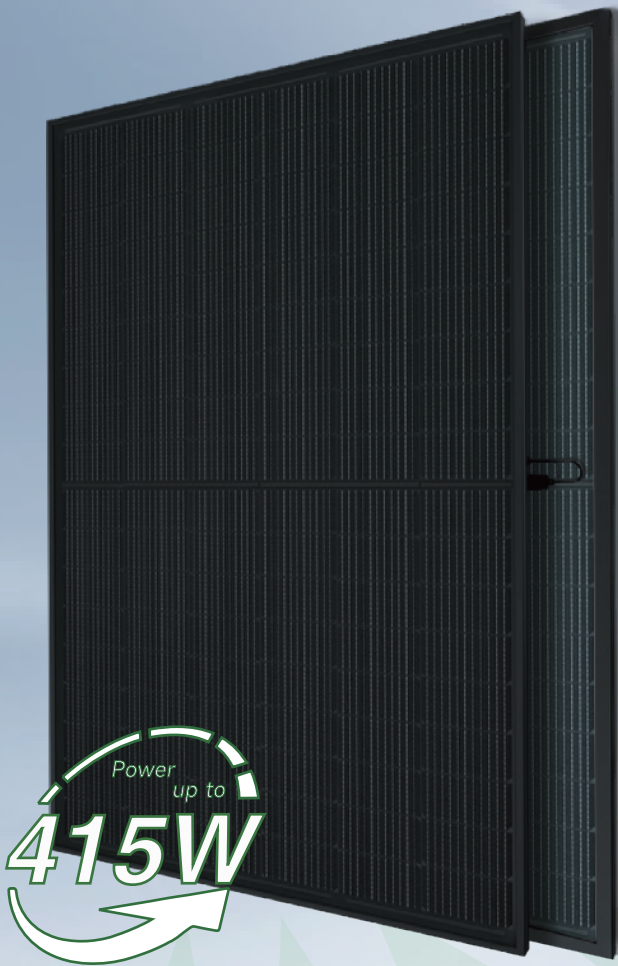


## TOPCon G10 Series 415-435W

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

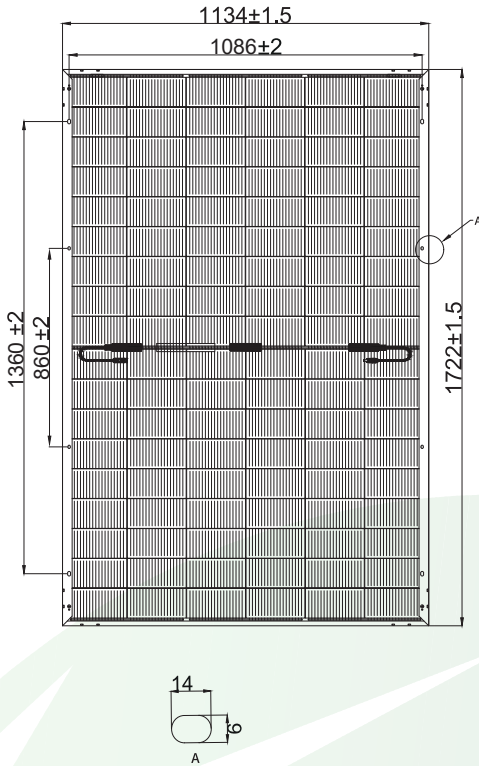
Linear  
Power  
Warranty **30** years



## TOPCon G10 Series 415-435W 108-cell Bifacial TOPCon Half Cell Module

### Engineering Drawings

Unit: mm



### Electrical Characteristics (STC\*)

THS-D54HND	415W	420W	425W	430W	435W
Maximum Power (Pmax)	415W	420W	425W	430W	435W
Module Efficiency (%)	21.25%	21.51%	21.76%	22.02%	22.28%
Optimum Operating Voltage(Vmp)	31.30V	31.50V	31.70V	31.90V	32.05V
Optimum Operating Current (Imp)	13.26A	13.34A	13.42A	13.50A	13.58A
Open Circuit Voltage (Voc)	38.00V	38.10V	38.20V	38.30V	38.40V
Short Circuit Current (Isc)	13.99A	14.07A	14.15A	14.23A	14.31A
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/m<sup>2</sup>, cell temperature 25°C, AM=1.5. Tolerance of Pmax is within +/- 3%.

### BSTC\*

Maximum Power (Pmax)	448W	454W	459W	464W	470W
Optimum Operating Voltage(Vmp)	32.13V	32.38V	32.64V	32.88V	33.13V
Optimum Operating Current (Imp)	13.95A	14.01A	14.06A	14.12A	14.18A
Open Circuit Voltage (Voc)	38.00V	38.28V	38.56V	38.84V	39.11V
Short Circuit Current (Isc)	14.69A	14.74A	14.80A	14.85A	14.90A

\*\*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.

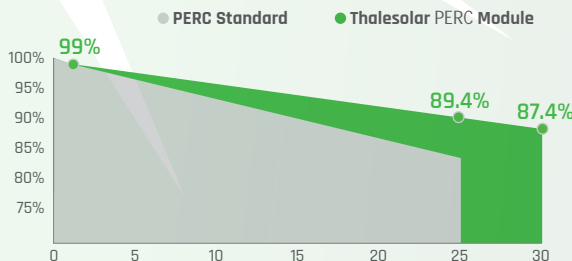
### Temperature Characteristics

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 182X91mm
Cell Connection	108(6X18)
Module Dimension	1722X1134X30mm
Weight	24.2kg/22.5kg
Junction Box	IP68
Output Cable	4mm <sup>2</sup> , 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