

# MESSENGER

KSHC-144 M



144 cell

Monocrystalline  
PERC

21,28%

Maximum Efficiency

0 ~ +3%

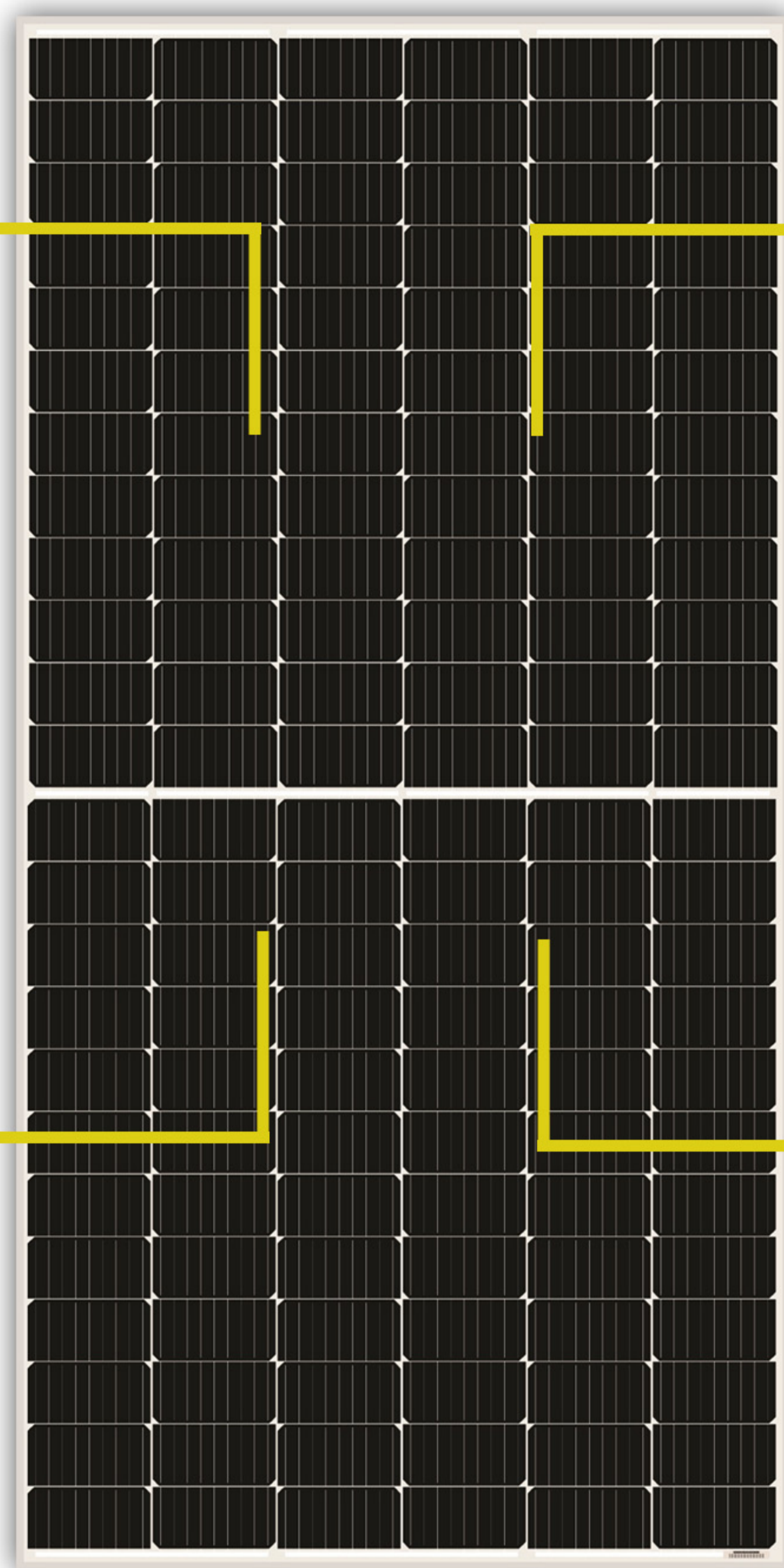
Positive Power Tolerance

525 - 550

Peak Power Range

## STRONG MECHANICAL LOAD CAPACITY

Certified for 5400Pa snow  
and 2400Pa wind loads test



## LOW LIGHT PERFORMANCE

With PERC technology.  
Increases performance in  
low-light environments

## ANTI-PID

Resistance to degradation  
induced by potential



## 9 BUSBAR SOLAR CELL

New technology for better  
efficiency

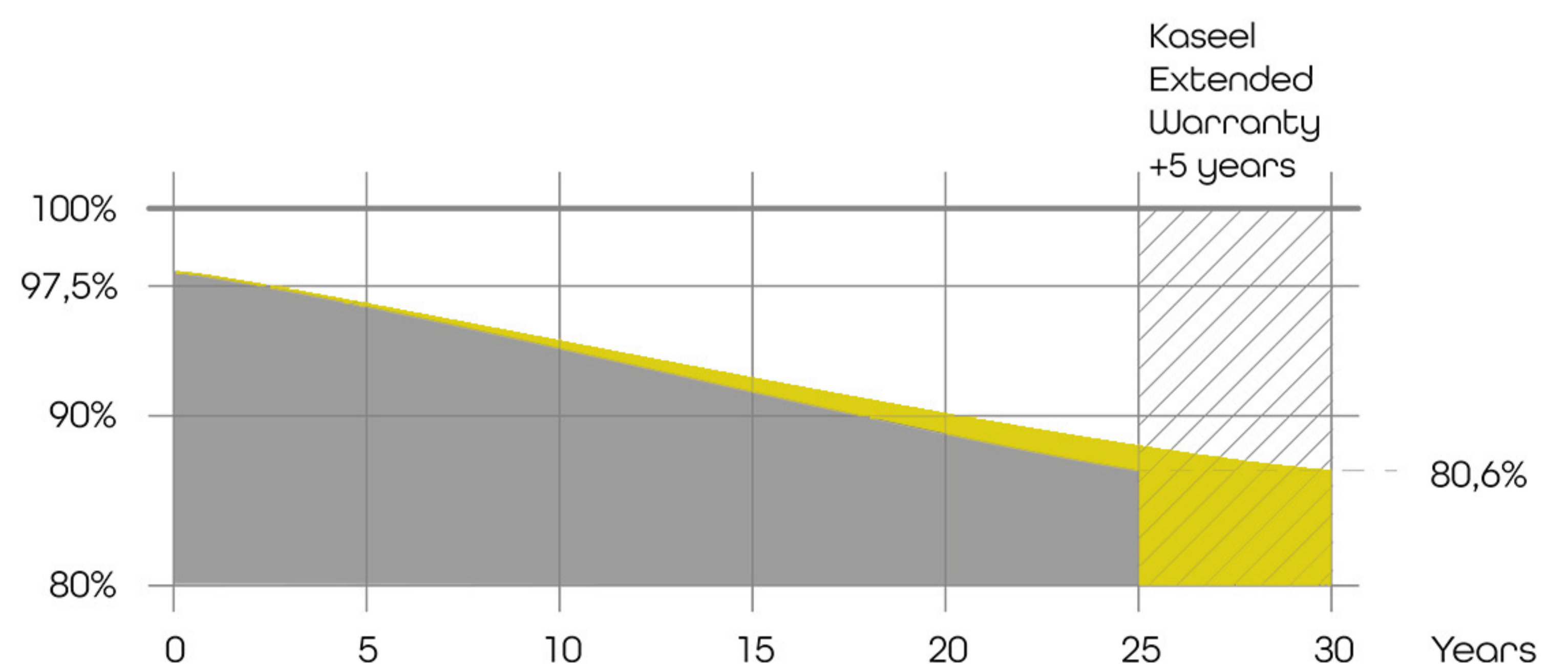
## SPECIAL WARRANTY



80,6% of the nominal  
power output



Limited product  
warranty

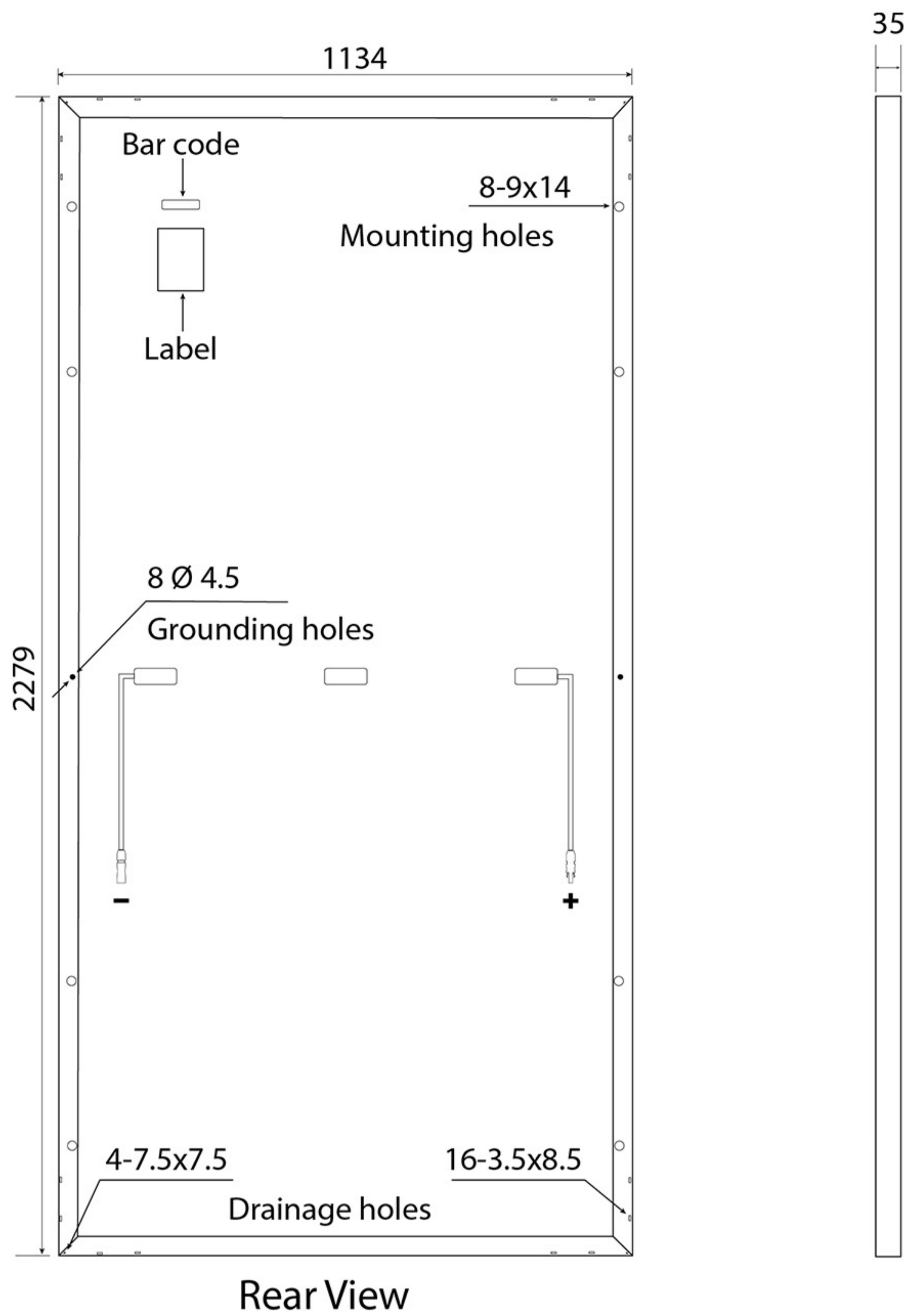


■ Linear performance warranty from Kaseel Solar.  
■ Standard performance warranty.



[www.kaseel.com](http://www.kaseel.com)  
[support@kaseel.com](mailto:support@kaseel.com)

