



390-410w

Mars Series:JH(390-410)-108M

Half-Cell High Efficiency PV Module

21.0%

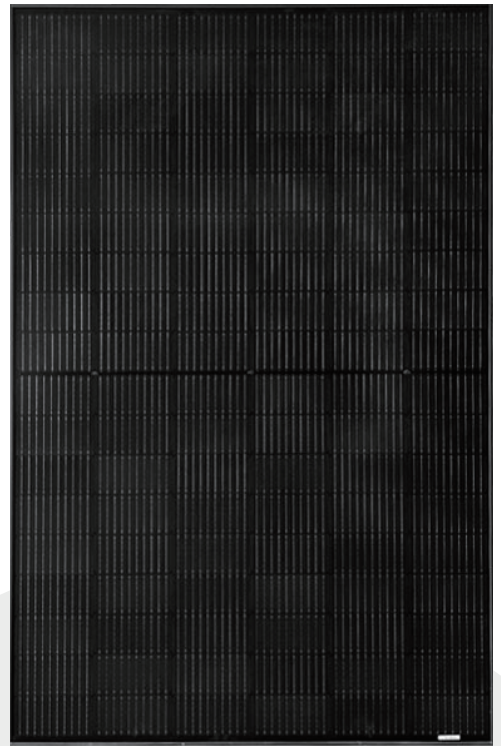
Maximum Efficiency

0~5W

Positive Power Tolerance

30years

Product Warranty



Key Features



BLC TECHNOLOGY

Better light trapping and current collection technology with patent to improve module power output and reliability.



PID Resistance

PID:Selected material and stringent quality system ensure PID free.



Salt-resistant & Ammonia-Resistant

TIANTECH Solar panels are salt mist and ammonia resistance certified.



Hot Technology

The module with Hot 2.0 technology has better reliability and lower LID/LETID.



Enhanced Mechanical Load

Heavy snow load up to 5400 Pa, wind load up to 2400 Pa.



High Reliability

TIANTECH Solar has complete testing facilities for tests of UV,TC,HF,EL,etc tests.100% of TIANTECH Solar panels were tested & minimumly twice EL tests guaranteed.

