

# Mono PERC 10BB - 455Wp

N455M10120 – 430 | 435 | 440 | 445 | 450 | 455  
**Maximum Module Efficiency – 21.00%**

### Durability Against Extreme Environmental Conditions

Severe salt mist & blown sand resistance for seaside, farm and desert.  
 Anti-reflective & Anti-soiling surface minimize power loss from dirt and dust.



### PID Resistance

Excellent Anti-PID performance guarantee limited power degradation for Mass production.(Potential Induced Degradation) under test conditions.



### High Efficiency

Higher module conversion efficiency(up to 21.00%) benefit from half cell structure(low resistance characteristic).



### Low-light Performance

Advanced glass and cell surface textured design ensure Excellent performance in low-light environment.



### Severe Weather Resilience

Excellent Snow load 5400Pa resistance.  
 Excellent Wind load 2400Pa resistance.



### Certifications :



ISO 9001:2015  
 ISO 14001:2015  
 ISO 45001:2018



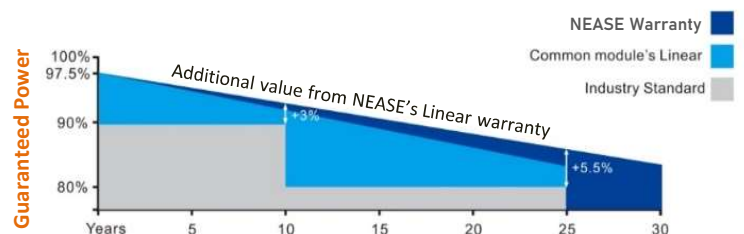
IS 14286:2010/IEC 61215 : 2005  
 IS/IEC 61730 (Part 1) : 2004  
 IS / IEC 61730 (Part 1) : 2004



R-72004740

## LINEAR PERFORMANCE WARRANTY

**12 years Product Warranty / 25 year Linear Power Warranty**



NEASE product warranty is 12 years instead of 10 years given by many competitors.

• NEASE established in 2008, is Hi-tech corporation with its core business in R&D manufacturing, and sale of high efficiency silicon based solar modules.

• As one of the leading PV enterprises in the world, NEASE has delivered more than 400MW Solar Photo Voltaic Modules to residential, commercial, utility and off-grid projects all around the world.

• Through strict selection of raw materials, stringent quality control and rigorous test in state of the art facilities in Gandhinagar and Ahmedabad, INDIA. NEASE has always committed to higher efficiency, more stable and better cost performance products.

## Electrical characteristics at Standard Test Conditions (STC)

MODEL	N430M10120	N435M10120	N440M10120	N445M10120	N450M10120	N455M10120
Maximum Power - Pmax	430	435	440	445	450	455
Open Circuit Voltage – Voc (V)	40.72	40.80	40.95	41.10	41.25	41.40
Short Circuit Current – Isc (A)	13.32	13.34	13.41	13.52	13.62	13.72
Voltage at Maximum Power – Vmp (V)	33.65	33.76	33.91	34.06	34.21	34.36
Current at Maximum Power – Imp (A)	12.78	12.89	12.98	13.07	13.16	13.25
Cell Efficiency	22.20	22.40	22.60	22.80	23.20	23.50
Module Efficiency	19.85	20.08	20.31	20.54	20.77	21.00

\*Standard Test Conditions(STC) : irradiance 1000W/m<sup>2</sup> ; cell temperature 25°C, AM 1.5G. The mentioned Power output is measured and determined by NEASE at its sole and absolute discretion.

## Electrical Characteristics at Nominal Module Operating Temperature (NMOT)

MODEL	N430M10120	N435M10120	N440M10120	N445M10120	N450M10120	N455M10120
Maximum Power - Pmax	323.79	327.70	331.50	335.20	339	342.80
Open Circuit Voltage – Voc (V)	37.59	38.17	38.31	38.45	38.59	38.73
Short Circuit Current – Isc (A)	10.68	10.77	10.82	10.91	10.99	11.07
Voltage at Maximum Power – Vmp (V)	32.02	32.11	32.30	32.41	32.53	32.65
Current at Maximum Power – Imp (A)	10.12	10.21	10.26	10.34	10.42	10.50

\* Nominal Operating Module temperature (NOCT) : irradiance 800W /m<sup>2</sup>; Wind speed 1 m/s, Ambient temperature 20°C.

