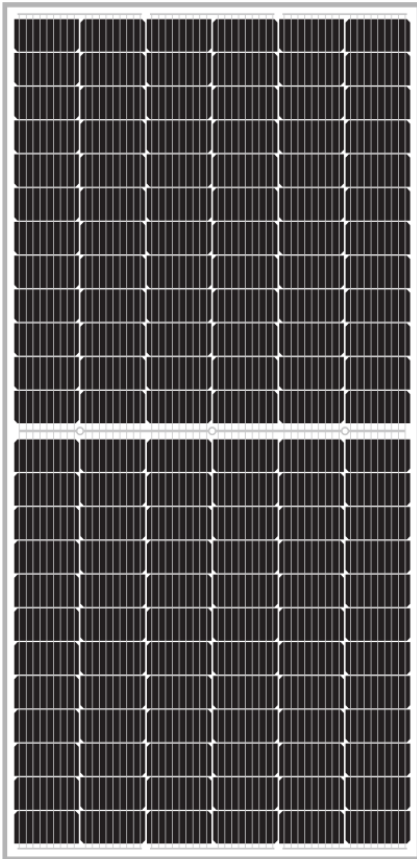
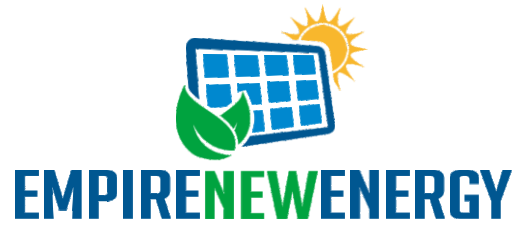
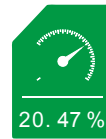


EMP-\*\*\*S144A  
 EMP-\*\*\*S144AH  
 POWER OUTPUT RANGE  
**420-445**



**POWER TOLERANCE**

0-+5W



**MAXIMUM EFFICIENCY**

20.47%



Certified to withstand the most challenging environmental conditions

- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h



- PID resistant and free of snail trails
- Increased module robustness to minimize micro-cracks



Pass class A fire test



25 Year Linear Power Warranty

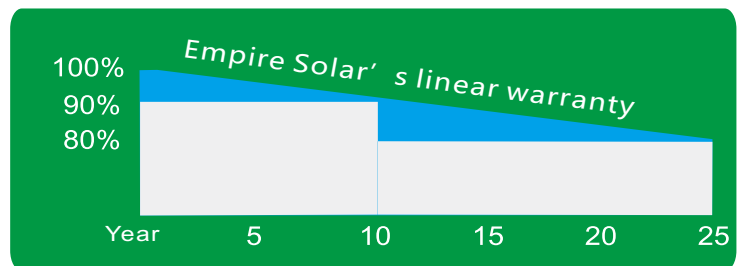
**Comprehensive Products And System Certificates**

IEC61215/IEC61730/UL1703/IEC61701/IEC62716  
 ISO 9001: Quality Management System  
 ISO 14001: Environmental Management System  
 OHSAS 18001: Occupation Health and Safety Management System



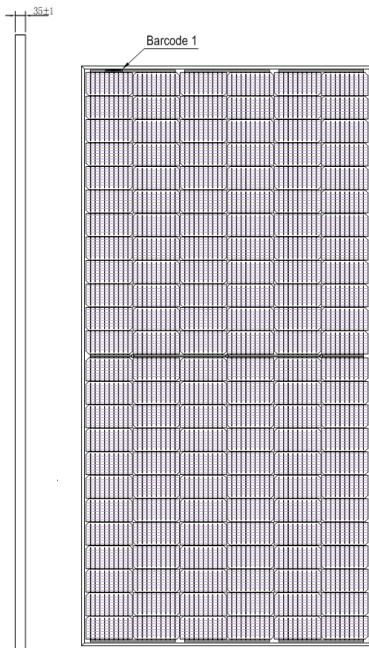
**LINEAR PERFORMANCE WARRANTY**

10 Year Product Warranty - 25 Year Linear Power Warranty





EMP- ( 420-445 ) S144A  
EMP- ( 420-445 ) S144AH



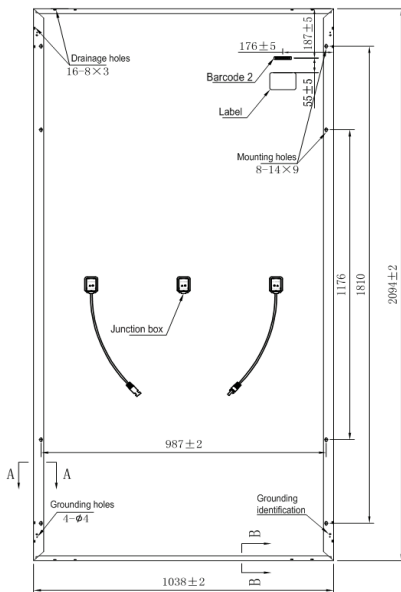
## ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)	420	425	430	435	440	445
Power Output Tolerance-PMAX (W)	0~+5					
Maximum Power Voltage-VMPP (V)	40.2V	40.4V	40.6V	40.8V	41.0V	41.2V
Maximum Power Current-IMPP (A)	10.45A	10.52A	10.60A	10.67A	10.74A	10.81A
Open Circuit Voltage-VOC (V)	49.1V	49.3V	49.5V	49.7V	49.9V	50.1V
Short Circuit Current-ISC (A)	11.04A	11.11A	11.19A	11.26A	11.33A	11.40A
Module Efficiency (%)	19.32%	19.55%	19.78%	20.01%	20.24%	20.47%

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

## MECHANICAL DATA

Solar Cells	Monocrystalline 166 × 83mm 144
Cell Orientation	cells (6 × 24) ) 2094 × 1038 × 35mm
Module Dimensions	
Weight	24.0kg
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Backsheet	White
Frame	Silver Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches)
Connector	Mc4 Compatible



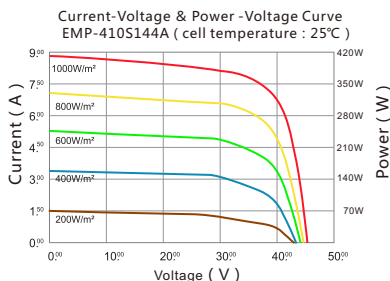
## TEMPERATURE RATINGS

Temperature Coefficient of Pmax	-0.36%/°C
Temperature Coefficient of Voc	-0.29%/°C
Temperature Coefficient of Isc	0.05%/°C

## MAXIMUM RATINGS

Operational Temperature	-40 + 85°C
Maximum System Voltage	1000V/1500V
Max Series Fuse Rating	20A

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)



## WARRANTY

10 year Product Workmanship Warranty  
25 year Linear Power Warranty

## PACKAGING CONFIGURATION

Modules per box: 30 pieces  
Modules per 40' container: 660 pieces