

TRANSFORMING THE POWER OF SUN



NEXT GEN BLACK SOLAR PV MODULE 540-555 Wp

Best in Class Efficiency **21.50%**

MBB Technology **M10 Half Cut (144 Cells)**
All Black Monofacial Module

Latest Water-less

Non-Destructive Cell Cutting (NDC)

FEATURES



Low LID Degradation using PERC Technology -
Enhanced Power Generation During its Life Cycle



Improved Temperature Coefficients -
Better Generation at Higher Temperature



Reduced Resistive Loss with MBB Technology -
Excellent Module Performance



Half Cut Cell Design - Excellent Performance
Under Partial Shading Conditions



Lower LCOE (Levelized Cost of Electricity) -
Faster Return on Investment (ROI)



Manufactured in Fully Automatic Production Line



100% in line Hi-Pot testing, 100% EL Testing at
3 stages – Stringer, In process and Final Testing



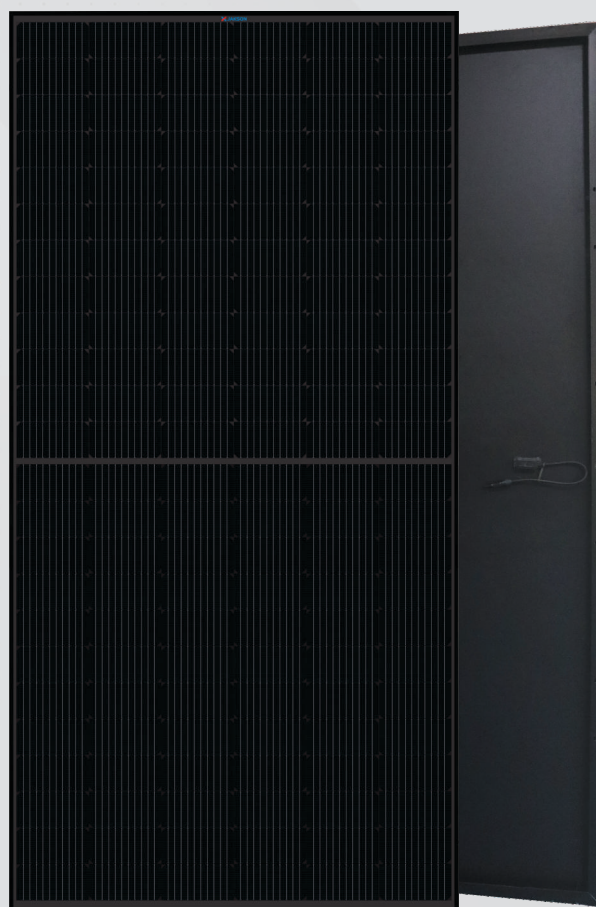
Manufactured using certified Tier 1 BOM Meeting
Highest Quality Standards



Innovative All Black Design to enhance the
aesthetics of your Residential, Industrial Building



Better reliability under Extreme Environmental
Conditions



FRAME

BLACK

FRONT
SUPERSTRATE

ARC GLASS

BACK
SUBSTRATE

BLACK
BACKSHEET

Approvals and Certificates:

*IEC 61215, IEC 61730 (I & II), IEC 61853, IEC 62804, IEC 60068, IEC 61701, IEC 62716, IS 14286 (BIS), UL 61730, ISO 9001:2015, 14001:2015, 45001:2018 certified



* Under Process



MONOFACIAL ALL BLACK SOLAR PV MODULES 540-555Wp

NEXT GEN BLACK SERIES



ELECTRICAL DATA - STC*

Model	Unit	JH-540M	JH-545M	JH-550M	JH-555M
Capacity Rating Wp	Pmax	540	545	550	555
Max. Power Voltage in V	Vpm	41.64	41.80	41.93	42.05
Max. Power Current in A	Ipm	12.97	13.04	13.12	13.20
Open Circuit Voltage in V	Voc	49.60	49.75	49.90	50.00
Short Circuit Current in A	Isc	13.86	13.92	13.98	14.05
Module Efficiency	%	20.92	21.12	21.31	21.50
Power Tolerance	Wp	-0/+4.99			