Comprehensive

Products and System Certificates

IEC61215 / IEC61730 / CE / INMETRO

ISO9001:2015 / Quality management system

ISO14001:2015 / Standards for environmental management system

OHSAS18001:2007 / International standards for occupational health&safety

SINO SOLAR LAB Certified factory

Warranty

30 years

Linear power output warranty

-12 years minimum 92% power output

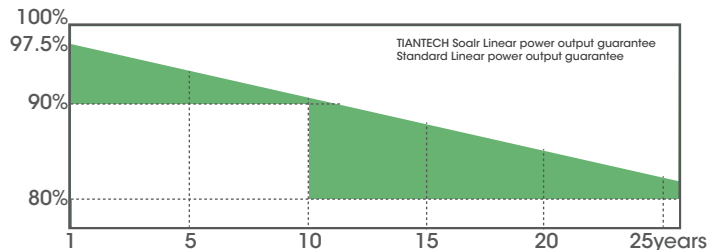
-30 years minimum 83% power output

12 years

Product warranty on materials and workmanship

According to the applicable Einnova Solarline

Limited Warranty Statement



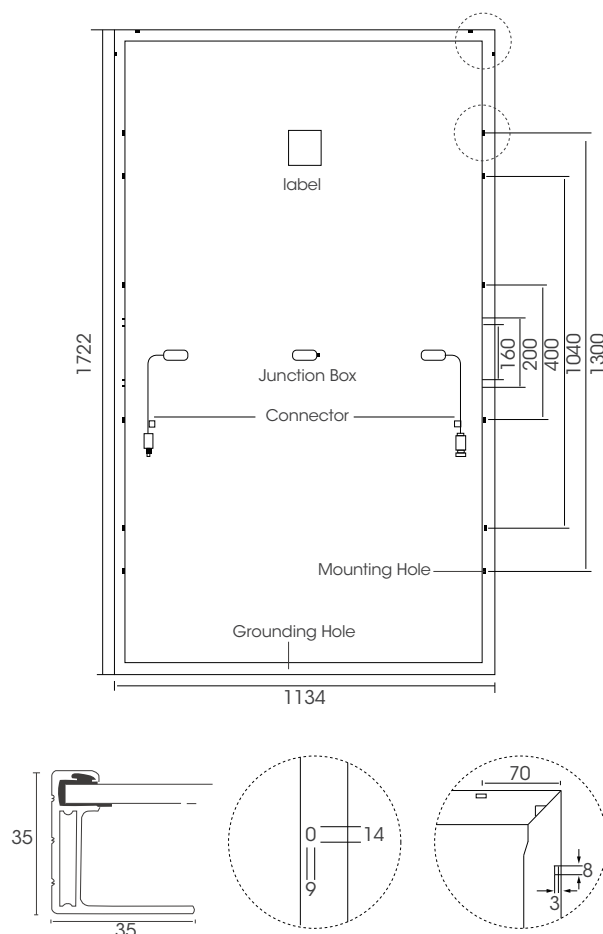
MECHANICAL SPECIFICATION

Cells Type	182x91mm
Dimension (LxWxT)	1722x1134x35mm
Weight	20.5kg
Cable	4.0mm ² , Portrait: 350mm(+)/350mm(-)
(Including connector)	Landscape: 1400mm(+)/1400mm(-)
No. of Cells	108 (6x18)
Glass	3.2mm High Transmission, Antireflection Coating
Junction box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible
Packing	36pcs/pallet, 936pcs/40HQ

OPERATING PARAMETERS

Maximum system voltage	1000V / 1500V DC
Operating Temperature	-40 ~ +85°
Maximum series fuse rating	25A
Snow load, frontside	5400Pa
Wind load, backside	2400Pa
Nominal operating cell temperature	45C ± 2C
Application level	Class A

DESIGN



ELECTRICAL CHARACTERISTICS(STC)

Module Type	JH(390-410)-108M				
Maximum Power (Pmax)	390W	395W	400W	405W	410W
Open-circuit Voltage (Voc)	36.85V	36.98V	37.07V	37.23V	37.32V
Maximum Power Voltage (Vmp)	30.64V	30.84V	31.01V	31.21V	31.45V
Short-circuit Current (Isc)	13.61A	13.70A	13.79A	13.87A	13.95A
Maximum Power Current (Imp)	12.73A	12.81A	12.90A	12.98A	13.04A
Module Efficiency (%)	20.0%	20.2%	20.5%	20.8%	21.0%
Power Tolerance	0~+5W				
Temperature Coefficient of Isc	0.05%/C				
Temperature Coefficient of Voc	-0.31%/C				
Temperature Coefficient of Pmax	-0.35%/C				

Standard Test Environment: Irradiance 1000W/m², Cell temperature 25 C, Spectrum AM1.5

ELECTRICAL CHARACTERISTICS(NOCT)

Module Type	JH(390-410)-108M				
Maximum Power (Pmax)	294W	298W	302W	306W	310W
Open-circuit Voltage (Voc)	34.62V	34.75V	34.88V	35.12V	35.23V
Maximum Power Voltage (Vmp)	28.87V	29.08V	29.26V	29.47V	29.72V
Short-circuit Current (Isc)	10.89A	10.96A	11.03A	11.10A	11.16A
Maximum Power Current (Imp)	10.18A	10.25A	10.32A	10.38A	10.43A

Standard Test Environment: Irradiance 800W/m², Ambient temperature 20 C, Spectrum AM1.5, Wind speed 1m/s



430-460w

Mars Series:JH(430-460)-120M

Half-Cell High Efficiency PV Module

21.24%

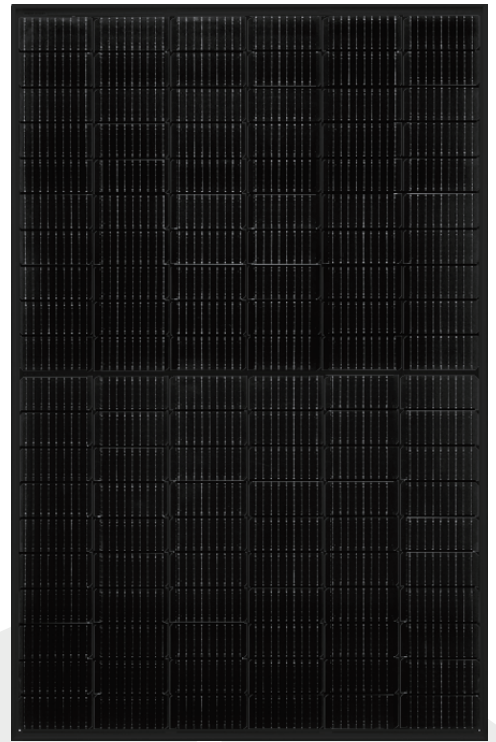
Maximum Efficiency

0~5W

Positive Power Tolerance

30years

Product Warranty



Key Features



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SINO SOLAR LAB Certified factory

