


# LESSO


## 182 MBB Mono Perc Half-cell Module


Black Frame

435W ~ 460W



 12 years product workmanship warranty

 25 years linear power output warranty

 1st year power degradation no more than 2%  
Subsequent annual power degradation no more than 0.55%



# LESSO 182 MBB Mono Perc Half-cell Module



Power Range  
**435W ~ 460W**



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



Maximum Efficiency  
**21.2%**

## 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.



Lower oxygen and carbon content result in lower LID.

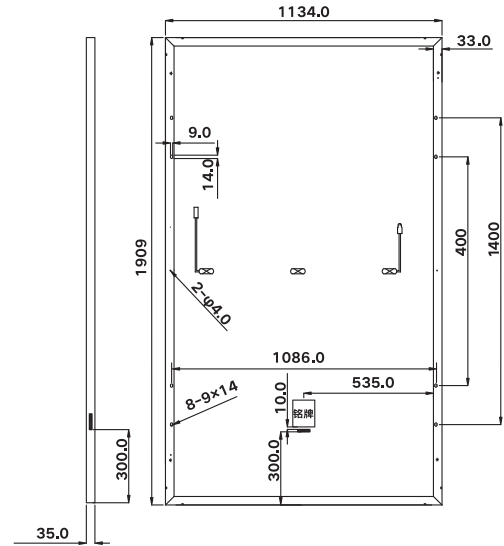


By series and parallel design, to reduce the series RS and achieve higher power output and lower BOS cost.



Lower temperature coefficient and lower operating temperature can ensure higher power generation.

(Unit: mm)



## Electrical Performance Parameters | STC

Model Type		435D(HPM) 60(182)	440D(HPM) 60(182)	445D(HPM) 60(182)	450D(HPM) 60(182)	455D(HPM) 60(182)	460D(HPM) 60(182)
Nominal Max. Power	P <sub>max</sub> (W)	435	440	445	450	455	460
Maximum Power Voltage	V <sub>mp</sub> (V)	33.93	34.13	34.33	34.53	34.73	34.93
Maximum Power Current	I <sub>mp</sub> (A)	12.83	12.90	12.97	13.04	13.11	13.18
Open Circuit Voltage	V <sub>oc</sub> (V)	40.72	40.92	41.12	41.32	41.52	41.72
Short Circuit Current	I <sub>sc</sub> (A)	13.69	13.76	13.83	13.90	13.97	14.04
Module Efficiency	(%)	20.10	20.30	20.60	20.80	21.00	21.20
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%.

## Electrical Performance Parameters | NMOT

Model Type		435D(HPM) 60(182)	440D(HPM) 60(182)	445D(HPM) 60(182)	450D(HPM) 60(182)	455D(HPM) 60(182)	460D(HPM) 60(182)
Nominal Max. Power	P <sub>max</sub> (W)	315	320	325	330	335	340
Maximum Power Voltage	V <sub>mp</sub> (V)	30.47	30.77	31.08	31.37	31.67	31.96
Maximum Power Current	I <sub>mp</sub> (A)	10.34	10.40	10.46	10.52	10.58	10.64
Open Circuit Voltage	V <sub>oc</sub> (V)	38.68	38.72	38.79	38.87	39.01	39.15
Short Circuit Current	I <sub>sc</sub> (A)	10.59	10.64	10.69	10.74	10.79	10.84

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

\* Power measurement tolerance ±3%.

## Structure Performance

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

## 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

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LESSO Solar

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