



210 P-type series

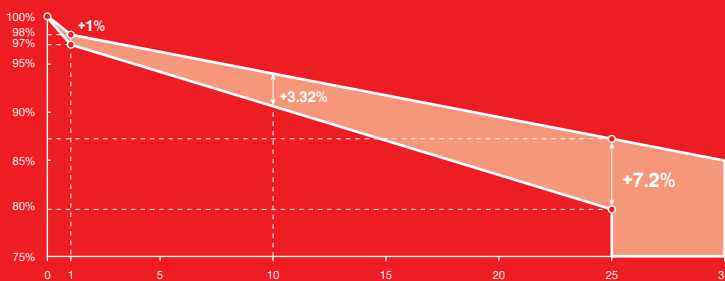
210 P-type Bifacial Module

645W ~ 665W

 **12** years product workmanship warranty








 **30** years linear power output warranty

 **2%** 1st-year degradation
0.45% annual degradation



 Conventional  LESSO Solar Module

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.
-  Double sides power output to reach higher comprehensive efficiency and get more profit.
-  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 210 P-type Bifacial Module



Power Range
645W ~ 665W



Power Output Tolerance
0W ~ +5W

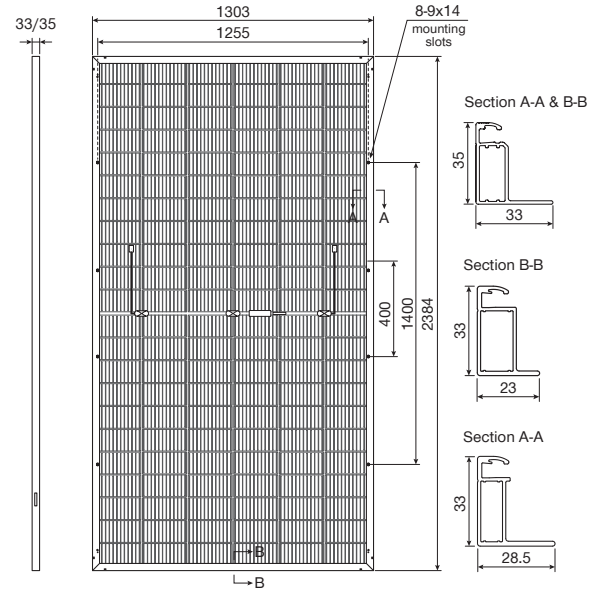


Maximum Efficiency
21.41%

Structure Performance

Solar Cell Type	210mm Mono-crystalline (Half Cell)
Solar Cell Arrangement	132pcs(6x22)
Module Dimension	2384×1303×35mm/33mm
Weight	38.2kg(35mm) / 37.8kg(33mm)
Front Glass	2.0mm, highly transparent tempered glass with anti-reflective coating
Frame	Anodized Aluminum Alloy
Junction Box	IP68 rated
Cable	4mm ² , portrait $\begin{matrix} 400mm (+) \\ 200mm (-) \end{matrix}$, landscape $\begin{matrix} 1400mm (+) \\ 1400mm (-) \end{matrix}$ Length can be customized
Diode Quantity	3 pcs
Front side / Rear side	5400pa / 2400pa
Connector	MC4 Compatible
Per Pallet	31pcs(35mm) / 33pcs(33mm)
Per Container(40'HQ)	558pcs(35mm) / 594pcs(33mm)

(Unit: mm)



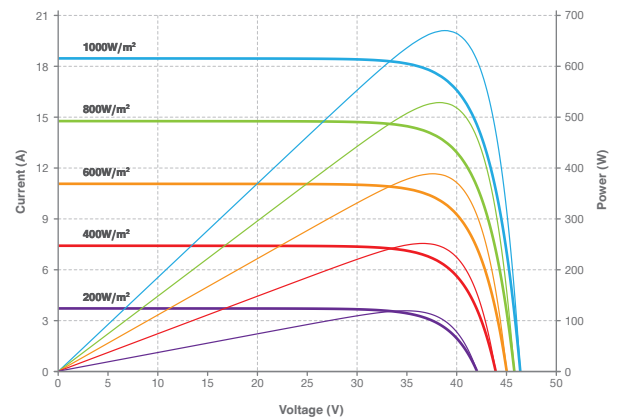
Electrical Performance Parameters | STC

Model Type	645D(HBD) 66(210)	650D(HBD) 66(210)	655D(HBD) 66(210)	660D(HBD) 66(210)	665D(HBD) 66(210)	
Nominal Max. Power	P _{max} (W)	645	650	655	660	665
Max. Power Voltage	V _{mp} (V)	37.43	37.63	37.83	38.03	38.23
Max. Power Current	I _{mp} (A)	17.24	17.28	17.32	17.36	17.40
Open Circuit Voltage	V _{oc} (V)	45.40	45.60	45.80	46.00	46.20
Short Circuit Current	I _{sc} (A)	18.30	18.34	18.38	18.42	18.46
Module Efficiency	(%)	20.76	20.92	21.09	21.25	21.41
Power Output Tolerance	(W)	0~+5W				

* STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.

* Power measurement tolerance ±3%.

Current-Voltage & Power-Voltage Curve (670D)



Electrical Performance Parameters | NMOT

Model Type	645D(HBD) 66(210)	650D(HBD) 66(210)	655D(HBD) 66(210)	660D(HBD) 66(210)	665D(HBD) 66(210)	
Nominal Max. Power	P _{max} (W)	488	492	496	500	504
Max. Power Voltage	V _{mp} (V)	34.84	35.04	35.22	35.42	35.62
Max. Power Current	I _{mp} (A)	14.02	14.06	14.08	14.12	14.16
Open Circuit Voltage	V _{oc} (V)	42.80	43.00	43.20	43.40	43.60
Short Circuit Current	I _{sc} (A)	14.74	14.78	14.82	14.86	14.90

* NMOT: Irradiance 800W/m², Cell Temperature 20°C, Wind Speed 1m/s.

* Power measurement tolerance ±3%.

Temperature Characteristics

Nominal Module Operating Temperature	44±2°C
Temperature Coefficient (I _{sc})	+0.048%
Temperature Coefficient (V _{oc})	-0.26%
Temperature Coefficient (P _{max})	-0.34%

Maximum Parameters

Working Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Nominal Maximum Fuse Current	30A