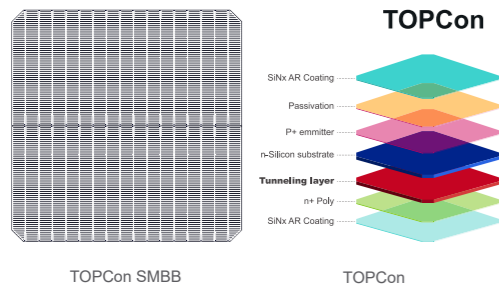


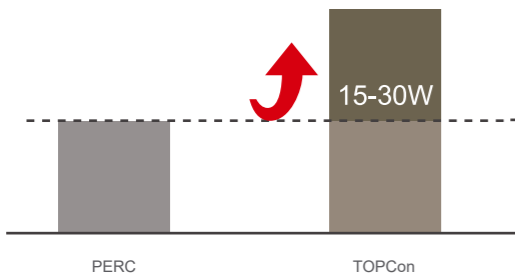


# High Efficiency N-Type TOPCon PV Module Advantages Half-Cell TOPCon PV Series



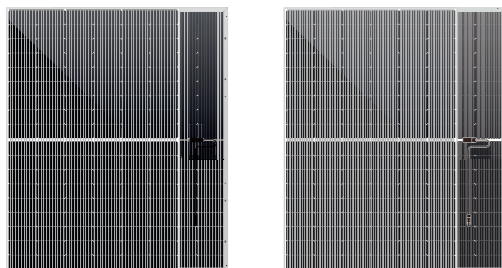
### SMBB Technology

- Reduce the current transmission distance, reduce grid line shielding, and improve optical utilization
- SMBB technology combined with round wire ribbon can increase the utilization rate of incident light by 70%, and increase the power by 1-1.5%



### Higher Power

- For the same module type, the power of N-type modules is 15-30W higher than that of P-type modules

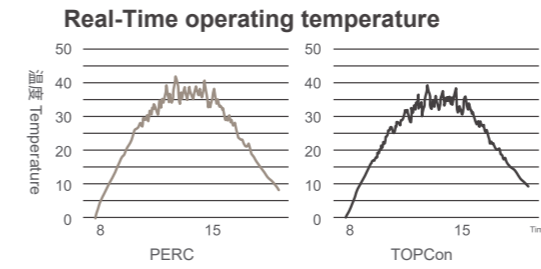


PERC 60% 双面率  
60%Bifaciality

TOPCon(  $\nearrow$  25%)85% 双面率  
85%Bifaciality

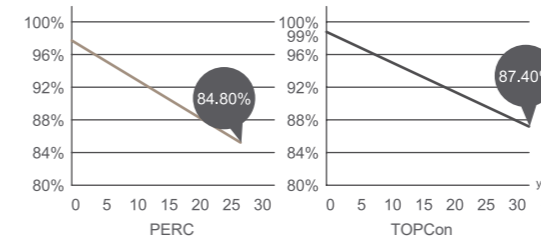
### 85%Bifaciality

- For the same module type, the double-sided rate of N-type modules is 25% higher than that of P-type modules



### Lower Temperature Coefficient

- The temperature coefficient of P-type PV module is  $-0.34\%/^{\circ}\text{C}$
- N-type module optimized temperature coefficient to  $-0.29\%/^{\circ}\text{C}$
- Power generation is particularly prominent in high temperature environments



### Better Power Guarantee

- N-type modules decay 1% in the first year (P-type 2%)
- Power warranty for 30 years
- After 30 years, the output power is not lower than 87.4% of the initial power