*STC: Irradiance 1000 W/m², cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3. Average efficiency reduction of 4.5 % at 200 W/m² according to EN 60904-1. Measurement uncertainty ±3%

MECHANICAL DATA

Dimensions (L x W x H)	2278 mm x 1133 mm x 35 mm (optional 40 mm)
Weight	29 kgs
Junction Box	Split JB, IP 68 with 3 bypass diodes
Cable	Solar Cable 4.0 mm ² , 400 mm (Higher cable option available on request)
Front Glass	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (144 pcs Half Cut)
Cell Encapsulation	EVA - Ethylene Vinyl Acetate
Backsheet	Composite Film - Black
Frame	Anodized Aluminium Alloy - Black
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

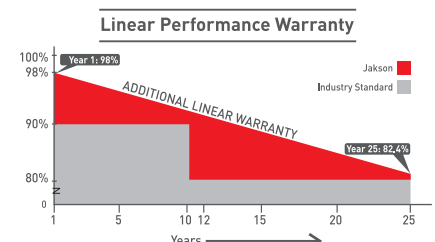
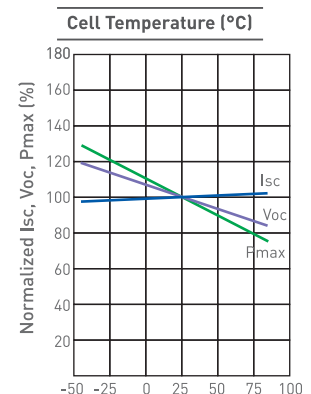
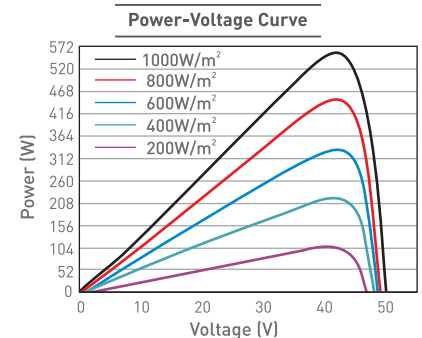
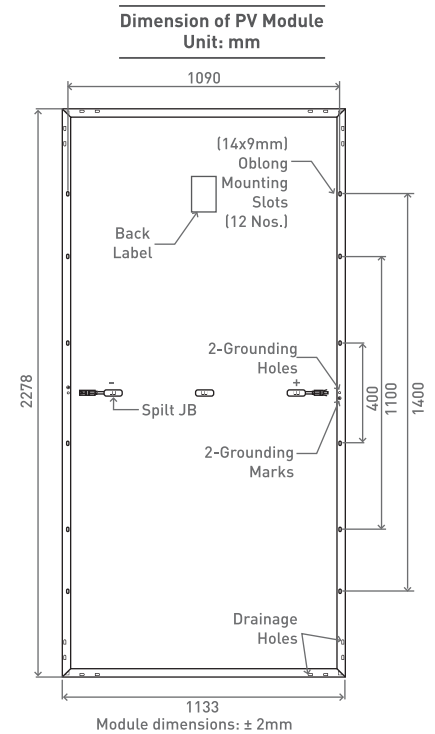
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	25 A

WARRANTY AND CERTIFICATIONS

Product Warranty	12 years Product Workmanship Warranty
Performance Guarantee	25 year Linear Performance Warranty

PACKAGING CONFIGURATION

Container Size	40' HQ
Modules per Pallet	31
Modules per Container	620



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TRANSFORMING THE POWER OF SUN



NEXT GEN BLACK SOLAR PV MODULE 490-505 Wp

Best in Class Efficiency **21.29%**

MBB Technology **M10 Half Cut (132 Cells)**
All Black Monofacial Module

Latest Water-less

Non-Destructive Cell Cutting (NDC)