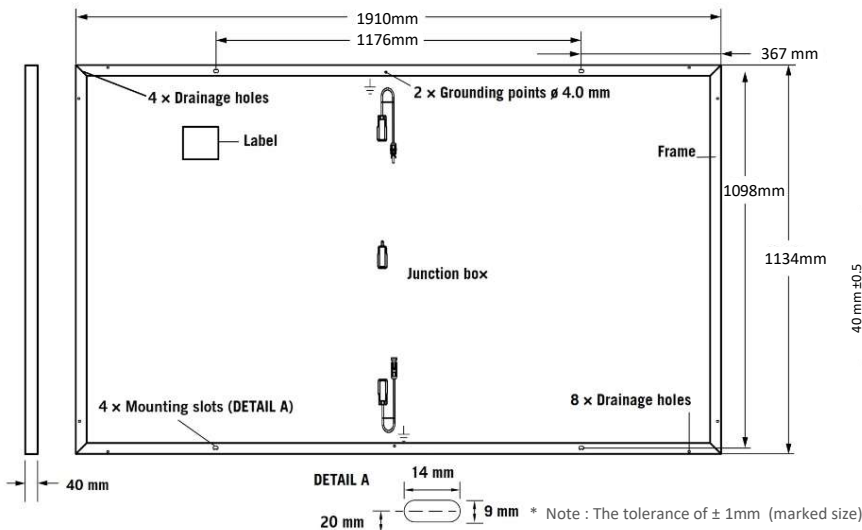
Temperature Characteristics	Maximum Ratings
Voltage Temperature Coefficient $\beta$	- 0.2730 %/°C
Current Temperature Coefficient $\alpha$	+ 0.0437 %/°C
Power Temperature Coefficient $\gamma$	- 0.3348 %/°C
	Maximum system voltage (VDC)
	1500VDC
	Series fuse rating (A)
	25 A
	Reverse Current overload (A)
	40 A

Mechanical characteristics	
Dimensions (mm)	1910 X 1134 X 40 mm
Weight (Kgs)	24.00 Kgs
Front Glass	High Transmittance , Low Iron toughened Glass – 3.2mm Thickness
Cell Encapsulation	EVA ( Ethylene – Vinyl-Acetate)
Back Sheet	Composite Film Tedlar White Back sheet (Optional Transparent Back sheet / Black Back sheet )
Number of Cells	MONO PERC Solar Cells 10-BUSBAR, 91 X 182 mm, 120 Cells , (6X10 Matrix – 2 nos)
Junction Box	IP68, 3 By Pass Diodes, IEC 60529 and Safety Class II
Cable & Connector	2 X 4mm <sup>2</sup> , Compatible with MC4, Positive (+) 400mm / Negative (-)400mm
Frame	Silver Mat Anodized aluminum, Alloy Type 6063 T5

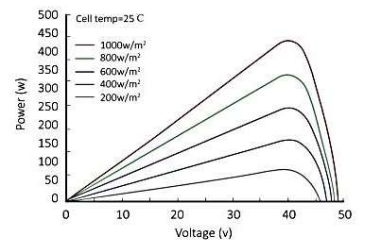
System Design	PACKING CONFIGURATION
Temperature Range	-40°C to 85°C
Wind / Snow load Capacity	2400Pa / 5400 Pa
Application Class	Class A
Safety Class	Class II
	Pieces per Pallet
	26 No's
	Container 20' GP
	208 No's
	Container 40' HC
	572 No's
	Packaging box dimensions ( L X W X H )
	2160X1180X1100mm

Note: Please refer the instruction manual in this entirely before handling, Installing and operating NEASE Solar Modules.

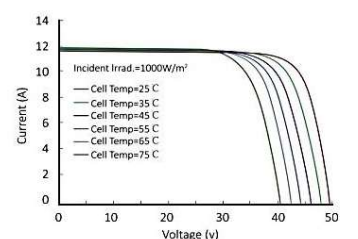
## PHYSICAL CHARACTERISTICS



Power-Voltage Curve (500Wp)



Current-Voltage Curve (500Wp)



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