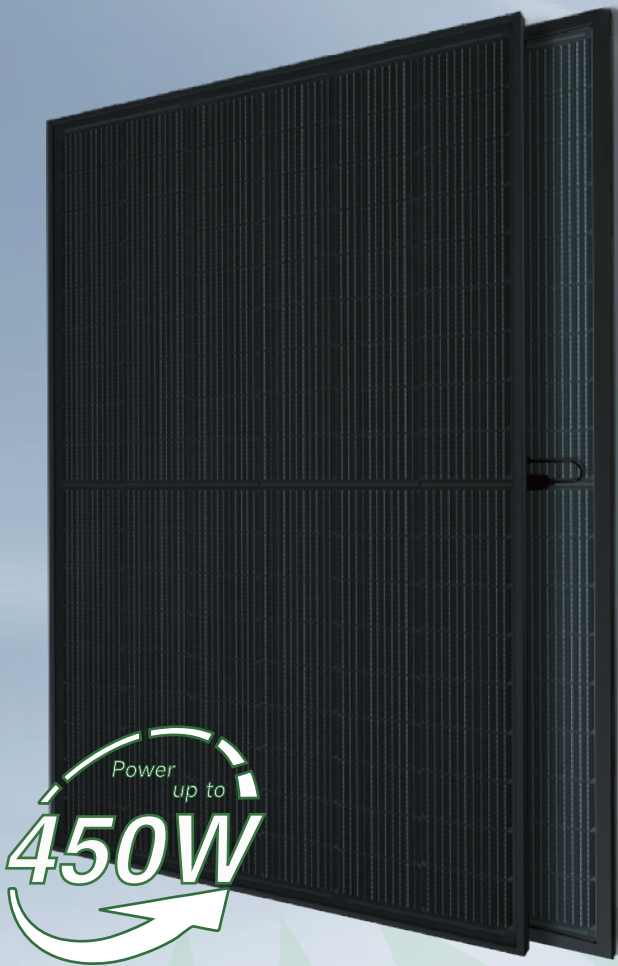


TOPCon G10 Series 430-450W

108-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 80% 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

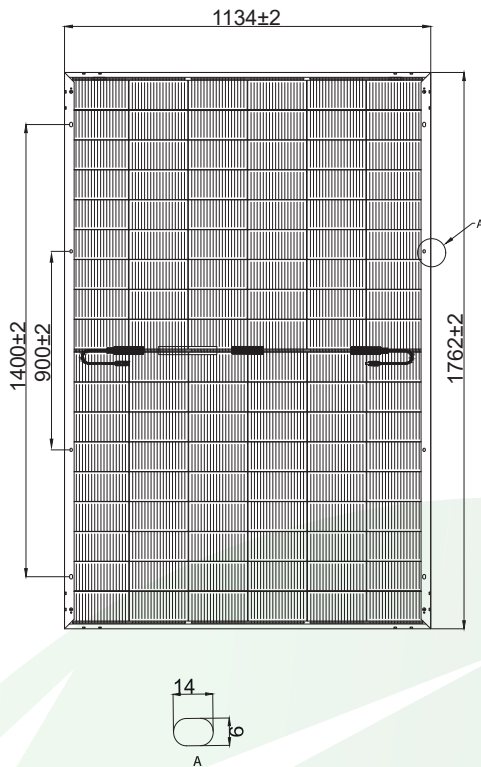
Linear
Power
Warranty **30** years



TOPCon G10 Series 430-450W 108-cell Bifacial TOPCon Half Cell Module

Engineering Drawings

Unit: mm



Electrical Characteristics (STC*)

THS-D54HND	430W	435W	440W	445W	450W
Maximum Power (Pmax)	430W	435W	440W	445W	450W
Module Efficiency (%)	21.5%	21.8%	22.0%	22.3%	22.5%
Optimum Operating Voltage(Vmp)	32.12V	32.29V	32.47V	32.65V	32.82V
Optimum Operating Current (Imp)	13.39A	13.47A	13.55A	13.63A	13.71A
Open Circuit Voltage (Voc)	38.50V	38.70V	38.90V	39.10V	39.30V
Short Circuit Current (Isc)	14.14A	14.23A	14.31A	14.40A	14.48A
Operating Module Temperature	-40 to +85°C				
Maximum System Voltage	DC1500V (IEC)				
Maximum Series Fuse	25A				
Power Tolerance	0~+5W				
Bifaciality	80%±5%				

*STC: Irradiance 1000 W/m², cell temperature 25°C, AM=1.5. Tolerance of Pmax is within +/- 3%.

BSTC*

Maximum Power (Pmax)	464W	470W	475W	481W	486W
Optimum Operating Voltage(Vmp)	32.11V	32.29V	32.49V	32.65V	32.82V
Optimum Operating Current (Imp)	14.46A	14.55A	14.63A	14.72A	14.81A
Open Circuit Voltage (Voc)	38.50V	38.70V	38.90V	39.10V	39.30V
Short Circuit Current (Isc)	15.27A	15.36A	15.46A	15.55A	15.64A

**BSTC: Front side irradiation 1000W/m², back side reflection irradiation 100W/m², AM=1.5, ambient temperature 25°C.

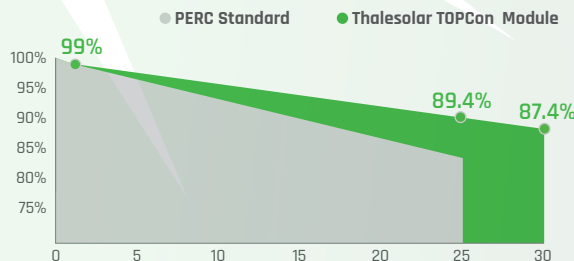
Temperature Characteristics

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 16BB
Cell Connection	108(6X18)
Module Dimension	1752X1134X30mm
Weight	25.3kg/22.5kg
Junction Box	IP68
Output Cable	4mm ² , 1200mm in length, length can be customized/UV resistant
Connectors Type	MC4 original/MC4 compatible
Frame	Anodised aluminum alloy(Black)
Encapsulant	PDE/EPE
Front Load	5400Pa
Rear Load	2400Pa
Glass Thickness	Double solar glass 2.0mm/1.6mm

Shipping Configurations

Container Type	HC
Container Size	40'
Pallets Per Container	26
Modules Per Pallet (pcs)	36
Modules Per Container (pcs)	936