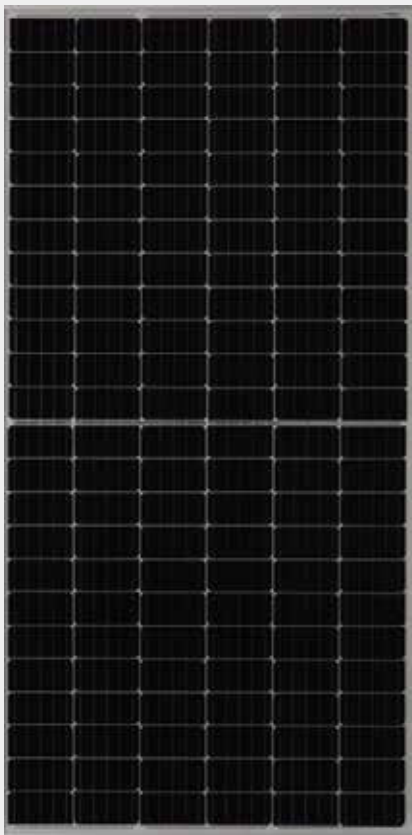


Einnova Solarline

invented for solar



PERC Half Cut Mno Crystalline Solar Module ESM 435/440/445/450/455H

KEY FEATURES



Excellent module efficiency up to: 20.90%



IP68 junction box for long-term weather endurance



Heavy snow load up to 5400 Pa, wind load up to 3600 Pa



PID: Selected material and stringent quality system ensure PID free

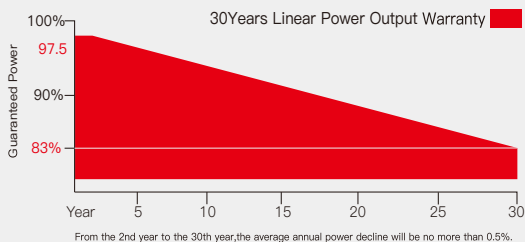


Applicable to harsh environment of deserts, farmlands and seashores



Much lower risk of Hot Spot

CERTIFICATE



WARRANTY



Linear power output warranty
- 12 years minimum 92% power output
- 30 years minimum 83% power output



Product warranty on materials and workmanship
According to the applicable Einnova Solarline Limited Warranty Statement

China Jiangsu
International Group Ltd.

5 West Beijing Road,
Nanjing, 210008, China

+86-(0)25-84792033
+86-(0)25-84705923

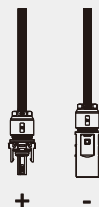
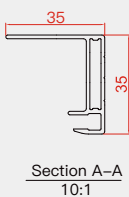
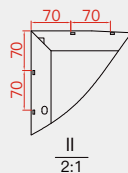
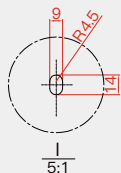
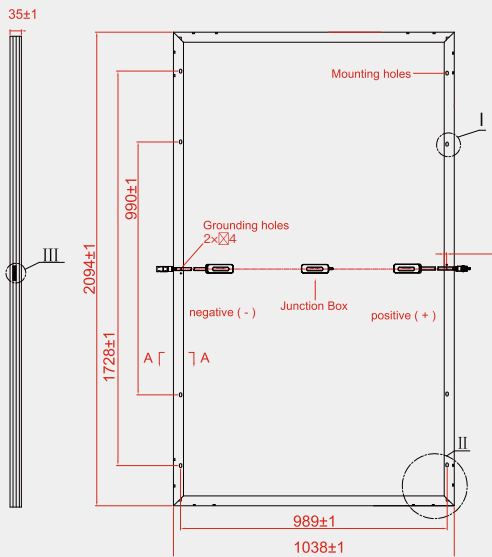
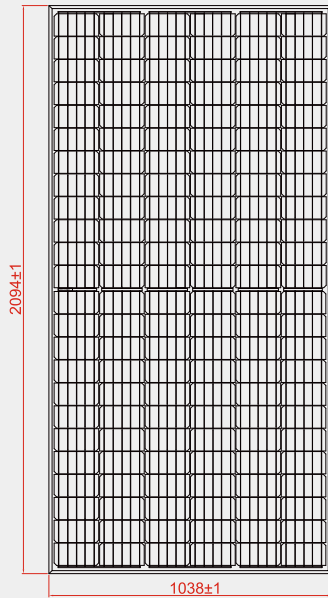
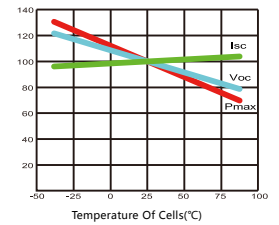
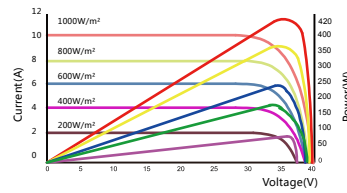
info@einnova-solarline.com
www.einnova-solarline.com

