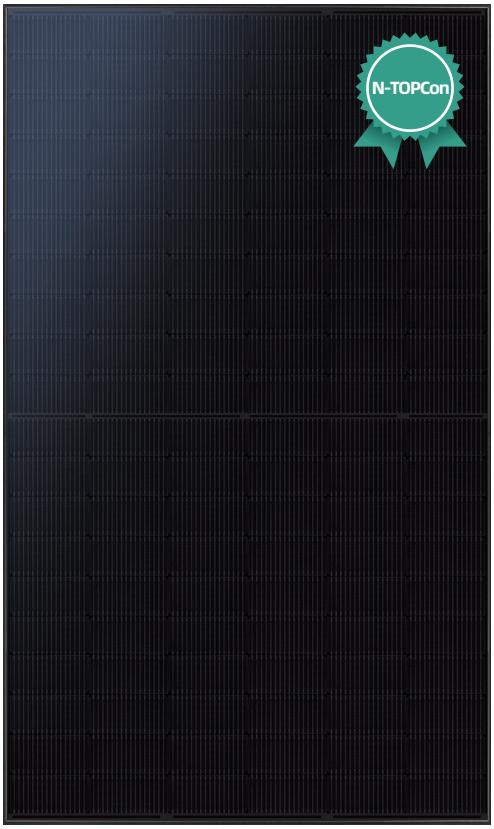


470-490w

Draco Module Series

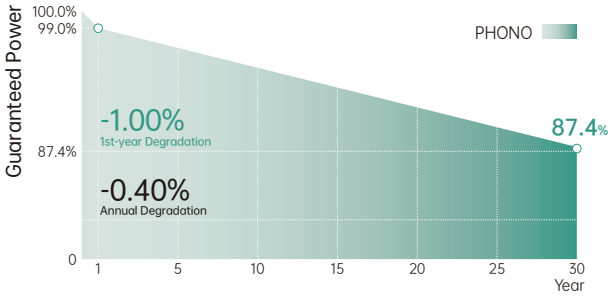
N-TOPCON HIGH EFFICIENCY 120-16BB-B-BG

Bloomberg NEW ENERGY FINANCE Tier 1 TOP PERFORMER 2025 kiwa PV MODULE RELIABILITY SCORECARD

Aesthetic Design in All Black

Extraordinary Product Performance

- Up to 30% additional power yield benefited from bifacial technology and over 80% cell bifaciality
- Competitive high-temperature performance with ameliorated temperature coefficient
- Better weak illumination response, higher power generation with N-TOPCon technology



15-year Product Warranty

30-year Linear Performance Warranty

High Quality Reliability

- N-type with lower LID and LeTID
- Industry-leading cell processing technology and dual glass contributes to excellent anti-PID characteristic
- First-year degradation is less than 1.0%, with linear degradation of 0.4% per year for 30 year

Wider Application Conditions

- BIPV, vertical installation, snowfield, high-humidity area, windy and dusty area
- Safer and easier handling during transportation and installation

MANAGEMENT SYSTEM CERTIFICATES

IEC 61215, IEC 61730

ISO 9001
2015 / Quality management system

ISO 14001
2015 / Standards for environmental management system

ISO 45001
2018 / International standards for occupational health & safety

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Electrical Typical Values

Model	1000V	PS470M8GF-20/UNH		PS475M8GF-20/UNH		PS480M8GF-20/UNH		PS485M8GF-20/UNH		PS490M8GF-20/UNH	
	1500V	PS470M8GFH-20/UNH		PS475M8GFH-20/UNH		PS480M8GFH-20/UNH		PS485M8GFH-20/UNH		PS490M8GFH-20/UNH	
Testing Condition		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Rated Power (Pmpp)		470	360	475	364	480	368	485	371	490	375
Rated Current (Impp)		13.24	10.66	13.30	10.71	13.36	10.76	13.42	10.81	13.48	10.86
Rated Voltage (Vmpp)		35.50	33.75	35.72	33.95	35.93	34.16	36.15	34.36	36.36	34.56
Short Circuit Current (Isc)		13.89	11.19	13.95	11.24	14.04	11.31	14.11	11.36	14.18	11.42
Open Circuit Voltage (Voc)		42.83	41.01	43.11	41.28	43.38	41.54	43.66	41.80	43.93	42.06
Module Efficiency (%)		21.71		21.94		22.17		22.40		22.63	

