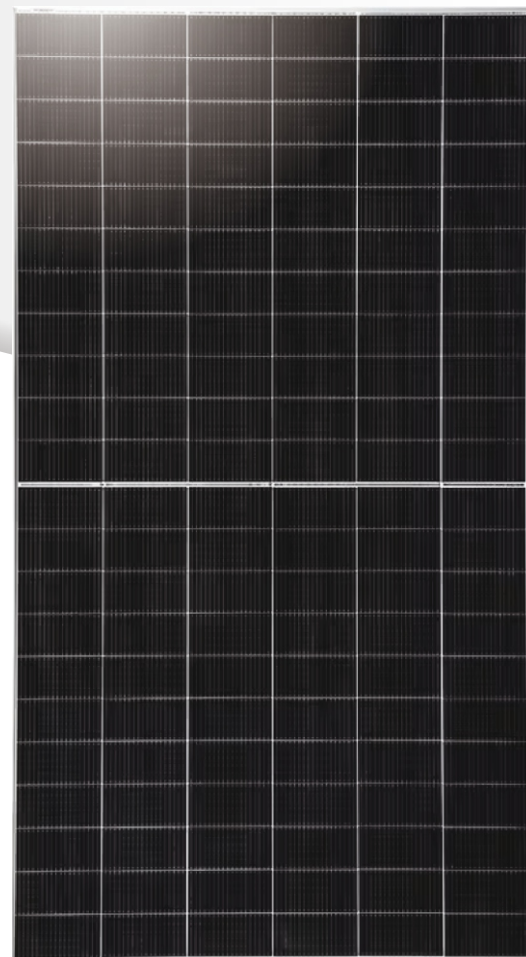
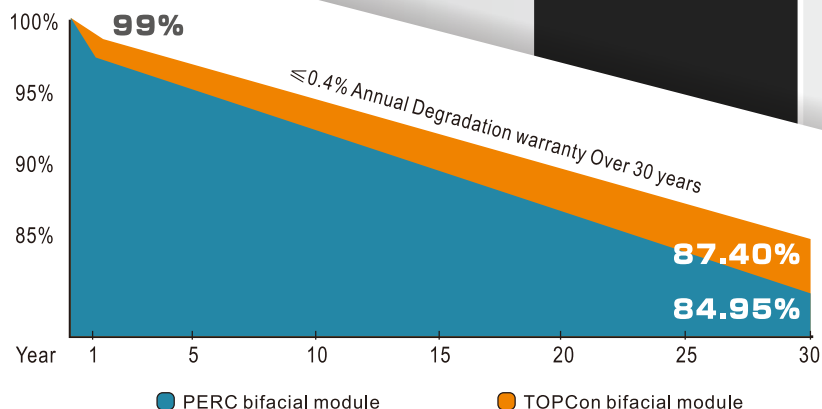


# DOUBLE-GLASS BIFACIAL N-TYPE 690~705 Watt



### Bifacial Mono Module

Capable of generating power at back side, at least 80% efficiency of the front side



### Anti-PID (potential induced degradation)

Passed anti-PID test under 85% damp heat 85% relative humidity for 192 hours



### Great Durability against extreme conditions

Passed salt mist corrosion test, ammonia corrosion test dust & sand test, fire test, all certified by TÜV



### Lower LCOE

Lower shading and resistive loss  
Lower temperature coefficient



### Outstanding mechanical load resistance

2400 Pa wind load, 5400 Pa snow load



15-year product warranty

30-year linear power output



CEC Listed



IEC 61215, IEC 61730

ISO 9001: 2015 (Quality management systems)

ISO 14001: 2015 (Environmental management systems)

ISO 45001: 2018 (Occupational health and safety)

