Navgrun

Nithin Sai Renewables Pvt Ltd

www.navgrun.com

info@navgrun.com

MBB Mono PERC
P-Type M10 Halfcut-cell

NS500B, 525 - 550/1500 V Series

Bi-Facial Glass-Glass

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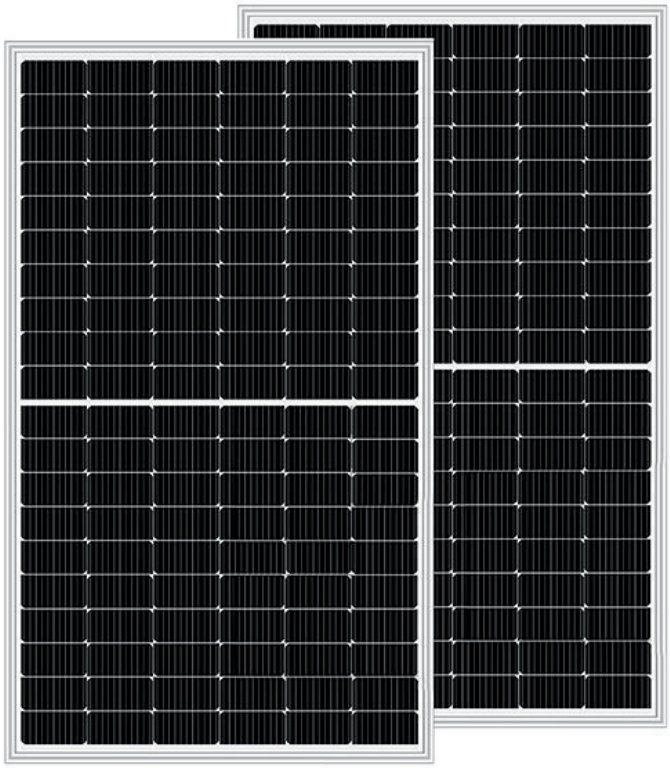

POWER

- Module power from **525 W to 550 W**
- Comprehensive LID/Le TID mitigation technology, up to 50% lower degradation
- Cost effective product for utility power plant
- Less shading effect

RELIABILITY

- Heavy snow load up to 5400 Pa
  Heavy load up to 2400 Pa
- Low temperature coefficient

25 Years
LINEAR PERFORMANCE WARRANTY

12 Years
PRODUCT WARRANTY

ALMM & BIS Approved

Advanced Technology Features

Cylindrical
Tabbing Wire reduces the shadow on active cells and increases the PV module's generation efficiency.

Higher Power Output
Enhanced module output 5-25% generally, bringing significantly lower LCOE and higher IRR.

Field Reliability
Improved due to multi-contacts in the cell, reducing cell stress

Minimal Power Loss
Optimized through low Internal Resistance.

Industry Leading
30 Years linear performance warranty.

PID Resistance
Excellent Anti-PID performance guarantee via optimised mass-production process and materials control.

Bypass Diodes
Within split JB enable PV module to perform in partial shadow conditions.

Strong Quality
Check and Quality Assurance with Pre and Post EL tests.

Certifications

IEC 61215 2021, 61730 1-2 2016, 61701 (Sev 6 ed. 3), 62716	BIS Certified
IEC 60068	CE Certified
IEC TS 62804	LeTID
IEC 61853-1	UL 61730 2022
IEC 61853-2	

R-62005509

TECHNICAL DATA

MBB Mono PERC P-Type M10 Halfcut-cell

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Electrical Parameters at STC

Model	NS-P10-144HG-525-550 Series						
Module Type	UoM	NS-P10-144HG-525	NS-P10-144HG-530	NS-P10-144HG-535	NS-P10-144HG-540	NS-P10-144HG-545	NS-P10-144HG-550
Maximum Power (Pmax)	Wp	525	530	535	540	545	550
Maximum Voltage (Vmpp)	V	41.40	41.50	41.60	41.70	41.80	41.90
Maximum Current (Impp)	A	12.67	12.78	12.87	12.96	13.05	13.14
Open Circuit Voltage (Voc)	V	49.20	49.30	49.40	49.50	49.60	49.70
Short Circuit Current (Isc)	A	13.37	13.46	13.55	13.64	13.73	13.82
Module Efficiency	%	20.33	20.50	20.70	20.90	21.10	21.30

STC: Irradiance 1000 W/m², module temperature 25°C, air mass 1.5 g, spectrum according to EN 60904-3.
Power measurement tolerance is -0 ~± 5Wp. Voc and Isc tolerance ±3%.
Maximum system voltage 1500 V, Maximum Fuse Rating 25A.

Electrical Parameters at NOCT

Model	NS-P10-144HG-525-550 Series						
Module Type	UoM	NS-P10-144HG-525	NS-P10-144HG-530	NS-P10-144HG-535	NS-P10-144HG-540	NS-P10-144HG-545	NS-P10-144HG-550
Maximum Power (Pmax)	Wp	394	397	400	403	407	410
Maximum Voltage (Vmpp)	V	38.30	38.40	38.50	38.60	38.70	38.80
Maximum Current (Impp)	A	10.30	10.34	10.40	10.44	10.50	10.56
Open Circuit Voltage (Voc)	V	45.80	45.90	46.00	46.10	46.20	46.30
Short Circuit Current (Isc)	A	9.96	10.01	10.06	11.02	11.08	11.14
Module Efficiency	%	14.94	15.09	15.23	15.37	15.51	15.62

NOCT: Irradiance 800 W/m², ambient temperature 20°C, wind speed 1m/Sec

Gain		NS-P10-144HG-525	NS-P10-144HG-530	NS-P10-144HG-535	NS-P10-144HG-540	NS-P10-144HG-545	NS-P10-144HG-550
10%	Power (Pmax)	577.5	583	588.5	594	599.5	605.0
20%		630	636	642	648.0	654.0	660.0
30%		682.5	689	695.5	702.0	708.5	715.0

Bifacial gains depend on the power plant design and albedo of the installation site.
Power Bifaciality = Pmax(Rear)/Pmax(Front) are tested under STC.

