


Pure Black series

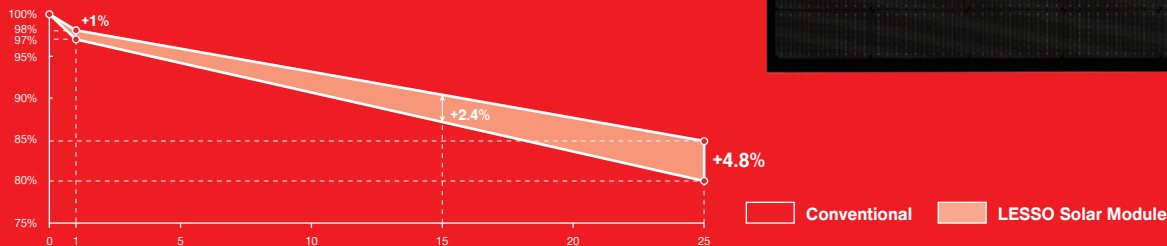
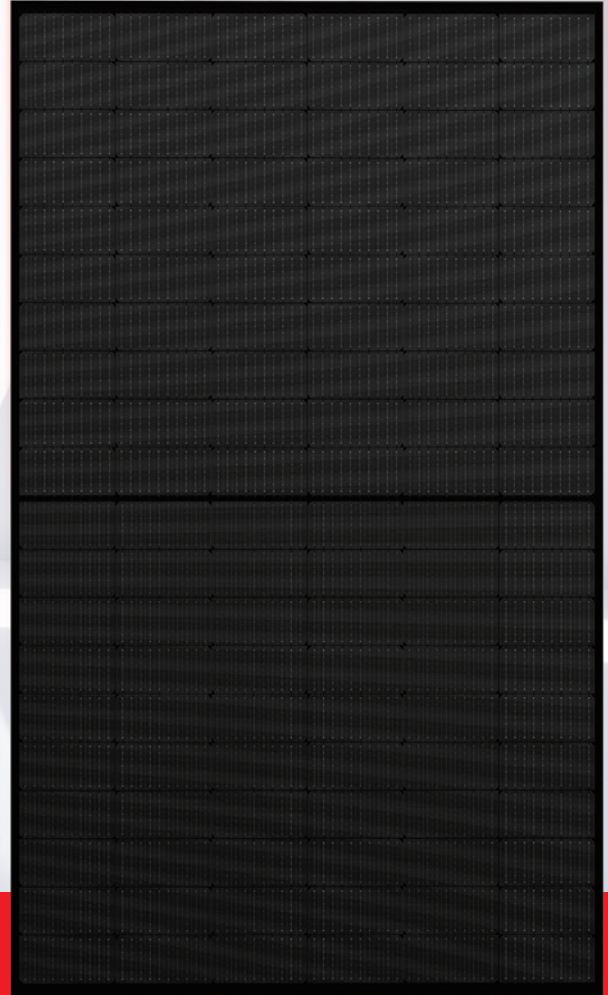
## 182 P-type Monofacial Module

440W ~ 450W







 **12** years product workmanship warranty

 **25** years linear power output warranty

 **2%** 1st-year degradation  
**0.55%** annual degradation



### FEATURES AND BENEFITS

-  The application of multi-busbar (MBB) half-cut cell technology brings stronger resistance to shade and lower risk of hot spot.
-  Strict control on raw materials and process optimization of high efficiency PERC ensure better resistance against PID of PV module.
-  Through harsh weathering tests of sand, dust, salt mist, ammonia, etc., to get stronger weather resistance of outdoor environment.
-  By series and parallel design, to reduce the series RS and achieve higher power output and lower BOS cost.
-  Lower temperature coefficient and lower operating temperature can ensure higher power generation.
-  Lower oxygen and carbon content result in lower LID.

