


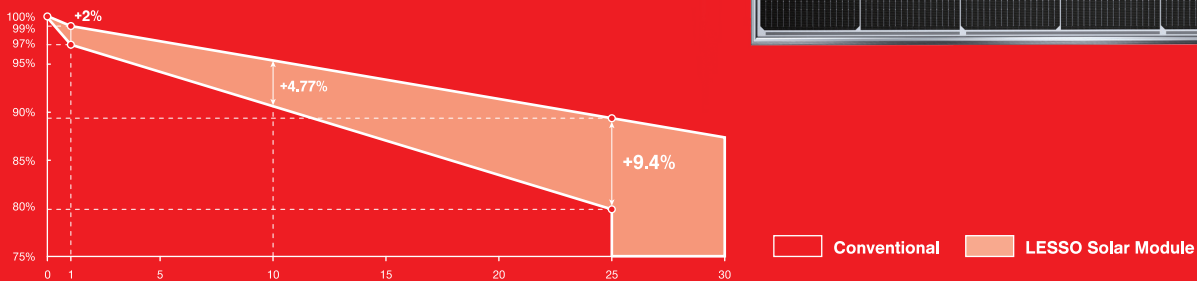
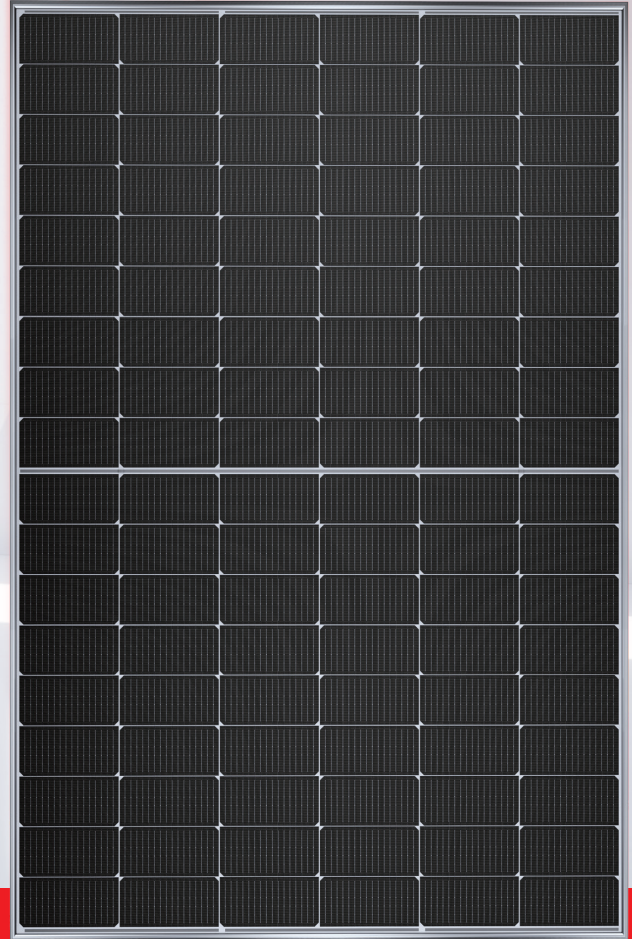
N series

## 182 N-type Bifacial Single Glass Module 415W ~ 435W

 **12** years product workmanship warranty

 **30** years linear power output warranty

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



### FEATURES AND BENEFITS



Topcon technology, higher power generation.



High density packaging, improving energy density.



Even cloudy or foggy days, better weak illumination response.



Zero LID, increase power generation.



Better temperature coefficient, more power generation.



Higher power output, lower bos cost.



Multiple weather, resistance tests, wider applicability.



Double-sided generation, powerfully energy boost.