FEATURES



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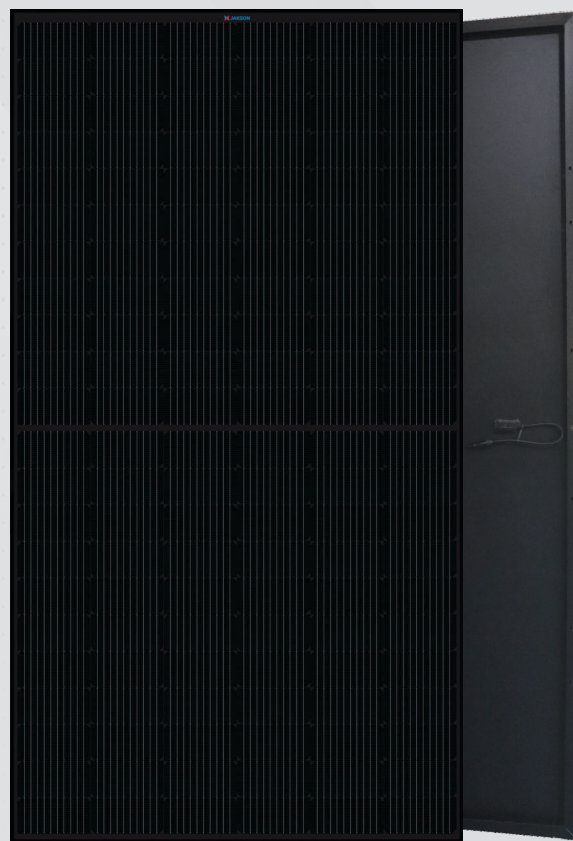
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* Under Process



MONOFACIAL ALL BLACK SOLAR PV MODULES 490-505Wp

NEXT GEN BLACK SERIES



ELECTRICAL DATA - STC*

Model		JH-490M	JH-495M	JH-500M	JH-505M
Capacity Rating Wp	Pmax	490	495	500	505
Max. Power Voltage in V	Vpm	38.20	38.30	38.40	38.52
Max. Power Current in A	Ipm	12.83	12.93	13.03	13.12
Open Circuit Voltage in V	Voc	45.50	45.62	45.75	45.99
Short Circuit Current in A	Isc	13.74	13.80	13.86	13.90
Module Efficiency	%	20.65	20.86	21.07	21.29
Power Tolerance	Wp	-0/+4.99			

*STC: Irradiance 1000 W/m², cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3. Average efficiency reduction of 4.5 % at 200 W/m² according to EN 60904-1. Measurement uncertainty ±3%

MECHANICAL DATA

Dimensions (L x W x H)	2094 mm x 1133 mm x 35 mm (optional 40 mm)
Weight	27 kgs
Junction Box	Split JB, IP 68 with 3 bypass diodes
Cable	Solar Cable 4.0 mm ² , 400 mm (Higher cable option available on request)
Front Glass	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (132 pcs Half Cut)
Cell Encapsulation	EVA - Ethylene Vinyl Acetate
Backsheet	Composite Film - Black
Frame	Anodized Aluminium Alloy - Black
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	25 A

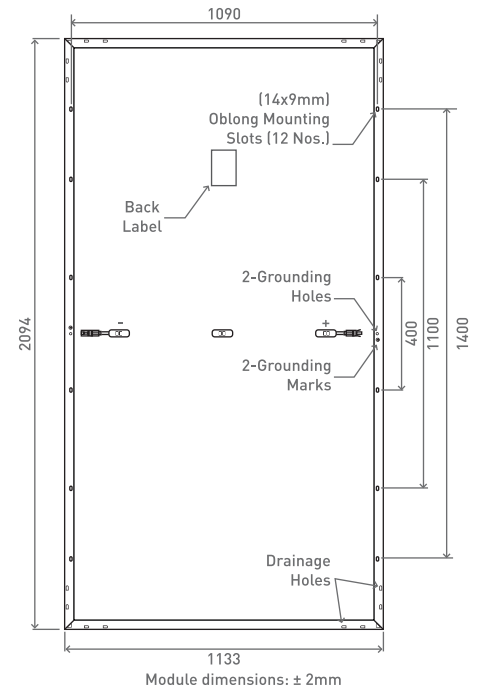
WARRANTY AND CERTIFICATIONS

Product Warranty	12 years Product Workmanship Warranty
Performance Guarantee	25 year Linear Performance Warranty

