future. N-type (TopCon) technology guarantees high performance and low degradation of the PV module, substantially improving the results and the yield in the time. "TOPCon" Series module is the ideal solution for end users who want a Quality PV & reliable product over time and a fast turnaround on their investments.



Guaranteed mechanical resistance to severe weather conditions




Positive Tolerance




100 % electroluminescence tested


#### Key benefits




Zero Light Induced Degradation




0% Front Grid Shading Loss




Low LCOE



25 Years Limited Product Warranty



Low Pmax Temperature Coefficient



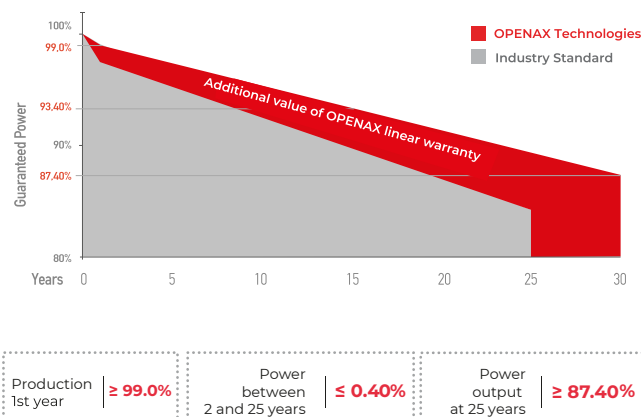
Higher Light Conversion

#### Tests, Certifications and Guarantees

<b>Standard tests</b>	IEC 61215, IEC 61730
<b>Factory quality testing</b>	ISO 9001: 2015. ISO 14001: 2015
<b>Certifications</b>	Conformity to CE. PV CYCLE Fire safety Class C according to UL790
<b>Wind and Snow Loads Testing</b>	Module certified to withstand extreme wind [2400 Pascal] and snow loads [5400 Pascal]
<b>Withstanding Hail</b>	Maximum Diameter of 25mm with impact speed of 23m/s
<b>Power Tolerance</b>	Guaranteed +0/+5W [STC condition]

<b>Warranties</b>	<ul style="list-style-type: none"> <li>30-year limited product warranty</li> <li>15-year manufacturer warranty on 93,40% of the nominal performance</li> <li>Linear power output guarantee over 25 years</li> </ul>
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#### Linear performance guarantees



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OX-xxx-M10TCBVB132-01(xxx=695-720)

## Electrical performance

POWER CLASS			695		700		705		710		715		720	
Measurement condition			STC <sup>(2)</sup>	NMOT <sup>(3)</sup>	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum power	Pmax	[Wp]	695	531	700	534	705	540	710	543	715	547	720	551
Voltage at Pmax	Vmp	[V]	40,30	37,90	40,50	38,00	40,70	38,30	40,90	38,50	41,10	38,70	41,30	38,80
Current at Pmax	Imp	[A]	17,25	14,00	17,29	14,04	17,33	14,08	17,36	14,12	17,40	14,14	17,44	14,19
Open Circuit Voltage	Voc	[V]	48,30	45,90	48,60	46,10	48,80	46,30	49,00	46,50	49,20	46,70	49,40	46,90
Short circuit current	Isc	[A]	18,28	14,72	18,32	14,76	18,36	14,80	18,40	14,83	18,44	14,86	18,49	14,90
Surface efficiency	Eff	[%]	22,37		22,53		22,70		22,86		23,02		23,18	
Max. Reverse Current	Ir	[A]	30											
System voltage max	Vsys	[V]	1500V CD (IEC)											

(1) Measurement tolerances: Pmax ( ± 3% ), Isc & Voc ( ± 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

## Bi Facial Output (4)

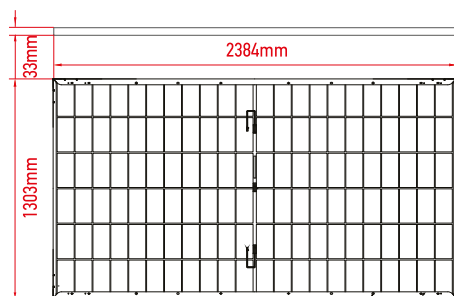
POWER CLASS		695		700		705		710		715		720	
Power with Backside Gain		Pmax (Wp)	Eff (%)	Pmax (Wp)	Eff (%)	Pmax (Wp)	Eff (%)	Pmax (Wp)	Eff (%)	Pmax (Wp)	Eff (%)	Pmax (Wp)	Eff (%)
	5 (%)	729,8	27,0%	735,0	27,2%	740,3	27,4%	745,5	27,6%	750,8	27,8%	756,0	28,0%
	10 (%)	764,5	28,3%	770,0	28,5%	775,5	28,7%	781,0	28,9%	786,5	29,1%	792,0	29,3%
	15 (%)	799,3	29,6%	805,0	29,8%	810,8	30,0%	816,5	30,2%	822,3	30,4%	828,0	30,6%
	20 (%)	834,0	30,8%	840,0	31,1%	846,0	31,3%	852,0	31,5%	858,0	31,7%	864,0	32,0%
	25 (%)	868,8	32,1%	875,0	32,4%	881,3	32,6%	887,5	32,8%	893,8	33,1%	900,0	33,3%
	30 (%)	903,5	33,4%	910,0	33,7%	916,5	33,9%	923,0	34,1%	929,5	34,4%	936,0	34,6%

(4) Bifaciality Factor > 90% - Back-side power gain depends upon the specific projet albedo - Efficiency is according to the module

## Mechanical characteristics

Dimensions	2384mm x 1303 x 33mm
Weight	37 Kg
Cells	N-type 210mm x 105mm (2x66 Pcs) - G12
Front panel	2.0mm Tempered and low iron glass + ARC
Rear panel	2.0mm Tempered and low iron glass
Frame	Anodized aluminum alloy
Junction box	IP68 - 3 Bypass Diodes
Connectors	MC4 Compatible
Cables	Cross-section: 4mm <sup>2</sup> - Length: 350mm or can be customized

## Dimensions



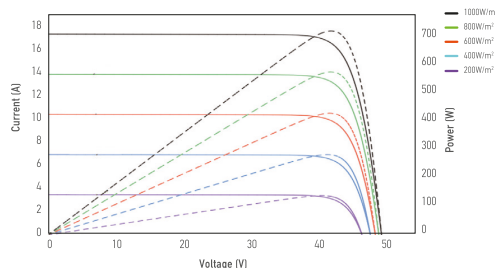
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## I-V curve

Power loss in low-light environments: 200W/m<sup>2</sup> is less than 3%.



## Thermal coefficients

Coeff./ Pmax	-0.29% / °C
Coeff./ Voc	-0.24% / °C
Coeff./ Isc	+0.04% / °C
Operating temperature	-40~+85 °C
Nominal module operating temperature (NMOT)	42 ± 2 °C

## Packaging configuration

Container	40' (HC)
Pieces per Pallet	33
Pallets per Container	18
Pieces per Container	(33+33)x9= 594 pcs