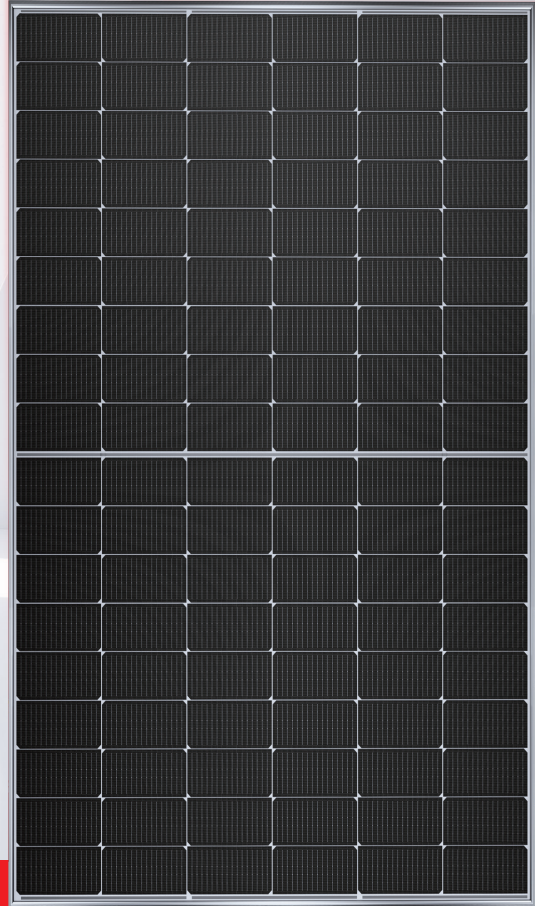


N series

## 210R N-type Bifacial Module

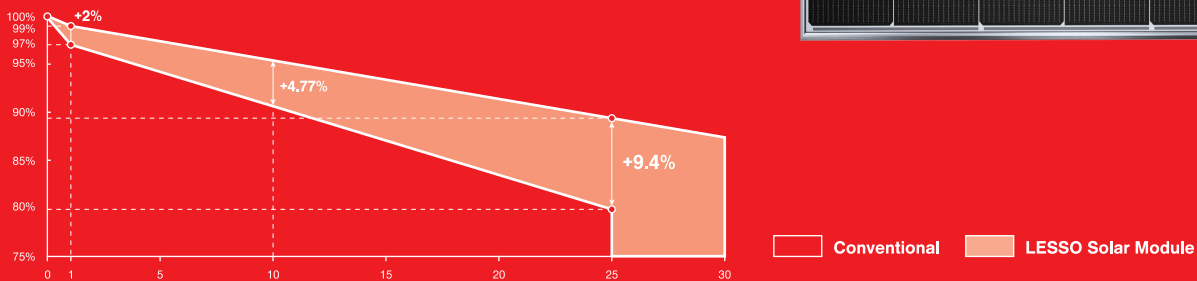
490W ~ 510W



**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 210R N-type Bifacial Module (54)



Power Range  
**490W ~ 510W**



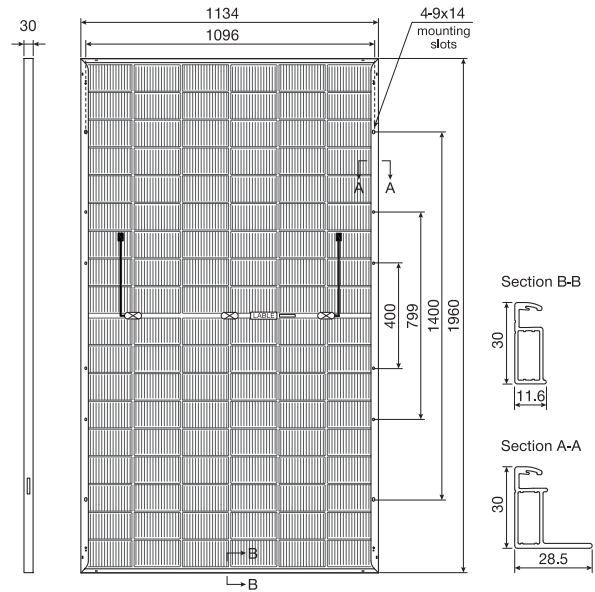
Power Output Tolerance  
**0W ~ +5W**



Maximum Efficiency  
**22.95%**

## Structure Performance

Solar Cell Type	210R N-TOPCon Mono Cell (Half Cell)
Solar Cell Arrangement	108pcs(6×18)
Module Dimension	1960×1134×30mm
Weight	27.4kg
Front Glass	2.0mm, highly transparent 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	MC4 Compatible
Per Pallet	36pcs
Per Container(40'HQ)	792pcs (horizontal packing) / 720pcs (vertical packing)



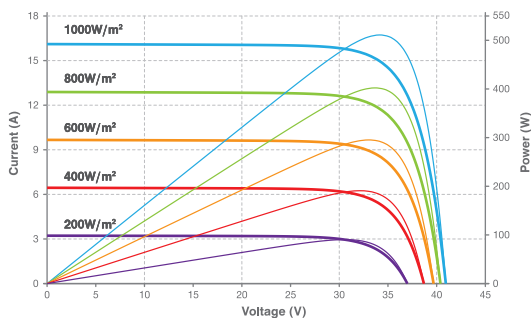
(Unit: mm)

## Electrical Performance Parameters

Model Type	490C(HBD)54(210R)		495C(HBD)54(210R)		500C(HBD)54(210R)		505C(HBD)54(210R)		510C(HBD)54(210R)		
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	
Nominal Max. Power	$P_{MAX}$ (W)	490	370	495	374	500	378	505	382	510	386
Max. Power Voltage	$V_{MP}$ (V)	33.14	31.02	33.27	31.17	33.41	31.32	33.55	31.47	33.68	31.62
Max. Power Current	$I_{MP}$ (A)	14.79	11.93	14.88	12.00	14.97	12.07	15.06	12.14	15.15	12.21
Open Circuit Voltage	$V_{OC}$ (V)	40.50	38.43	40.61	38.54	40.72	38.64	40.83	38.75	40.94	38.85
Short Circuit Current	$I_{SC}$ (A)	15.76	12.71	15.85	12.79	15.94	12.86	16.02	12.93	16.11	13.00
Module Efficiency	(%)	22.05		22.27		22.50		22.72		22.95	

\* STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5; NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s; Power measurement tolerance ±3%.

## Current-Voltage & Power-Voltage Curve (510C)



## Bifacial Output-rearside Power Gain

Gain	Maximum Power		$P_{MAX}$ (W)				
	$P_{MAX}$ (W)	(%)	515	520	525	530	536
5%	Maximum Power	$P_{MAX}$ (W)	515	520	525	530	536
	Module Efficiency	(%)	23.15%	23.38%	23.62%	23.86%	24.09%
10%	Maximum Power	$P_{MAX}$ (W)	539	545	550	556	561
	Module Efficiency	(%)	24.25%	24.50%	24.75%	24.99%	25.24%
25%	Maximum Power	$P_{MAX}$ (W)	613	619	625	631	638
	Module Efficiency	(%)	27.56%	27.84%	28.12%	28.40%	28.68%

## Temperature Characteristics

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

## Maximum Parameters

Working Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Nominal Maximum Fuse Current	35A