Warranty

30 years

Linear power output warranty

-12 years minimum 92% power output

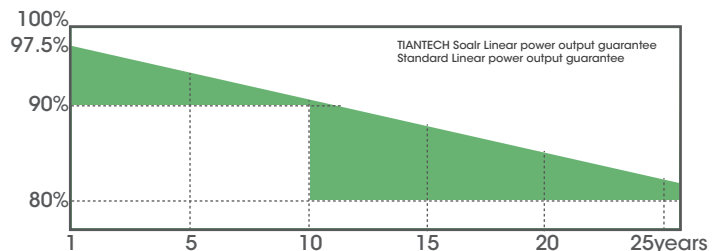
-30 years minimum 83% power output

12 years

Product warranty on materials and workmanship

According to the applicable Einnova Solarline

Limited Warranty Statement



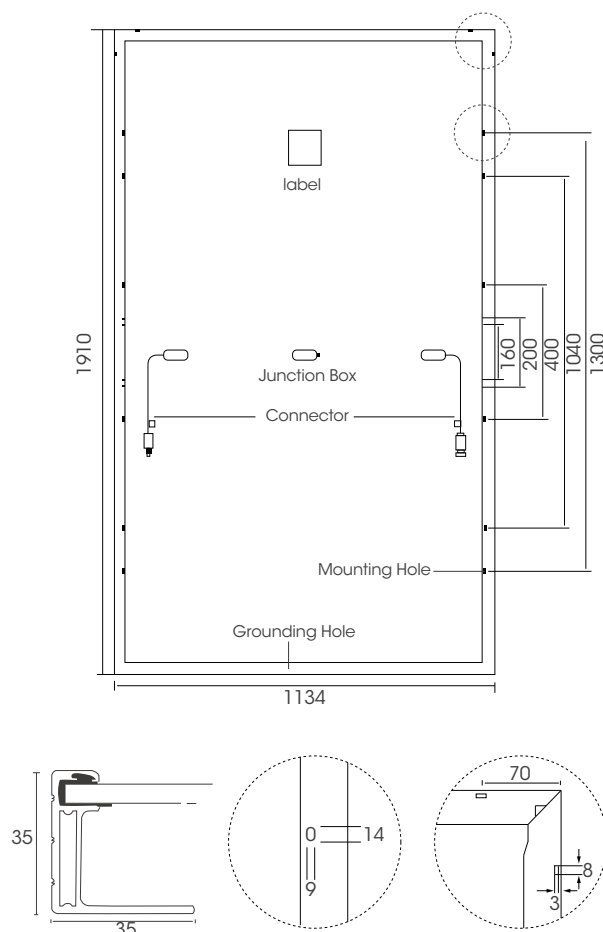
MECHANICAL SPECIFICATION

Cells Type	182x91mm
Dimension (LxWxT)	1910x1134x35mm
Weight	24kg
Cable	4.0mm ² , Portrait: 350mm(+) / 350mm(-)
(Including connector)	Landscape: 1400mm(+) / 1400mm(-)
No. of Cells	120 (6x20)
Glass	3.2mm High Transmission, Antireflection Coating
Junction box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible
Packing	31pcs/pallet, 744pcs/40HQ

OPERATING PARAMETERS

Maximum system voltage	1000V / 1500V DC
Operating Temperature	-40 ~ +85°
Maximum series fuse rating	20A
Snow load, frontside	5400Pa
Wind load, backside	2400Pa
Nominal operating cell temperature	45C ± 2C
Application level	Class A

DESIGN



ELECTRICAL CHARACTERISTICS(STC)

