


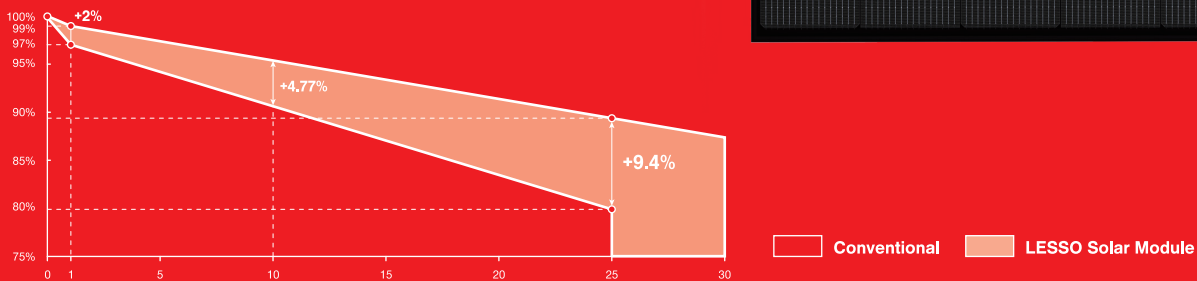
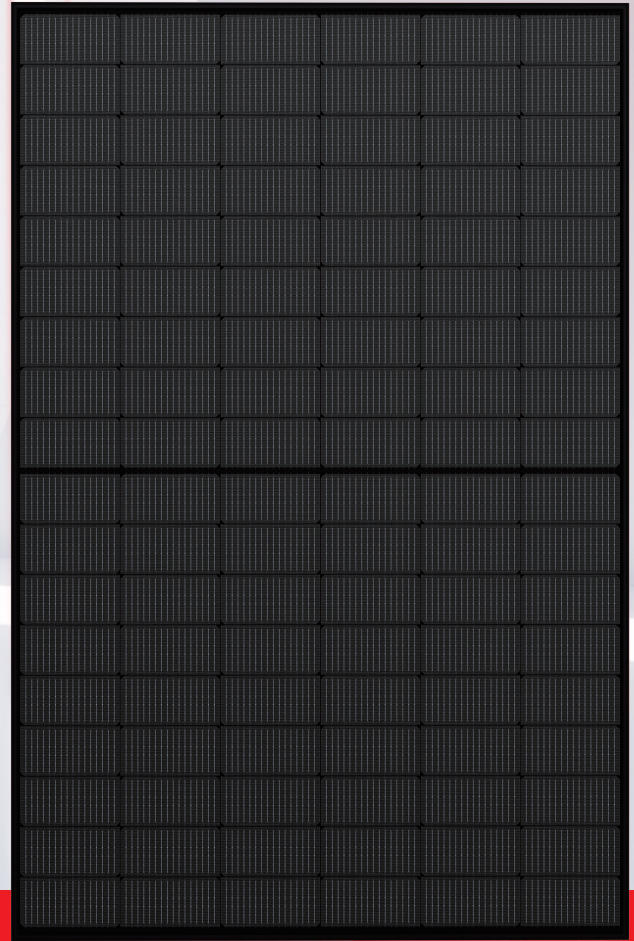
Pure Black series

182 N-type Bifacial Single Glass Module 410W ~ 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.



Highly-resistant black, crystal material, modernity to buildings.



Even cloudy or foggy days, better weak illumination response.



Zero LID, increase power generation.



High density packaging, improving energy density.



Higher power output, lower bos cost.



Multiple weather, resistance tests, wider applicability.



Double-sided generation, powerfully energy boost.