UNI 9177 Ia CLASSE DI REAZIONE AL FUOCO: 1

# TOPCon(N TYPE) 690~705Watt

## ELECTRICAL SPECIFICATIONS

Module Type	UL-690M-132DGN		UL-695M-132DGN		UL-700M-132DGN		UL-705M-132DGN		
	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	
Maximum Power (Pmax)	W	690	523	695	527	700	530	705	534
Maximum Power Voltage (Vmp)	V	40.17	36.96	40.35	37.12	40.54	37.29	40.69	37.44
Maximum Power Current (Imp)	A	17.18	14.15	17.22	14.19	17.27	14.22	17.33	14.27
Open-circuit Voltage (Voc)	V	48.22	43.88	48.42	44.06	48.62	44.24	48.77	44.38
Short-circuit Current (Isc)	A	18.25	14.72	18.28	14.75	18.32	14.78	18.38	14.83
Module Efficiency STC	%	22.21		22.37		22.53		22.70	
Operating Temperature	-40°C~85°C								
Maximum system voltage	DC1500V(IEC)								
Maximum series fuse rating	35A								
Power tolerance	0~+5Watt								
Temperature coefficients of Pmax	-0.29%/°C								
Temperature coefficients of Voc	-0.25%/°C								
Temperature coefficients of Isc	0.046%/°C								
Nominal operating cell temperature (NOCT)	43±2°C								

\*STC : Cell temperature: 25°C, Irradiance: 1000 W/m², Air mass: 1.5G

\*NOCT : Air temperature: 20°C, Irradiance: 800 W/m², Air mass: 1.5G, Wind speed: 1 m/s

## SPECIFICATIONS

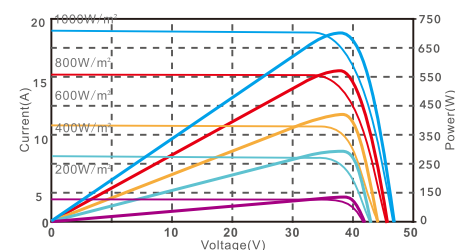
Cell Type	N type Mono-crystalline	
No. of cells	132(6×11×2)	
Dimensions	2384*1303*33mm	
Weight	37.9kg	
Glass	2.0mm+2.0mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass	
Junction Box	IP68, 3 diodes	
Connector	MC4 Compatible	
Cable Length (Including Connector)	4m <sup>2</sup> Portrait: (+)400/(-)200mm Landscape: (+)1400/(-)1400mm	
Packaging Configuration	33pcs/Pallet, 594pcs/40HQ Container	

## Electrical characteristics with different rear side power gain (reference to 700 W front)

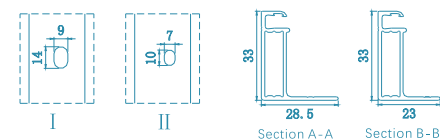
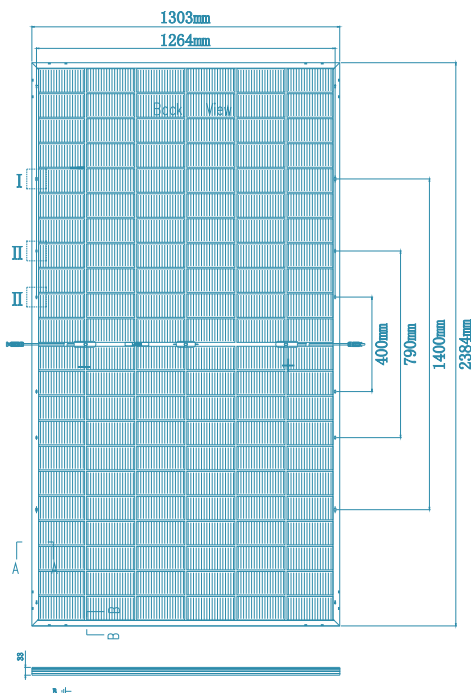
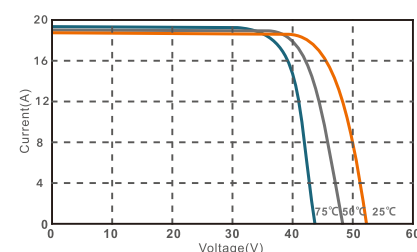
Pmax/W	Voc/V	Isc/A	Vmp/V	Imp/A	Pmax gain
700	48.62	18.32	40.54	17.27	0
735	48.62	19.24	40.54	18.13	5%
770	48.62	20.15	40.54	19.00	10%
805	48.62	21.07	40.54	19.86	15%
840	48.62	21.98	40.54	20.72	20%
875	48.62	22.90	40.54	21.59	25%
910	48.62	23.82	40.54	22.45	30%

## I-V CURVE[700W]

I-V characteristics at different irradiances



I-V characteristics at different temperature



Length: ± 2mm  
Width: ± 2mm  
Height: ± 1mm  
Row Pitch: ± 2mm