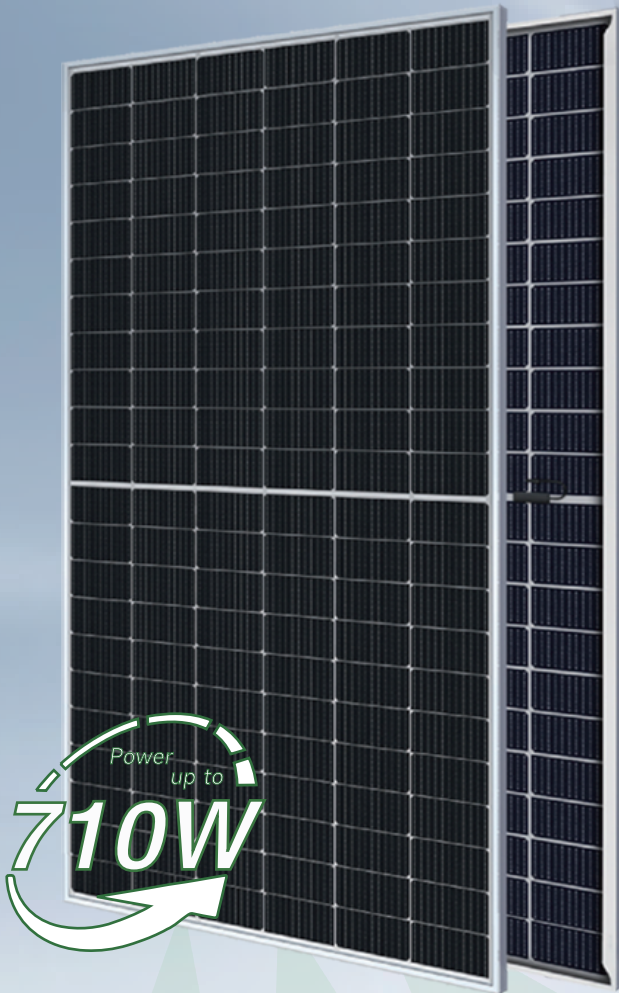


## TOPCON G12 Series 690-710W

132-cell Bifacial TOPCon Half Cell  
Double-glass Solar Module



### TOPCon Cell Technology

N-type with very Lower LID, Better low irradiance response



### SMBB design with Half-Cut Technology

Shorter current transmission distance, less resistive loss and higher cell efficiency.



### Up to 90% Bifaciality

Natural symmetrical bifacial structure bringing more energy yield from the backside.



### Sealing with PIB based sealant

Stronger water resistance, greater air impermeability to extend module lifespan.



### Higher reliability

Industrial leading product and performance warranty, ensuring modules' consistent outstanding performance.



### Suitable for Utility project

Lower BOS cost, lower LCOE.

## WARRANTY

Product  
Warranty **30** years

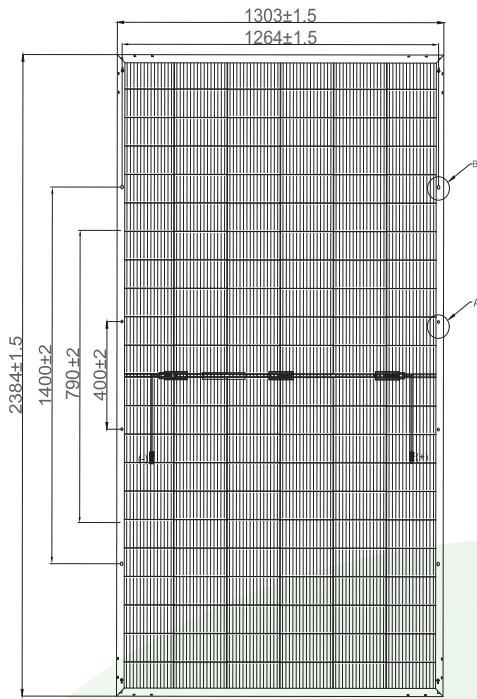
Linear  
Power  
Warranty **30** years



## TOPCon G12 Series 690-710W 132-cell Bifacial TOPCON Half Cell Module

### Engineering Drawings

Unit: mm



### Electrical Characteristics (STC\*)

THS-D66HND	690W	695W	700W	705W	710W
Maximum Power (Pmax)	690W	695W	700W	705W	710W
Module Efficiency (%)	22.2%	22.4%	22.5%	22.7%	22.9%
Optimum Operating Voltage(Vmp)	40.32V	40.52V	40.72V	40.92V	41.12V
Optimum Operating Current (Imp)	17.12A	17.16A	17.20A	17.20A	17.27A
Open Circuit Voltage (Voc)	48.38V	48.82V	48.86V	48.90V	48.94V
Short Circuit Current (Isc)	17.88A	17.93A	17.97A	18.01A	18.05A
Operating Module Temperature	-40 to +85°C				
Maximum System Voltage	DC1500V (IEC)				
Maximum Series Fuse	35A				
Power Tolerance	0~+5W				
Bifaciality	80%±10%				

\*STC: Irradiance 1000 W/m<sup>2</sup>, cell temperature 25°C, AM=1.5. Tolerance of Pmax is within +/- 3%.

### BSTC\*

	765W	770W	776W	782W	788W
Maximum Power (Pmax)	765W	770W	776W	782W	788W
Optimum Operating Voltage(Vmp)	40.32V	40.52V	40.72V	40.92V	41.12V
Optimum Operating Current (Imp)	18.97A	19.01A	19.06A	19.11A	19.16A
Open Circuit Voltage (Voc)	48.38V	48.82V	48.86V	48.90V	48.94V
Short Circuit Current (Isc)	19.83A	19.87A	19.91A	19.95A	20.01A

\*\*BSTC: Front side irradiation 1000W/m<sup>2</sup>, back side reflection irradiation 135W/m<sup>2</sup>, AM=1.5, ambient temperature 25°C.

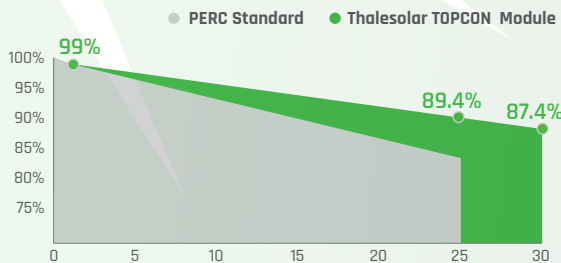
### Temperature Characteristics

Nominal Operating Cell Temp.(NOCT)	43°C ± 2°C
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Isc	0.046%/°C

### Safety & Warranty

Safety Class	Class II
Product Warranty	30 yrs Workmanship
Performance Warranty	30 yrs Linear Warranty*

\*Less than 1% attenuation in the 1st year, the annual attenuation from the 2nd year is no more than 0.4%, and the power is no less than 87.4% until the 30th year.



\*Refer to Thalesolar standard warranty for details

### Mechanical Characteristics

Cell Type	TOPCon Mono 210X105mm
Cell Connection	132(6X24)
Module Dimension	2384X1303X33mm
Weight	38.3kg
Junction Box	IP68
Output Cable	4mm <sup>2</sup> , 300mm in length, length can be customized/UV resistant
Connectors Type	MC4 original/MC4 compatible
Frame	Anodised aluminum alloy
Encapsulant	PDE/EPE
Front Load	5400Pa
Rear Load	2400Pa
Glass Thickness	Double solar glass 2.0mm

### Shipping Configurations

Container Type	HC
Container Size	40'
Pallets Per Container	18
Modules Per Pallet (pcs)	33
Modules Per Container (pcs)	594