Mechanical Data

Length x Width x Height	2278 x 1134 x 30 mm, ± 2 mm
Weight	34 kg ± 2 kg
Junction Box	IP68, 3 Split Junction Box with Individual Bypass Diodes
Output Cable	Length: 400 mm / As Per Customer Requirement, Dia: 4 mm²
Connector	MC4 Compatible
Application Class	Class A (Safety Class II)
Glass Front / Glass Rear	Semi-tempered - High Transmittance ARC Glass 2 mm / High Transmittance Non-ARC Glass 2mm
Solar PV Cells	72 Mono PERC (144 Halfcut - Cells) P Type
Cell Encapsulant	EVA (Ethylene Vinyl Acetate)
Frame	Anodised (15 µ) Aluminium Frame, Silver
Mechanical Load Test	5400 Pa (Snow Load), 2400 Pa (Wind Load)
Fire Performance	Type 4 (UL 61730) or Class C (IEC 61730)
Country of Origin	India

Operating Conditions	
Temperature Coefficient Voc, β	-0.27%/°C
Temperature Coefficient Isc, α	0.05%/°C
Temperature Coefficient Pmax, γ	-0.35%/°C
NOCT	42°C±2°C
Temperature range	-40°C to +85°C

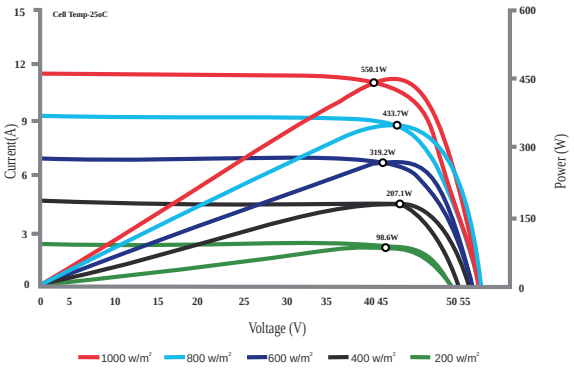
- 25-Year Linear Performance Warranty
- 12-Year Product Warranty

- <2.0% degradation for 1st year
- <0.45% from 2nd year onward to 25th year

Note: The specifications in this data sheet may deviate slightly from our actual products due to the ongoing innovation and product enhancement. We reserve the right to make necessary adjustments to the information described herein at any time without further notice.

Typical I-V Curves

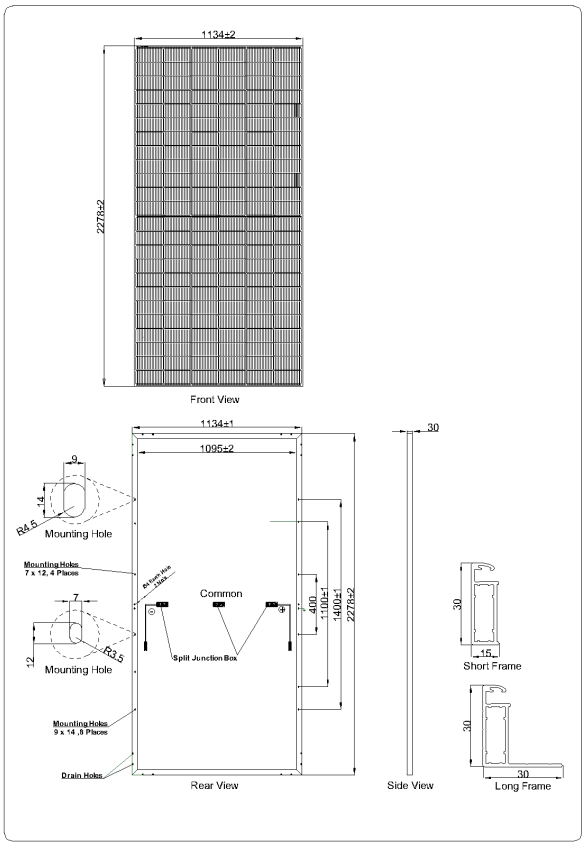
Cell Temperature 25°C



Packaging Information

Container	20'GP	32'HQ	40'HQ
Quantity per Pallet	36	36	36
Pallet/Container	8	16	20
Quantity/Container	288	576	720

Mechanical Diagrams



Remark: Customized frame colour and length available upon request

***WARRANTY: Please refer the Warranty Card.**
***CAUTION: Please read safety and installation instructions before using the product.**

Contact Us

Nithin Sai Renewables Pvt Ltd

www.navgrun.com
info@navgrun.com
+91 9606080780

Corporate Office
Balsa N1, 2nd Floor, Embassy Manyata Business Park, Outer Ring Road, Nagavara, Rachenahalli Village, KR Puram Hobli, Bangalore, India - 560045

Factory
Plot No. 75-A, 2nd Phase, KIADB Industrial Area, Chintamani Taluk, Mastenahalli Industrial Area, Chikkaballapur, Karnataka - 563128