Module Type	JH(430-460)-120M						
Maximum Power (Pmax)	430W	435W	440W	445W	450W	455W	460W
Open-circuit Voltage (V _{oc})	40.8V	41.0V	41.2V	41.4V	41.6V	41.8V	42.0V
Maximum Power Voltage (V _{mp})	34.1V	34.3V	34.5V	34.8V	35.0V	35.2V	35.5V
Short-circuit Current (I _{sc})	13.42A	13.48A	13.54A	13.60A	13.66A	13.72A	13.78A
Maximum Power Current (I _{mp})	12.62A	12.68A	12.74A	12.80A	12.86A	12.91A	12.97A
Module Efficiency (%)	19.85%	20.08%	20.31%	20.55%	20.78%	20.01%	21.24%
Power Tolerance	0~+5W						
Temperature Coefficient of I _{sc}	0.05%/C						
Temperature Coefficient of V _{oc}	-0.31%/C						
Temperature Coefficient of P _{max}	-0.35%/C						

Standard Test Environment: Irradiance 1000W/m², Cell temperature 25 C , Spectrum AM1.5

ELECTRICAL CHARACTERISTICS(NOCT)

Module Type	JH(430-460)-120M						
Maximum Power (Pmax)	320W	324W	327W	331W	335W	339W	342W
Open-circuit Voltage (V _{oc})	38.3V	38.5V	38.6V	38.8V	39.0V	39.2V	39.4V
Maximum Power Voltage (V _{mp})	32.0V	32.2V	32.4V	32.6V	32.8V	33.0V	33.3V
Short-circuit Current (I _{sc})	10.84A	10.89A	10.94A	10.99A	11.04A	11.09A	11.13A
Maximum Power Current (I _{mp})	10.01A	10.06A	10.11A	10.15A	10.20A	10.24A	10.29A

Standard Test Environment: Irradiance 800W/m², Ambient temperature 20 C , Spectrum AM1.5, Wind speed 1m/s



520-550W

Mars Series: JH(520-550)-144M

Half-Cell High Efficiency PV Module

21.28%

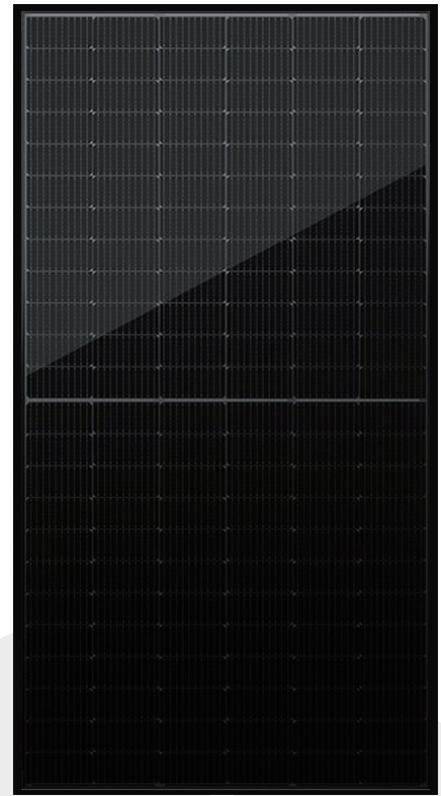
Maximum Efficiency

0~5W

Positive Power Tolerance

30years

Product Warranty



Key Features



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Enhanced Mechanical Load

Heavy snow load up to 5400 Pa, wind load up to 2400 Pa.



High Reliability

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Comprehensive

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ISO9001:2015 / Quality management system

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SINO SOLAR LAB Certified factory