# ENGINEERING DRAWINGS



Specifications in this datasheet are subject to change without prior notice.

# MECHANICAL CHARACTERISTICS

Cell type	Monocrystalline MBB Mono  182x91mm
Number of cells	144 (6x24)
Module dimensions	2279x1134x35 mm
Weight	29kg
Front cover	3.2mm. Low Iron Tempered Glass
Frame	Anodized Aluminum Alloy
Junction box	IP68, 3 diodes
Cable	4mm <sup>2</sup> Length 1400mm or customized
Connector	MC4 compatible
Operating Temperature	-40°C ~+85°C
Maximum System Voltage	1000/1500V DC
Fire Resistance Rating	Type 1/Class C (IEC61730)
Maximum Series Fuse Rating	25A

# TEMP. CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	44°C ±2°C
Temperature Coefficients of Pmax	-0.36%/°C
Temperature Coefficients of VOC	-0.28%/°C
Temperature Coefficients of ISC	0.05%/°C

# PACKAGING

Standard packaging	31pcs/pallet
Module quantity per 40' container	620pcs

# ELECTRICAL CHARACTERISTICS AT STC

Nominal Power (Pmax)	525W	530W	535W	540W	545W	550W
Open Circuit Voltage (VOC)	48.8V	49.0V	49.2V	49.4V	49.6V	49.8V
Short Circuit Current (ISC)	13.69A	13.75A	13.81A	13.87A	13.93A	13.99A
Voltage at Nominal Power (Vmp)	40.6V	40.8V	41.0V	41.2V	41.4V	41.6V
Current at Nominal Power (Imp)	12.89A	12.94A	13.05A	13.11A	13.17A	13.23A
Module Efficiency (%)	20.30	20.50	20.70	20.90	21.09	21.28

STC: Irradiance 1000W/m<sup>2</sup>, Cell temperature 25°C, AM1.5

# ELECTRICAL CHARACTERISTICS AT NOCT

Nominal Power (Pmax)	391W	395W	399W	403W	407W	411W
Open Circuit Voltage (VOC)	45.7V	45.9V	46.1V	46.3V	46.5V	46.7V
Short Circuit Current (ISC)	11.03A	11.18A	11.13A	11.18A	11.23A	11.28A
Voltage at Nominal Power (Vmp)	37.8V	38.0V	38.2V	38.4V	38.6V	38.8V
Current at Nominal Power (Imp)	9.34A	9.39A	10.44A	10.49A	10.54A	10.58A

NOCT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, Wind Speed 1 m/s

# CURVES

