



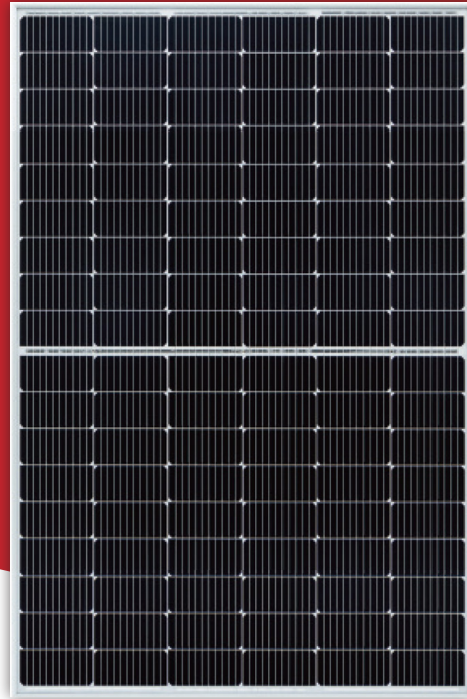
# SUNOVA SOLAR

Leading one-stop PV Supplier

## HI-KILO

# 400-415W

High Efficiency Half-Cell Mono PERC Module



Excellent low irradiance performance.



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



Industry leading lowest thermal co-efficient of power.



Optimized electrical design and lower operating current for reduced hot spot loss and better temperature coefficient.

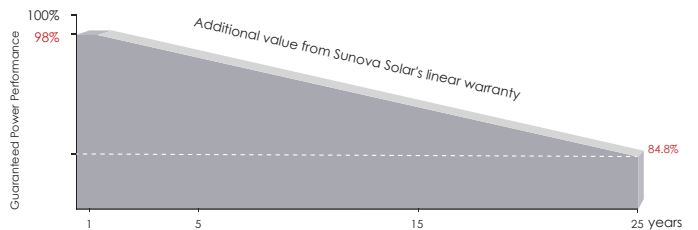


Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).



100% triple EL test enabling remarkable reduction of hidden crack rate of modules

## LINEAR PERFORMANCE WARRANTY



**15** years

Product quality & process guarantee

**25** years

Linear power guarantee

**0.55** %

Annual Degradation Over 25 years

## COMPREHENSIVE CERTIFICATES



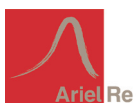
ISO 9001: Quality Management System

ISO 14001: Environmental Management System Standard

OHSAS 18001: International Occupational Health and Safety Assessment System Standard

\* Different markets have different certification requirements. Also, the products are under rapid innovation. Please confirm the certification status with regional sales representatives.

## PERFORMANCE INSURANCE



**中国平安**

PING AN P & C INSURANCE CO CN SZN

## ELECTRIC CHARACTERISTICS

Model of modules	SS-400-54MDH		SS-405-54MDH		SS-410-54MDH		SS-415-54MDH	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum power — $P_{mp}$ (W)	400	298	405	302	410	305	415	309
Open-circuit voltage — $V_{oc}$ (V)	37.18	34.95	37.33	35.09	37.68	35.42	37.79	35.59
Short-circuit current — $I_{sc}$ (A)	13.39	10.85	13.44	10.89	13.59	11.01	13.72	11.12
Maximum power voltage — $V_{mp}$ (V)	31.42	29.22	31.55	29.35	31.84	29.61	31.94	29.72
Maximum power current — $I_{mp}$ (A)	12.74	10.21	12.84	10.29	12.88	10.31	13.01	10.42
Module efficiency — $\eta_m$ (%)	20.5%		20.7%		21.0%		21.2%	
Power tolerance (W)	(0,+5)							
Maximum system voltage (V)	1500							
Maximum rated fuse current (A)	25							
Current operating temperature (°C)	-40~+85 °C							

**STC** (Standard Testing Conditions): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25 °C, Spectra at AM1.5

**NOCT** (Nominal Operating Cell Temperature): Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/s

## STRUCTURAL CHARACTERISTICS

Module dimensions (L*W*H)	1724 x 1134 x 30 mm
Weight	21.5 kg
Number of cells	108 cells
Cell	PERC Monocrystalline 182x91 mm
Glass	Tempered, 3.2 mm AR, High transmittance, Low iron
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Output wire	4.0 mm <sup>2</sup> , wire length: 300 mm or Customized Length
Connector	MC4 Compatible
Mechanical load	Snow load: 5400 Pa / Wind load: 2400 Pa

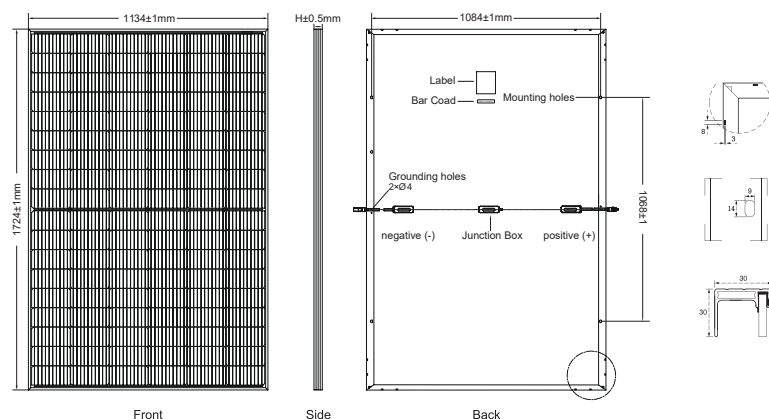
## TEMPERFORMANCE RATINGS

Temperature coefficient ( $P_{max}$ )	-0.35 %/°C
Temperature coefficient ( $V_{oc}$ )	-0.27 %/°C
Temperature coefficient ( $I_{sc}$ )	+0.05 %/°C
Nominal operating cell temperature	45±2 °C

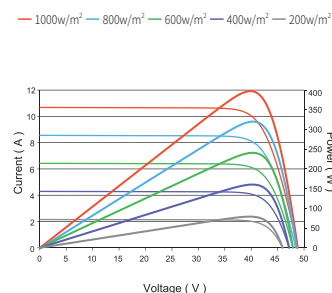
## PACKAGING CONFIGURATION

Container	40HQ
Quantity/pallet	36
Pallets/container	26
Quantity/container	936

## MODULE DIMENSIONS (MM)



Current-Voltage & Power-Voltage Curves (400W)



Temperature Dependence of  $I_{sc}$ ,  $V_{oc}$ ,  $P_{max}$

