



# BLACK BUCK Series

'Super High Power 9-Busbar  
MONO PERC Module'

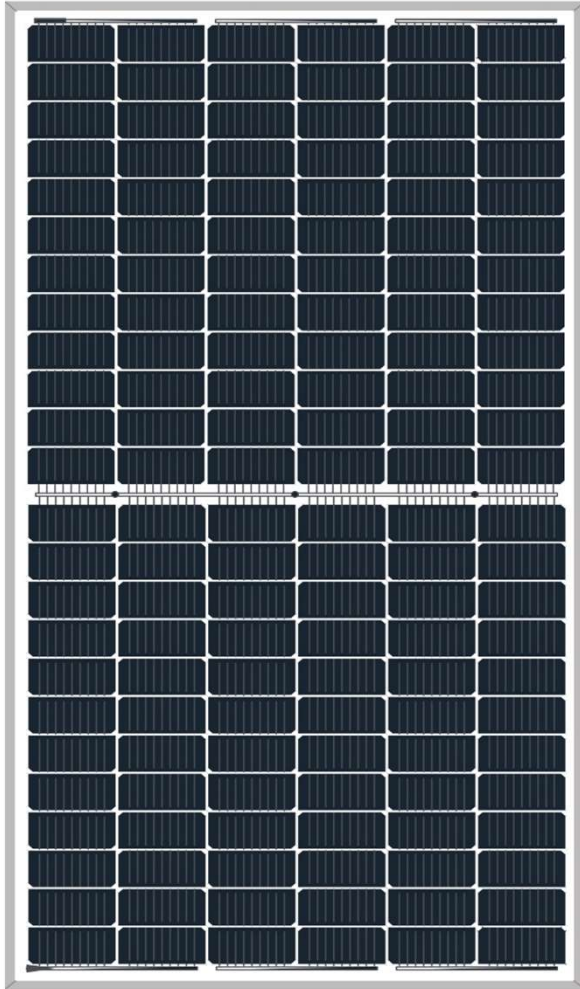
450 Wp  
Maximum  
Power Output

20.28%  
Max Module  
Efficiency

12 Years  
Material & Workmanship  
Warranty

30 Years  
Linear Power  
Warranty

N455M144 - 425 | 430 | 435 | 440 | 445 | 450 | 455



## KEY SALIENT FEATURES



Industry leading conversion efficiency



Positive tolerance up to 0 ~ +5W



Passed salt mist & ammonia corrosion  
blowing sand and hail testing



Certified to withstand wind and snow load



Excellent performance under low light  
conditions



Good temperature co-efficient enables  
better output in high temperature regions



Double Stage 100% EL Inspection  
warranting defect-free Module



Excellent PID resistance



Certified to withstand severe environmental conditions

- Anti-reflective & Anti-soiling surface minimize power loss from dirt and dust.
- Severe salt mist & blown sand resistance for seaside, farm and desert environments.
- Excellent mechanical load 2400Pa & Snow load 5400Pa resistance.

### Certifications :



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



IS 14286:2010/IEC 61215 : 2005  
IS/IEC 61730 (Part 1) : 2004  
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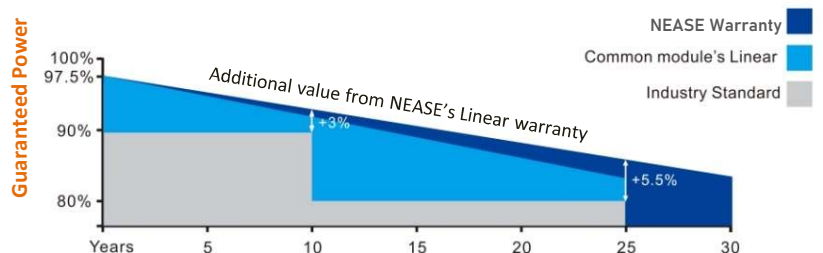
• NEASE established in 2008, is Hi-tech corporation with its core business in R&D manufacturing, and sale of high efficiency silicon based solar modules.

• 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.

## LINEAR PERFORMANCE WARRANTY

12 years Product Warranty / 30 year Linear Power Warranty



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

❖ The loss of output power shall not exceed 0.60% per year.