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



Power Range
410W ~ 435W



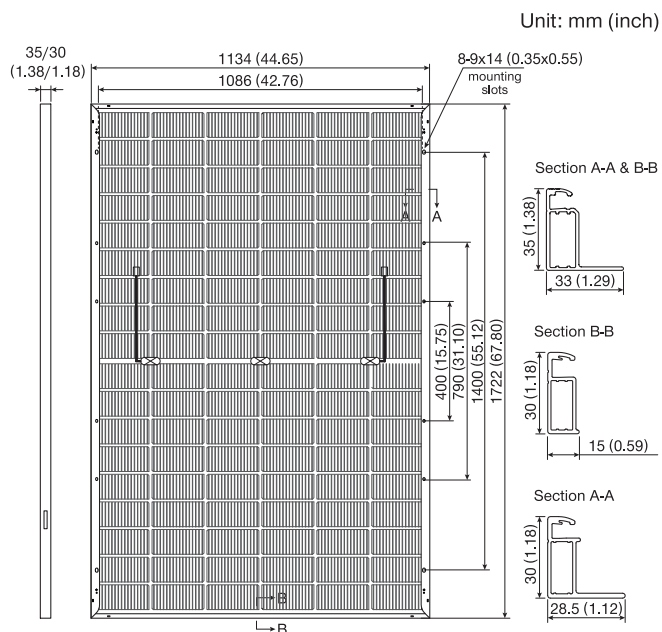
Power Output Tolerance
0W ~ +5W



Maximum Efficiency
22.28%

Structure Performance

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

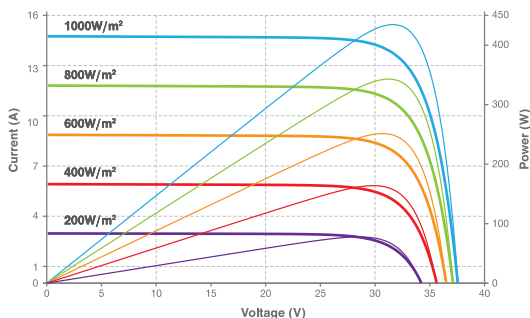


Electrical Performance Parameters

Model Type	410C(HBB)54(182)		415C(HBB)54(182)		420C(HBB)54(182)		425C(HBB)54(182)		430C(HBB)54(182)		435C(HBB)54(182)	
	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
Nominal Max. Power P_{MAX} (W)	410	445	415	450	420	456	425	461	430	467	435	472
Max. Power Voltage V_{MP} (V)	30.77	30.80	31.00	31.02	31.23	31.26	31.46	31.49	31.69	31.73	31.92	31.96
Max. Power Current I_{MP} (A)	13.33	14.46	13.39	14.52	13.45	14.59	13.51	14.65	13.57	14.72	13.63	14.78
Open Circuit Voltage V_{OC} (V)	39.53	39.60	39.68	39.75	39.83	39.90	39.98	40.05	40.13	40.20	40.28	40.35
Short Circuit Current I_{SC} (A)	14.58	16.10	14.64	16.16	14.70	16.23	14.76	16.30	14.82	16.36	14.88	16.43
Module Efficiency (%)	21.00		21.25		21.51		21.76		22.02		22.28	

* STC: Irradiance 1000W/m² (0.65W/sq.in), Cell Temperature 25°C (77°F), Air Mass AM1.5; BNPI: Irradiance 1000W/m² (0.65W/sq.in) + ϕ * 135W/m² (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)	431	436	441	446	452	457
	Module Efficiency (%)								
5%	Module Efficiency (%)		22.05%	22.31%	22.58%	22.85%	23.12%	23.39%	
	Maximum Power		451	457	462	468	473	479	
10%	Module Efficiency (%)		23.10%	23.38%	23.66%	23.94%	24.22%	24.50%	
	Maximum Power		513	519	525	531	538	544	
25%	Module Efficiency (%)		26.25%	26.57%	26.89%	27.21%	27.53%	27.85%	

Temperature Characteristics

Nominal Module Operating Temperature	44 \pm 2°C (111.2 \pm 35.6°F)	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 (-40~+185°F)
Maximum System Voltage	1500V DC
Nominal Maximum Fuse Current	30A