### 30 Power Warranty

$\leq 1\%$

First year degradation

**-0.4%**

Linear degradation



# TOPCon MONOFACIAL



## SL-410-430M10T 410~430 Watt

182mm 16BB 108Cells All Black  
TOPCon Mono Half Cell PV-Module Series



**12**  
Years

Materials and workmanship warranty

**30**  
Years

Linear power warranty

SMBB Technology  
Half Cut TOPCon Cell

High Energy  
Performance

100% Inspection  
25years Guarantee

Fire Class A

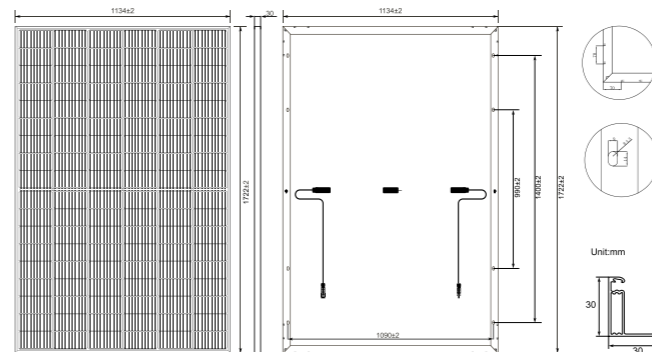
Strengthened  
Mechanical Load

Anti PID

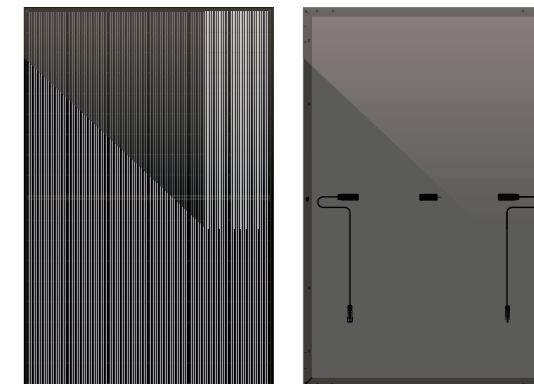


## UKS-410-430M10T

182mm 16BB 108Cells All Black  
TOPCon Mono Half Cell PV-Module



All Dimensions in mm  
The above drawing is a graphical representation of the product  
For engineering quality drawings please contact DIRECTION.



Transparent backsheet is available.  
Bifacial Solar PV Modules can be customized.

### Electrical Characteristics (STC/NOCT)

Module Type	SL-410M10T		SL-415M10T		SL-420M10T		SL-425M10T		SL-430M10T	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power- Pmax(W)	410	313.5	415	317.3	420	321.1	425	320	430	328.7
Open Circuit Voltage - Voc(V)	38.20	36.30	38.33	36.40	38.46	36.50	38.59	36.60	38.72	36.80
Short- Circuit Current - Isc(A)	13.93	11.23	14.01	11.30	14.09	11.36	14.17	11.42	14.25	11.49
Voltage at Pmax -Vmp(V)	31.60	29.60	31.79	29.70	31.97	29.90	32.16	30.00	32.34	30.20
Current at Pmax - Imp(A)	12.98	10.60	13.06	10.68	13.14	10.75	13.22	10.82	13.30	10.89
Module Efficiency -ηm(%)	21.00	/	21.30	/	21.50	/	21.80	/	22.00	/
Power Tolerance(W)	(0, +4.99W)									
Maximum System Voltage(V)	1500Vdc (IEC / UL)									
Maximum Series Fuse Rating (A)	25A									

STC : Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25 C, Air Mass 1.5  
NOCT : Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20 C, Air Mass 1.5, Wind Speed 1m/s

### Mechanical Specifications

External Dimensions	1722x1134x30mm
Weight	20.5kg
Solar Cells	N-Type 16BB 182mm(2x54pcs)
Front Glass	AR Coated 3.2 mm tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68
Output Cables	4.0mm <sup>2</sup> , 1200mm (+), 1200mm (-), length can be customized
Connector	MC4 Compatible
Mechanical Load	Front Side Max. 5400Pa, Rear Side Max. 2400Pa

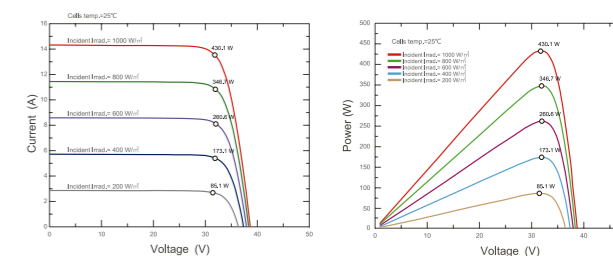
### Packing Configuration

	1722x1134x30mm	
Container	20'GP	40'HQ
Pieces per Pallet	36	36
Pallets per Container	6	26
Pieces per Container	216	936

### Temperature Characteristics

Pmax Temperature Coefficient	-0.290%/C
Voc Temperature Coefficient	-0.250%/C
Isc Temperature Coefficient	+0.045%/C
Operating Temperature	-40~+85 C
Nominal Operating Cell Temperature(NOCT)	45±2 C

### Current-Voltage & Power-Voltage Curves



Specifications are subject to change without further notification

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