**NEETY EURO-ASIA SOLAR ENERGY**  
E-153, GIDC, Electronics Estate, Sector - 26,  
Gandhinagar - 382028. Gujarat. India.  
Email: [info@nease.in](mailto:info@nease.in) & [neetyintl@gmail.com](mailto:neetyintl@gmail.com)

## Electrical characteristics at Standard Test Conditions (STC)

MODEL	N425M144	N430M144	N435M144	N440M144	N445M144	N450M144
Maximum Power - Pmax	425	430	435	440	445	450
Open Circuit Voltage – Voc (V)	49.03	49.22	49.42	49.62	49.70	49.76
Short Circuit Current – Isc (A)	11.06	11.18	11.20	11.28	11.32	11.35
Voltage at Maximum Power – Vmp (V)	40.36	40.68	40.79	40.99	41.19	41.32
Current at Maximum Power – Imp (A)	10.53	10.57	10.67	10.74	10.81	10.90
Cell Efficiency	21.60	21.80	22.10	22.40	22.80	23.00
Module Efficiency	19.17	19.39	19.61	19.84	20.06	20.28

\*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	N425M144	N430M144	N435M144	N440M144	N445M144	N450M144
Maximum Power - Pmax	314.6	318.3	322	325.80	329.50	333.20
Open Circuit Voltage – Voc (V)	45.76	45.88	46.08	46.28	46.52	46.76
Short Circuit Current – Isc (A)	8.90	9.0	9.06	9.11	9.16	9.22
Voltage at Maximum Power – Vmp (V)	37.26	37.48	37.68	37.88	38.07	38.26
Current at Maximum Power – Imp (A)	8.45	8.50	8.54	8.59	8.64	8.70

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

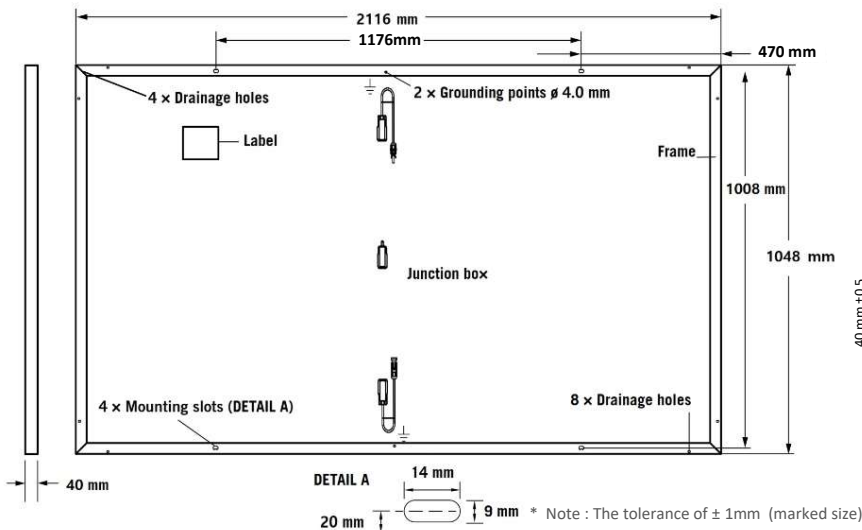
Temperature Characteristics		Maximum Ratings	
Voltage Temperature Coefficient β	-0.36 %/°C	Maximum system voltage (VDC)	1500VDC
Current Temperature Coefficient α	+0.07 %/°C	Series fuse rating (A)	25 A
Power Temperature Coefficient γ	-0.38 %/°C	Reverse Current overload (A)	40 A

Mechanical characteristics	
Dimensions (mm)	2116 X 1048 X 40 mm
Weight (Kgs)	23.60 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 9-BUSBAR, 83 X 166 mm, 144 Cells , (6X12 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

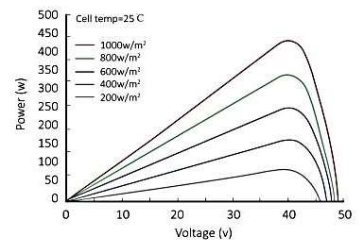
System Design		PACKING CONFIGURATION	
Temperature Range	-40°C to 85°C	Pieces per Pallet	26 No's
Wind / Snow load Capacity	2400Pa / 5400 Pa	Container 20' GP	210 No's
Application Class	Class A	Container 40' HC	572 No's
Safety Class	Class II	Packaging box dimensions ( L X W X H )	2150X1140X1200mm

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

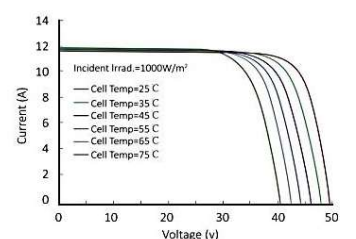
## PHYSICAL CHARACTERISTICS



Power-Voltage Curve (450Wp)



Current-Voltage Curve (450Wp)



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