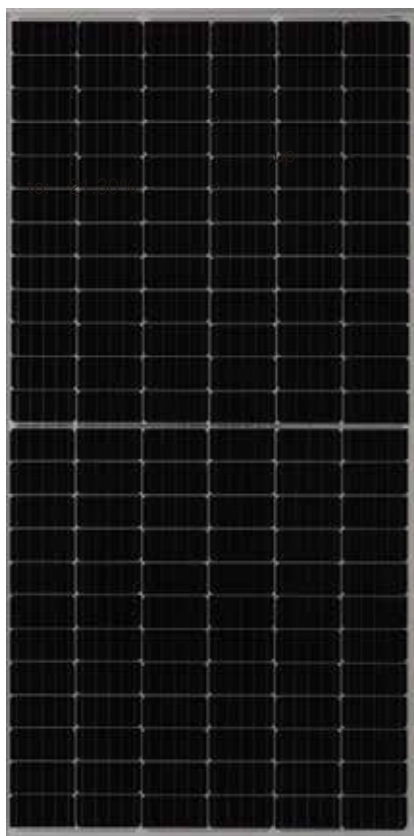


PERC Half Cut bifacial Mono Crystalline Solar Module ESM 530/535/540/545/550H



RALOS

AURINKOVOIMALAT



Excellent module efficiency



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

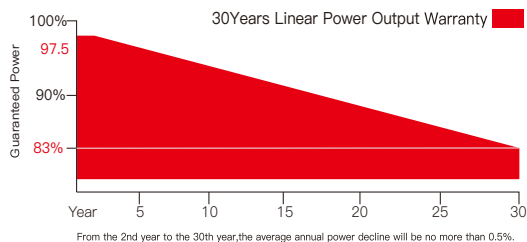


Applicable to harsh environment of deserts, farmlands and seashores



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

Ralos Eco Oy

Pellavantori 1 LH 1
33100 Tampere

020 155 2222
Y: 2853297-3

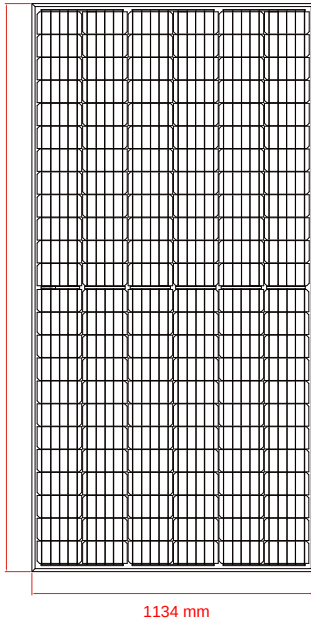
info@ralos.fi
www.ralos.eco

EN

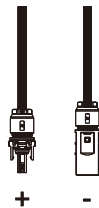
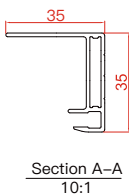
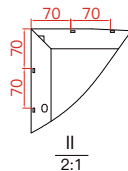
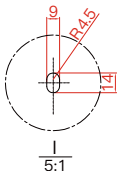
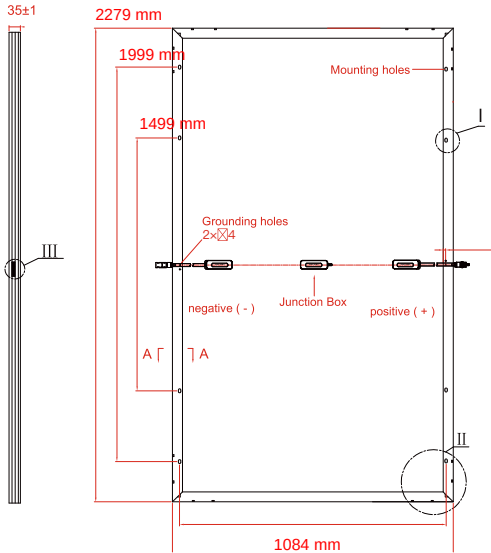
The specifications are subject to change without prior notice.



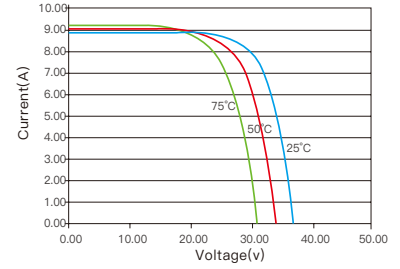
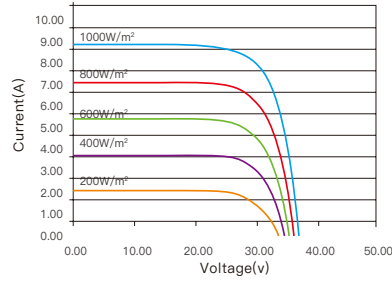
2279 mm



1134 mm



IV CURVE



ELECTRICAL SPECIFICATION	Unit	ESM-530H	ESM-535H	ESM-540H	ESM-545H	ESM-550H
Maximum Power (Pmax)	W	530	535	540	545	550
Module Efficiency	%	20.5	20.7	20.9	21.1	21.3
Open Circuit Voltage (Voc)	V	49.25	49.40	49.55	49.70	49.85
Short Circuit Current (Isc)	A	13.73	13.79	13.85	13.91	13.97
Maximum Power Voltage (Vmp)	V	41.40	41.55	41.70	41.85	42.00
Maximum Power Current (Imp)	A	12.81	12.88	12.95	13.03	13.09
Maximum System Voltage	V	ICE 1500VDC/UL1500(VDC)				
Maximum Series Fuse Rating	A	20				

ELECTRICAL DATA@NOCT	ESM-530H	ESM-535H	ESM-540H	ESM-545H	ESM-550H
Pmax[W]	394	398	402	405	409
Vmp[V]	37.84	37.91	38.08	38.25	38.42
Imp [A]	10.42	10.50	10.55	10.60	10.65
Voc[V]	46.50	46.57	46.65	46.74	46.84
Isc[A]	11.07	11.14	11.19	11.26	11.33

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

MECHANICAL SPECIFICATIONS

Solar Cell Type	Mono Crystalline 182x91mm
Number of Cells	144pcs (24x6)
Module Size	2279x1134x35mm
Weight	28.5kg
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

PACKAGING CONFIGURATION

Modules per box:	31pcs
Number per 20GP:	186pcs
Modules per 40' HQ:	620pcs

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)

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