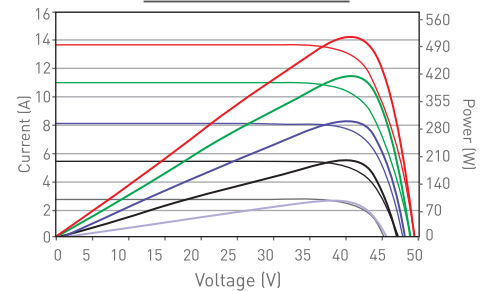
PACKAGING CONFIGURATION

Container Size	40' HQ
Modules per Pallet	31
Modules per Container	682

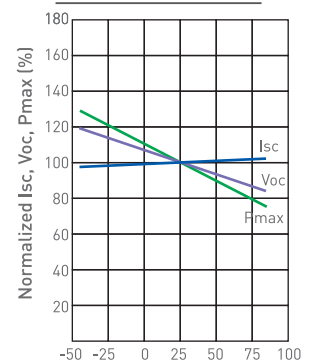
Dimension of PV Module
Unit: mm



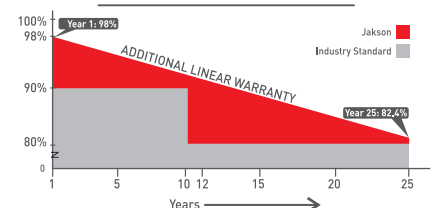
Power-Voltage Curve



Cell Temperature (°C)



Linear Performance Warranty



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NEXT GEN BLACK SOLAR PV MODULE 440-460 Wp

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MBB Technology **M10 Half Cut (120 Cells)**
All Black Monofacial Module

Latest Water-less

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FEATURES



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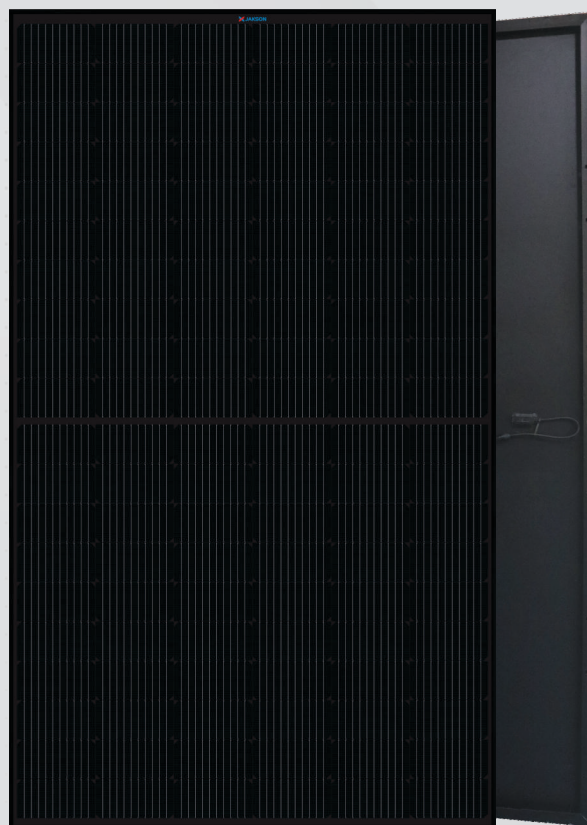
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Approvals and Certificates:

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* Under Process



MONOFACIAL ALL BLACK SOLAR PV MODULES 440-460Wp

NEXT GEN BLACK SERIES



ELECTRICAL DATA - STC*

Model		JH-440M	JH-445M	JH-450M	JH-455M	JH-460M
Capacity Rating Wp	Pmax	440	445	450	455	460
Max. Power Voltage in V	Vpm	34.11	34.26	34.43	34.58	34.83
Max. Power Current in A	Ipm	12.90	12.99	13.07	13.16	13.21
Open Circuit Voltage in V	Voc	40.85	41.05	41.22	41.40	41.52
Short Circuit Current in A	Isc	13.74	13.80	13.86	13.92	13.99
Module Efficiency	%	20.31	20.54	20.77	21.00	21.23
Power Tolerance	Wp	-0/+4.99				