Warranty

30 years

Linear power output warranty

-12 years minimum 92% power output

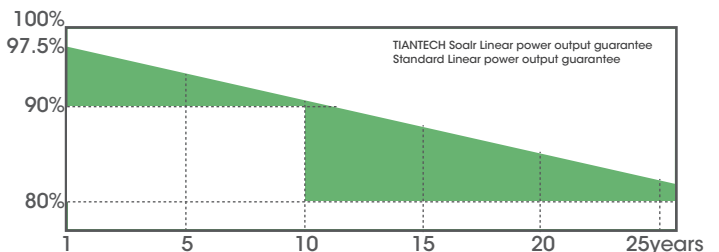
-30 years minimum 83% power output

12 years

Product warranty on materials and workmanship

According to the applicable Einnova Solarline

Limited Warranty Statement



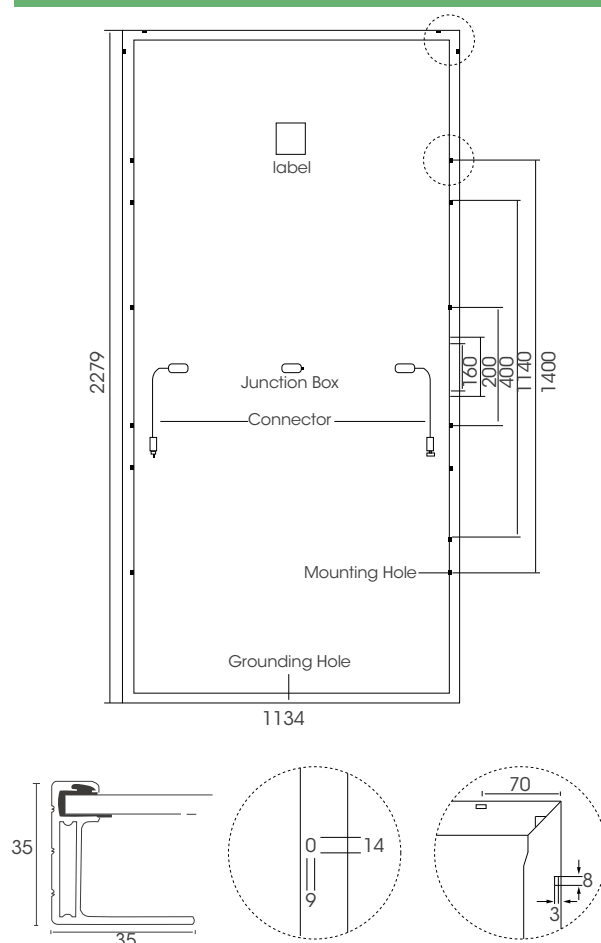
MECHANICAL SPECIFICATION

Cells Type	182x91mm
Dimension (LxWxT)	2279x1134x35mm
Weight	29kg
Cable	4.0mm ² , Portrait: 350mm(+)/350mm(-)
(Including connector)	Landscape: 1400mm(+)/1400mm(-)
No. of Cells	144 (6x24)
Glass	3.2mm High Transmission, Antireflection Coating
Junction box	IP68, 3 Bypass Diodes
Connector	MC4 Compatible
Packing	31 pcs/pallet, 620 pcs/40HQ

OPERATING PARAMETERS

Maximum system voltage	1000V / 1500V DC
Operating Temperature	-40 ~ +85°
Maximum series fuse rating	25A
Snow load, frontside	5400Pa
Wind load, backside	2400Pa
Nominal operating cell temperature	45C ± 2C
Application level	Class A

DESIGN



ELECTRICAL CHARACTERISTICS(STC)

Module Type	JH(520-550)-144M						
Maximum Power (Pmax)	520W	525W	530W	535W	540W	545W	550W
Open-circuit Voltage (V _{oc})	49.0V	49.2V	49.4V	49.6V	49.8V	50.0V	50.2V
Maximum Power Voltage (V _{mp})	41.2V	41.4V	41.6V	41.8V	42.0V	42.2V	42.4V
Short-circuit Current (I _{sc})	13.42A	13.48A	13.54A	13.60A	13.66A	13.72A	13.78A
Maximum Power Current (I _{mp})	12.62A	12.68A	12.74A	12.80A	12.86A	12.91A	12.97A
Module Efficiency (%)	20.12%	20.31%	20.51%	20.70%	20.89%	21.09%	21.28%
Power Tolerance	0~+5W						
Temperature Coefficient of I _{sc}	0.05%/C						
Temperature Coefficient of V _{oc}	-0.31%/C						
Temperature Coefficient of P _{max}	-0.35%/C						

Standard Test Environment: Irradiance 1000W/m², Cell temperature 25 C, Spectrum AM1.5

ELECTRICAL CHARACTERISTICS(NOCT)

Module Type	JH(520-550)-144M						
Maximum Power (Pmax)	387W	391W	394W	398W	402W	405W	409W
Open-circuit Voltage (V _{oc})	46.0V	46.1V	46.3V	46.5V	46.7V	46.9V	47.1V
Maximum Power Voltage (V _{mp})	38.6V	38.8V	39.0V	39.2V	39.4V	39.6V	39.8V
Short-circuit Current (I _{sc})	10.84A	10.89A	10.94A	10.99A	11.04A	11.09A	11.13A
Maximum Power Current (I _{mp})	10.01A	10.06A	10.11A	10.15A	10.20A	10.24A	10.29A

Standard Test Environment: Irradiance 800W/m², Ambient temperature 20 C, Spectrum AM1.5, Wind speed 1m/s