# LESSO 182 Pure Black P-type Monofacial Module



Power Range  
**440W ~ 450W**



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

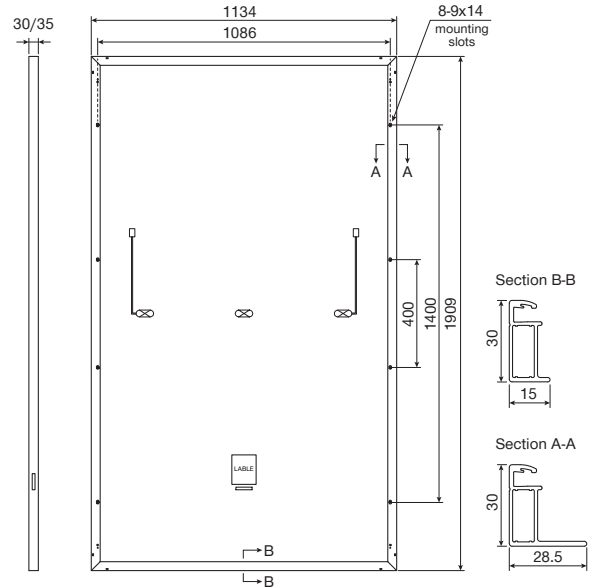


Maximum Efficiency  
**20.79%**

## Structure Performance

(Unit: mm)

Solar Cell Type	182mm Mono-crystalline (Half Cell)
Solar Cell Arrangement	120pcs(6×20)
Module Dimension	1909×1134×35mm/30mm
Weight	23.2kg(35mm) / 22.1kg(30mm)
Front Glass	3.2mm, highly transparent tempered glass with anti-reflective coating
Back Sheet	Black
Frame	Anodized Aluminum Alloy (Black)
Junction Box	IP68 rated
Cable	4mm <sup>2</sup> , portrait <sup>400mm (+)</sup> / <sub>300mm (-)</sub> , landscape <sup>1400mm (+)</sup> / <sub>1400mm (-)</sub> Length can be customized
Diode Quantity	3 pcs
Front side / Rear side	5400pa / 2400pa
Connector	MC4 Compatible
Per Pallet	31pcs(35mm) / 36pcs(30mm)
Per Container(40'HQ)	744pcs(35mm) / 864pcs(30mm)



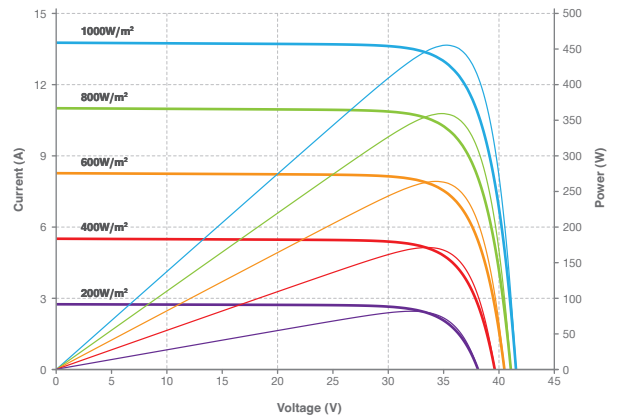
## Electrical Performance Parameters | STC

Model Type	440D(BPM) 60(182)	445D(BPM) 60(182)	450D(BPM) 60(182)	
Nominal Max. Power	P <sub>max</sub> (W)	440	445	450
Max. Power Voltage	V <sub>mp</sub> (V)	34.22	34.42	34.62
Max. Power Current	I <sub>mp</sub> (A)	12.86	12.93	13.00
Open Circuit Voltage	V <sub>oc</sub> (V)	40.98	41.18	41.38
Short Circuit Current	I <sub>sc</sub> (A)	13.60	13.66	13.72
Module Efficiency	(%)	20.33	20.56	20.79
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%.

## Current-Voltage & Power-Voltage Curve (455D)



## Electrical Performance Parameters | NMOT

Model Type	440D(BPM) 60(182)	445D(BPM) 60(182)	450D(BPM) 60(182)	
Nominal Max. Power	P <sub>max</sub> (W)	320	325	330
Max. Power Voltage	V <sub>mp</sub> (V)	31.24	31.44	31.64
Max. Power Current	I <sub>mp</sub> (A)	10.25	10.34	10.43
Open Circuit Voltage	V <sub>oc</sub> (V)	38.48	38.68	38.88
Short Circuit Current	I <sub>sc</sub> (A)	10.77	10.97	11.17

\* NMOT: Irradiance 800W/m<sup>2</sup>, Cell Temperature 20°C, Wind Speed 1m/s.

\* Power measurement tolerance ±3%.

## Temperature Characteristics

Nominal Module Operating Temperature	44±2°C
Temperature Coefficient (I <sub>sc</sub> )	+0.048%
Temperature Coefficient (V <sub>oc</sub> )	-0.26%
Temperature Coefficient (P <sub>max</sub> )	-0.34%

## Maximum Parameters

Working Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Nominal Maximum Fuse Current	25A