# LESSO 182 N-type Bifacial Single Glass Module (54)



Power Range  
**415W ~ 435W**



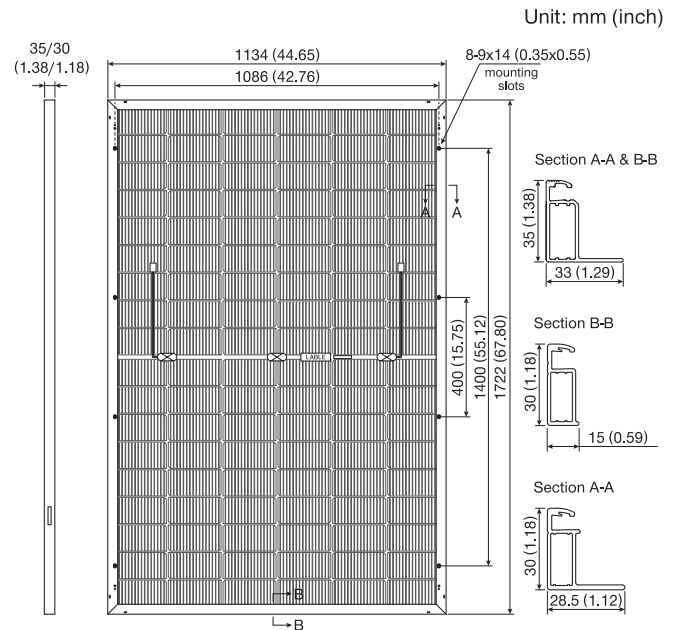
Power Output Tolerance  
**0W ~ +5W**



Maximum Efficiency  
**22.28%**

## Structure Performance

<b>Solar Cell Type</b>	182mm N-TOPCon Mono Cell (Half Cell)
<b>Solar Cell Arrangement</b>	108pcs(6×18)
<b>Module Dimension</b>	1722×1134×35/30mm (67.80×44.65×1.38/1.18inches)
<b>Weight</b>	21.7kg (47.84lbs) (35mm (1.38 inches)) 20.7kg (45.64lbs) (30mm (1.18 inches))
<b>Front Glass</b>	3.2mm (0.13inches), highly transparent tempered glass with anti-reflective coating
<b>Frame</b>	Anodized Aluminum Alloy
<b>Junction Box</b>	IP68 rated
<b>Cable</b>	4mm <sup>2</sup> (IEC), 12 AWG(UL) portrait 450mm (17.72in) (+), 250mm (9.84in) (-), landscape 1200mm (47.24in) (+), 1200mm (47.24in) (-) or customized
<b>Diode Quantity</b>	3 pcs
<b>Front side / Rear side</b>	5400pa / 2400pa
<b>Connector</b>	MC4 Compatible
<b>Per Pallet</b>	31pcs (35mm (1.38 inches)) / 36pcs (30mm (1.18 inches))
<b>Per Container(40'HQ)</b>	806pcs (35mm (1.38 inches)) / 936pcs (30mm (1.18 inches))

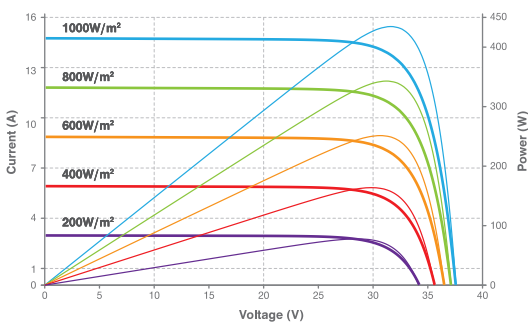


## Electrical Performance Parameters

Model Type	415C(HWB)54(182)		420C(HWB)54(182)		425C(HWB)54(182)		430C(HWB)54(182)		435C(HWB)54(182)	
	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
<b>Nominal Max. Power</b> $P_{MAX}$ (W)	415	457	420	463	425	468	430	474	435	479
<b>Max. Power Voltage</b> $V_{MP}$ (V)	31.18	31.24	31.42	31.48	31.65	31.71	31.88	31.94	32.11	32.17
<b>Max. Power Current</b> $I_{MP}$ (A)	13.31	14.65	13.37	14.72	13.43	14.79	13.49	14.85	13.55	14.92
<b>Open Circuit Voltage</b> $V_{OC}$ (V)	38.57	38.56	38.72	38.71	38.87	38.86	39.02	39.01	39.17	39.16
<b>Short Circuit Current</b> $I_{SC}$ (A)	14.55	16.06	14.61	16.13	14.67	16.20	14.73	16.26	14.79	16.33
<b>Module Efficiency</b> (%)	21.25		21.51		21.76		22.02		22.28	

\* STC: Irradiance 1000W/m<sup>2</sup> (0.65W/sq.in), Cell Temperature 25°C (77°F), Air Mass AM1.5; BNPI: Irradiance 1000W/m<sup>2</sup> (0.65W/sq.in) +  $\phi$  \* 135W/m<sup>2</sup> (0.09W/sq.in); Power measurement tolerance  $\pm$ 3%.

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



## Bifacial Output-rearside Power Gain

Gain	Maximum Power		$P_{MAX}$ (W)	436	441	446	452	457
	Module Efficiency (%)	(%)						
5%	Module Efficiency (%)	(%)	22.31%	22.58%	22.85%	23.12%	23.39%	
	Maximum Power	$P_{MAX}$ (W)	457	462	468	473	479	
10%	Module Efficiency (%)	(%)	23.38%	23.66%	23.94%	24.22%	24.50%	
	Maximum Power	$P_{MAX}$ (W)	519	525	531	538	544	
25%	Module Efficiency (%)	(%)	26.57%	26.89%	27.21%	27.53%	27.85%	

## Temperature Characteristics

<b>Nominal Module Operating Temperature</b>	44 $\pm$ 2°C (111.2 $\pm$ 35.6°F)	<b>Temperature Coefficient (<math>V_{OC}</math>)</b>	-0.25%
<b>Temperature Coefficient (<math>I_{SC}</math>)</b>	+0.043%	<b>Temperature Coefficient (<math>P_{MAX}</math>)</b>	-0.30%

## Maximum Parameters

<b>Working Temperature</b>	-40~+85°C (-40~+185°F)
<b>Maximum System Voltage</b>	1500V DC
<b>Nominal Maximum Fuse Current</b>	30A