

N-TOPCon series

## 182 N-TOPCon Bifacial Module

430W ~ 440W



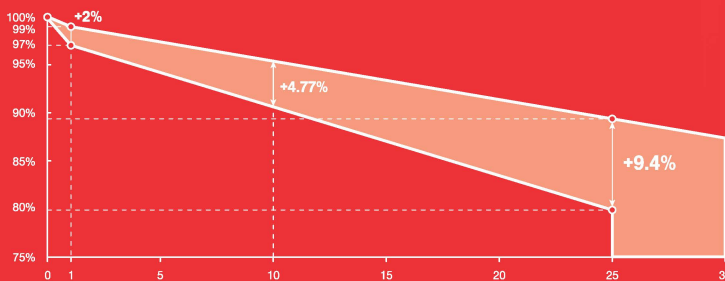
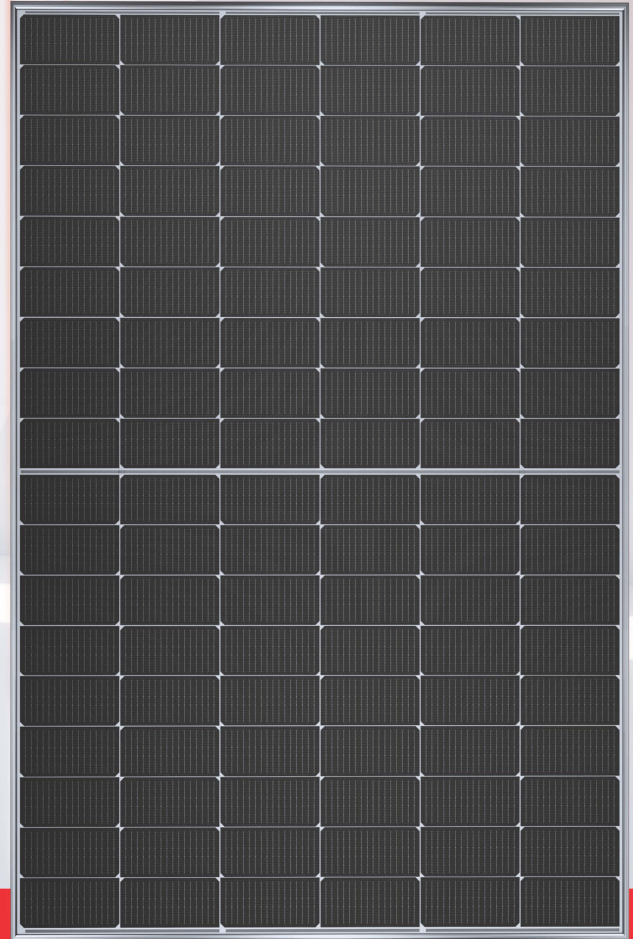
**12** years product  
workmanship warranty



**30** years linear power output  
warranty



**1%** 1st-year degradation  
**0.40%** annual degradation



Conventional LESSO Solar Module

### FEATURES AND BENEFITS



N-TOPCon brings 10-30% additional power generation comparing with conventional P-type module.



N-TOPCon solar cell has no LID naturally which can increase power generation.



Higher bifaciality, higher power output and lower BOS cost.



Double sides power output to reach higher comprehensive efficiency and get more profit.



Higher power output even under low-light environments like on cloudy or foggy days.



Higher power generation under working conditions, thanks to passivating contact cell technology.



More application scenes like BIPV, vertical installation, snowfield, high-humid, windy and dusty area.

# LESSO 182 N-TOPCon Bifacial Module



Power Range  
**430W ~ 440W**



Power Output Tolerance  
**0W ~ +5W**



Maximum Efficiency  
**22.53%**

## Structure Performance

Solar Cell Type	182mm N-TOPCon Mono Cell (Half Cell)
Solar Cell Arrangement	108pcs(6×18)
Module Dimension	1722×1134×35mm/30mm
Weight	24.2kg(35mm) / 23.1kg(30mm)
Front Glass	2.0mm, highly transparent semi tempered glass with anti-reflective coating
Frame	Anodized Aluminum Alloy
Junction Box	IP68 rated
Cable	4mm <sup>2</sup> , portrait $\begin{matrix} 400\text{mm}(+) \\ 200\text{mm}(-) \end{matrix}$ , landscape $\begin{matrix} 1400\text{mm}(+) \\ 1400\text{mm}(-) \end{matrix}$ Length can be customized
Diode Quantity	3 pcs
Front side / Rear side	5400pa / 2400pa
Connector	PV-01 (Guangdong Lesso Electric Co., Ltd.)
Per Pallet	31pcs(35mm) / 36pcs(30mm)
Per Container(40'HQ)	806pcs(35mm) / 936pcs(30mm)
Fire Rating	Class A