EN

Ennova Solarline

invented for solar

IV CURVE



ELECTRICAL SPECIFICATION	Unit	ESM-435H	ESM-440H	ESM-445H	ESM-450H	ESM-455H
Maximum Power (Pmax)	W	435	440	445	450	455
Module Efficiency	%	20.00	20.20	20.50	20.70	20.90
Open Circuit Voltage (Voc)	V	48.70	48.90	49.10	49.30	49.50
Short Circuit Current (Isc)	A	11.39	11.46	11.53	11.60	11.66
Maximum Power Voltage (Vmp)	V	40.89	41.10	41.30	41.50	41.70
Maximum Power Current (Imp)	A	10.64	10.71	10.77	10.84	10.91
Maximum System Voltage	V	ICE 1500VDC/UL1500(VDC)				
Maximum Series Fuse Rating	A	20				

ELECTRICAL DATA@NOCT	ESM-435H	ESM-440H	ESM-445H	ESM-450H	ESM-455H
Pmax[W]	324.9	328.6	332.3	336.1	339.8
Vmp[V]	38.10	38.30	38.50	38.60	38.80
Imp [A]	8.53	8.59	8.64	8.70	8.75
Voc[V]	45.70	45.80	46.00	46.20	46.40
Isc[A]	9.21	9.27	9.33	9.38	9.43

NOCT:Irradiance:800W/m², Ambient Temperature:20°C,Air Mass:1.5,Wind Speed:1m/s

MECHANICAL SPECIFICATIONS	
Solar Cell Type	Mono Crystalline 166x166mm
Number of Cells	144pcs (24x6)
Module Size	2094*1038*35mm
Weight	23.5kg
Glass	3.2mm tempered glass
Back Sheet	White or Black
Frame	Anodized aluminum alloy ,silver or black
Junction Box	IP68
Quantity of Diodes	3pcs
Cable	4.0mm ² 1100mm
Connector	MC4 Compatible
Wind/Snow Load	3600pa/5400pa

TEMPERATURE CHARACTERISTIC	
NMOT (Nominal Module Operating Temperature)	41°C (±3°C)
Temperature Coefficient of P _{MAX}	- 0.36%/°C
Temperature Coefficient of U _{OC}	- 0.26%/°C
Temperature Coefficient of I _{SC}	0.04%/°C

MAXIMUM RATINGS	
Operational Temperature	-40 to +85°C
Maximum System Voltage	1500V DC(IEC) 1500V DC (UL)
Max Series Fuse Rating	20A
Snow Load	5400 Pa (3600 Pa)
Wind Load	3600 Pa (1600 Pa)

PACKAGING CONFIGURATION	
Modules per box:	30 pieces
Number per 20GP:	275 pieces
Modules per 40' HQ:	660 pieces

*design load with safety factor 1.5
(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)