

TOPCon 182 Full Black Bifacial Solar Module

High Efficiency

Higher module conversion efficiency benefit from half cell structure (low resistance characteristic).



Multi busbar technology

Better light utilization and current collection capabilities, effectively improving product power output and reliability.



Longer service life

Excellent double-sided warranty promises a 30-year power warranty of 0.45% linear power attenuation.



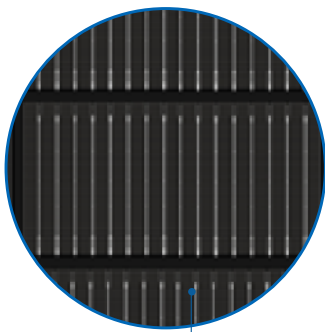
Severe Weather Resilience

Certified to withstand: Wind load (2400 pascal) and snow load (5400 pascal).



Double-sided power generation

The double-sided power generation gain increases with the light received on the back side, up to 25%, which significantly reduces the LCOE.

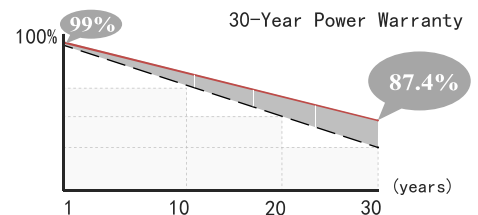


• Double-sided cell technology

12-year Warranty for Materials and Processing



30-year Warranty for Extra Linear Power Output



IEC61215, IEC61730, IEC61701, IEC62716, IEC62804

ISO 9001:2015: ISO Quality Management System

ISO 14001: 2015: ISO Environment Management System

ISO 45001: 2018: ISO Occupational Health and Safety Management Systems

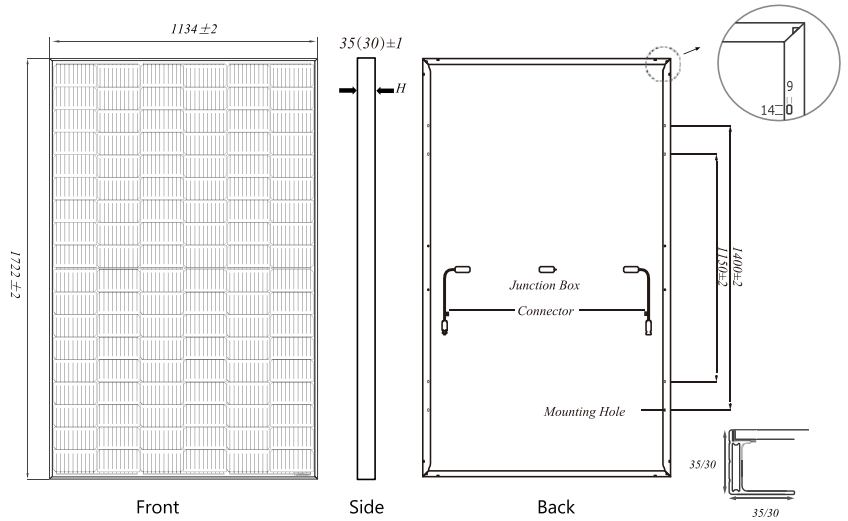


415-430W

STM415-430/108-S5SB

Full Black Half-Cut Cell High Efficiency Bifacial PV Module

Weight	Dimension(LxWxT)
21.0kg±3%	1722x1134x35(30)mm
Cells Type	Packaging(pcs/40HQ container)
Mono 182-10BB 31/806pcs 37/962pcs	



Remark: customized frame color and cable length available upon request

MECHANICAL SPECIFICATION

Cell	N-type mono-crystalline
No.of cells	108(6x18)
Cable Length	300mm(+)/300mm(-)
Cable Cross Section Size	4mm ² (IEC)
Junction Box	IP68,3 diodes
Connector	MC4 Compatible

OPERATING PARAMETERS

Maximum System Voltage	1500VDC
Operating Temperature	-40 C ~ +85 C
Maximum Series Fuse	25A
Maximum StaticLoad,Front	5400Pa(112lb/ft ²)
Maximum StaticLoad,Back	2400Pa(50lb/ft ²)
Safety Class	Class II

ELECTRICAL CHARACTERISTICS

STC:AM1.5 1000W/m² 25 C NOCT:AM1.5 800W/m² 20 C 1m/s Test uncertainty for Pmax ±3%

Module Type	STM415/108-S5SB		STM420/108-S5SB		STM425/108-S5SB		STM430/108-S5SB	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power(Pmax/W)	415	315	420	318	425	322	430	326
Open Circuit Voltage(Voc/V)	37.7	36.0	37.9	36.2	38.1	36.4	38.3	36.6
Short Circuit Current(Isc/A)	13.91	11.22	13.98	11.27	14.05	11.33	14.12	11.38
Voltage at Maximum Power(Vmp/V)	31.7	29.8	31.9	30	32.1	30.02	32.3	30.3
Current at Maximum Power(Imp/A)	13.10	10.56	13.17	10.62	13.24	10.67	13.32	10.74
Module Efficiency(%)	21.25		21.51		21.76		22.02	

POWER OUTPUT OF THE FRONT AND REAR SIDE

(REFERENCEDSPECIFICALLY TO 540WP FRONT)

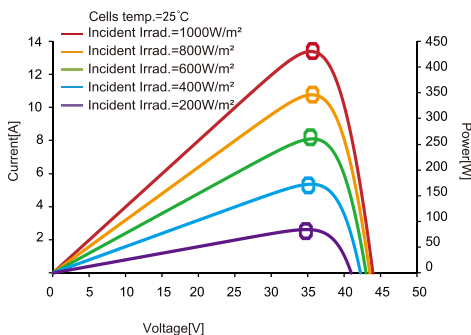
Power Gain (%)	5%	10%	15%	20%	25%
Maximum Power(Pmax/W)	572	600	627	654	681
Pmax Gain(%)	22.07%	23.16%	24.20%	25.24%	25.28%

TEMPERATURE RATINGS

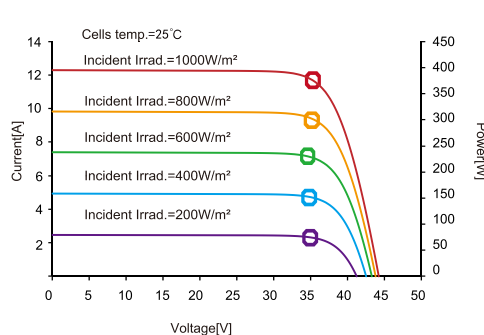
Norminal Operating Cell Temperature(NOCT)	45±2 C
Temperature Coefficient of Isc	+0.045%/C
Temperature Coefficient of Voc	-0.275%/C
Temperature Coefficient of Pmax	-0.350%/C

I-V CURVE(STM415-430/108-S5SB)

Power-Voltage Curve



Current-Voltage Curve



Isc, Voc, Pmax-Temperature Curve

