



# LESSO


## 182 MBB Mono Perc Bifacial Half-cell Module

**440W ~ 465W**



 **12** years product workmanship warranty

 **30** years linear power output warranty

 1st year power degradation no more than **2%**  
Subsequent annual power degradation no more than **0.45%**



# LESSO 182 MBB Mono Perc Bifacial Half-cell Module



Power Range  
**440W ~ 465W**



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



Maximum Efficiency  
**21.48%**

## 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.

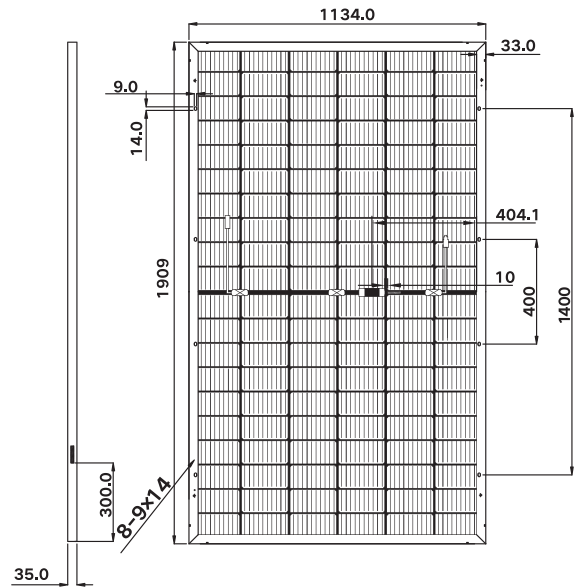


Lower temperature coefficient and lower operating temperature can ensure higher power generation.



Double sides power output to reach higher comprehensive efficiency and get more profit.

(Unit: mm)



## Electrical Performance Parameters | STC

Model Type		440D(HBD) 60(182)	445D(HBD) 60(182)	450D(HBD) 60(182)	455D(HBD) 60(182)	460D(HBD) 60(182)	465D(HBD) 60(182)
Nominal Max. Power	P <sub>max</sub> (W)	440	445	450	455	460	465
Maximum Power Voltage	V <sub>mp</sub> (V)	34.38	34.58	34.78	34.98	35.18	35.38
Maximum Power Current	I <sub>mp</sub> (A)	12.80	12.87	12.94	13.01	13.08	13.15
Open Circuit Voltage	V <sub>oc</sub> (V)	40.98	41.08	41.20	41.32	41.46	41.61
Short Circuit Current	I <sub>sc</sub> (A)	13.69	13.76	13.83	13.90	13.97	14.04
Module Efficiency	(%)	20.33	20.56	20.79	21.02	21.25	21.48
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		440D(HBD) 60(182)	445D(HBD) 60(182)	450D(HBD) 60(182)	455D(HBD) 60(182)	460D(HBD) 60(182)	465D(HBD) 60(182)
Nominal Max. Power	P <sub>max</sub> (W)	312	317	322	327	332	337
Maximum Power Voltage	V <sub>mp</sub> (V)	30.18	30.54	30.91	31.27	31.62	31.98
Maximum Power Current	I <sub>mp</sub> (A)	10.34	10.38	10.42	10.46	10.50	10.54
Open Circuit Voltage	V <sub>oc</sub> (V)	38.68	38.78	38.90	39.02	39.14	39.30
Short Circuit Current	I <sub>sc</sub> (A)	11.06	11.11	11.17	11.22	11.28	11.34

\* 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	26.9kg
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 <sup>400mm (+)</sup> / <sub>200mm (-)</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
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

Lesso New Energy Development Private Limited

One Raffles Quay, North Tower, #19-03, Singapore 048583

LESSO Group, STOCK CODE: 2128.HK



info@lessosolar.com



www.lessosolar.com



LESSO Solar

Data contained in these specifications is subject to change without notice.