## Electrical Performance Parameters | STC

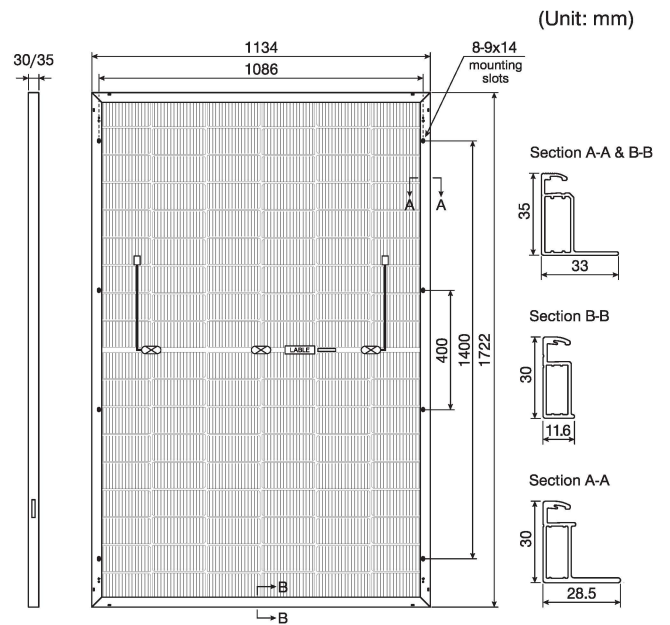
Model Type		430C(HBD) 54(182)	435C(HBD) 54(182)	440C(HBD) 54(182)
Nominal Max. Power	$P_{max}$ (W)	430	435	440
Max. Power Voltage	$V_{MP}$ (V)	31.88	32.11	32.34
Max. Power Current	$I_{MP}$ (A)	13.49	13.55	13.61
Open Circuit Voltage	$V_{OC}$ (V)	37.37	37.57	37.77
Short Circuit Current	$I_{SC}$ (A)	14.73	14.79	14.85
Module Efficiency	(%)	22.02	22.28	22.53
Power Output Tolerance	(W)		0~+5W	

\* STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\* Power measurement tolerance ±3%.

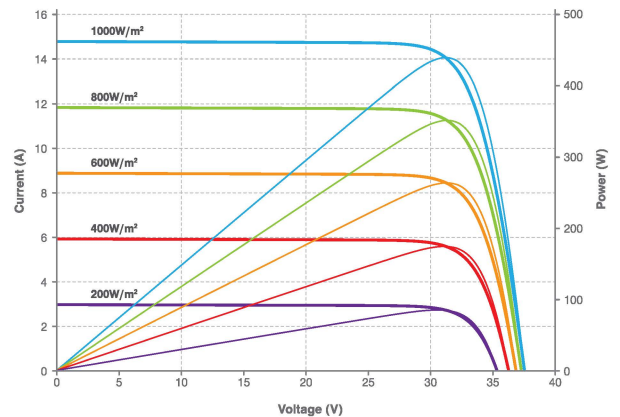
## Bifacial Nameplate Irradiance | BNPI

Model Type		430C(HBD) 54(182)	435C(HBD) 54(182)	440C(HBD) 54(182)
Nominal Max. Power	$P_{max}$ (W)	474	479	485
Max. Power Voltage	$V_{MP}$ (V)	31.94	32.17	32.40
Max. Power Current	$I_{MP}$ (A)	14.85	14.92	14.98
Open Circuit Voltage	$V_{OC}$ (V)	37.36	37.56	37.76
Short Circuit Current	$I_{SC}$ (A)	16.26	16.33	16.39
BIFI		0.326	0.326	0.333

\* BIFI: rear irradiance driven power gain yield.  
\* BNPI: Irradiance Front side 100W/m<sup>2</sup> Rear side 135W/m<sup>2</sup>, Ambient Temperature 25°C, Air Mass AM1.5.  
\* Power measurement tolerance ±3%.



## Current-Voltage & Power-Voltage Curve (435C)



## Bifaciality Coefficient

Tolerance/ $\rho I_{SC}$	77.71±4%
Tolerance/ $\rho V_{OC}$	99.00±3%
Tolerance/ $\rho P_{max}$	77.32±5%

## Short Circuit Current at BSI

Tolerance/ $I_{SC}$ [A]	17.62±4%
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## Temperature Characteristics

Nominal Module Operating Temperature	44±2°C
Temperature Coefficient ( $I_{SC}$ )	+0.043%
Temperature Coefficient ( $V_{OC}$ )	-0.25%
Temperature Coefficient ( $P_{max}$ )	-0.30%

## Maximum Parameters

Working Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Nominal Maximum Fuse Current	30A