STC (Standard Testing Conditions): Irradiance 1000W/m², AM 1.5, Cell Temperature 25°C

NOCT (Nominal Operation Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

BNPI

Maximum Power (Pmax)	518	523	529	534	540
Optimum Operating Current (Impp)	14.60	14.65	14.73	14.78	14.86
Optimum Operating Voltage (Vmpp)	35.50	35.72	35.93	36.15	36.36
Short Circuit Current (Isc)	15.39	15.44	15.52	15.56	15.64
Open Circuit Voltage (Voc)	42.83	43.11	43.38	43.66	43.93

BNPI:Front Side Irradiation 1000W/m², Back Side Reflection Irradiation 135W/m² , AM 1.5, Ambient Temperature 25°C

Mechanical Characteristics

Cell Type	N Type Monocrystalline
Dimension (L × W × H)	Length: 1909mm (75.16 inch) Width: 1134mm (44.65 inch) Height: 30mm (1.18 inch)
Weight	27.0kg (59.52 lbs)
Glass	2.0mm/2.0mm Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Cable (Including Connector)	4mm² (IEC), (+): 350mm,(-): 250mm or Customized Length
Junction Box	IP 68 Rated

Temperature Ratings

Voltage Temperature Coefficient	-0.25%/°C
Current Temperature Coefficient	+0.04%/°C
Power Temperature Coefficient	-0.29%/°C
Tolerance	0~+3%
NOCT	42±2°C
Bifaciality	80±5%

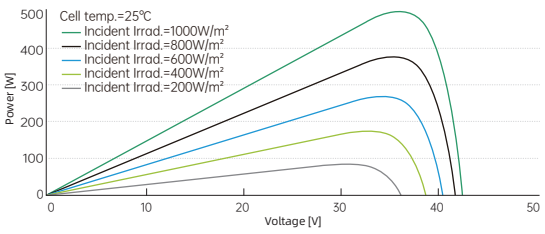
Absolute Maximum Rating

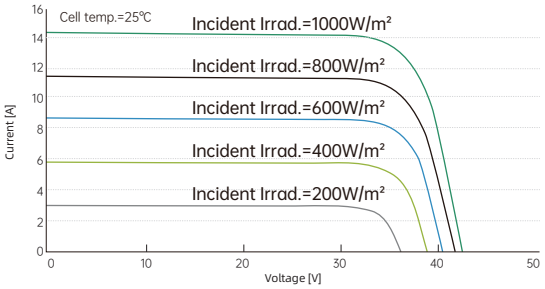
Operating Temperature	From -40 to + 85°C
Hail Diameter @ 80km/h	Up to 25mm
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Maximum Series Fuse Rating	30A
PV Module Classification	II
Fire Rating (IEC 61730)	C
Maximum System Voltage	DC 1000V/1500V

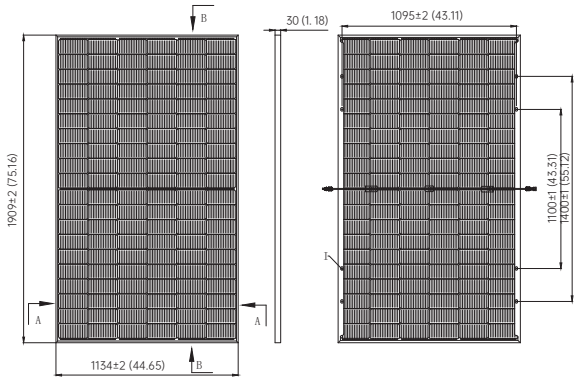
Packing Configuration

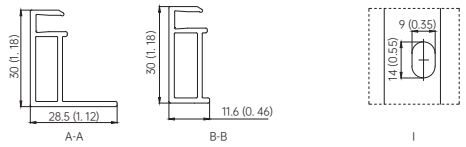
Container	20' GP	40' HQ
Pcs/Container	180	864
Pcs/Pallet	36	36
Pallets/Container	5	24

Electrical Characteristics









Note:mm (inch)

PHONO SOLAR TECHNOLOGY CO., LTD. reserves the right to make necessary adjustments to the information described herein at any time without further notice. The specifications and certificates contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Please be sure to use the most recent version of data.