*STC: Irradiance 1000 W/m², cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3. Average efficiency reduction of 4.5 % at 200 W/m² according to EN 60904-1. Measurement uncertainty $\pm 3\%$

MECHANICAL DATA

Dimensions (L x W x H)	1912 mm x 1133 mm x 35 mm (optional 40 mm)
Weight	24 kgs
Junction Box	Split JB, IP 68 with 3 bypass diodes
Cable	Solar Cable 4.0 mm ² , 400 mm (Higher cable option available on request)
Front Glass	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (120 pcs Half Cut)
Cell Encapsulation	EVA - Ethylene Vinyl Acetate
Backsheet	Composite Film - Black
Frame	Anodized Aluminium Alloy - Black
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C ($\pm 2^\circ\text{C}$)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

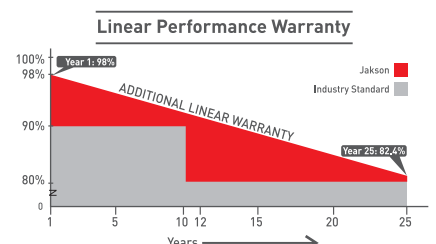
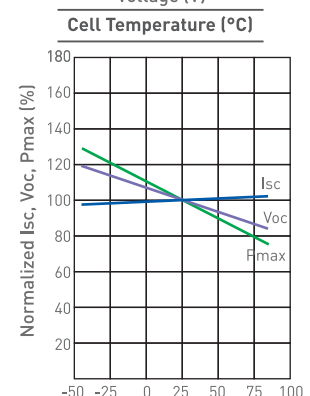
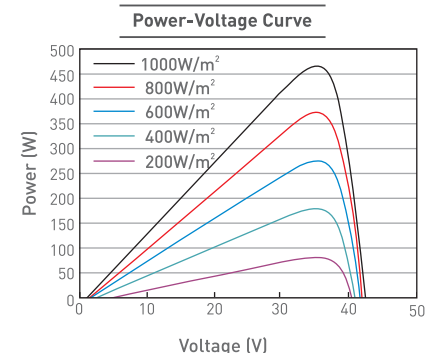
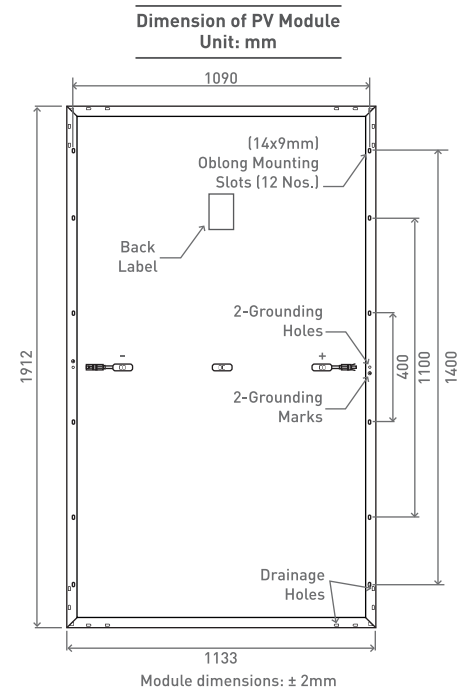
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	25 A

WARRANTY AND CERTIFICATIONS

Product Warranty	12 years Product Workmanship Warranty
Performance Guarantee	25 year Linear Performance Warranty

PACKAGING CONFIGURATION

Container Size	40' HQ
Modules per Pallet	31
Modules per Container	744



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TRANSFORMING THE POWER OF SUN



NEXT GEN BLACK SOLAR PV MODULE 400-415 Wp

Best in Class Efficiency **21.27%**

MBB Technology **M10 Half Cut (108 Cells)**
All Black Monofacial Module

Latest Water-less

Non-Destructive Cell Cutting (NDC)

FEATURES



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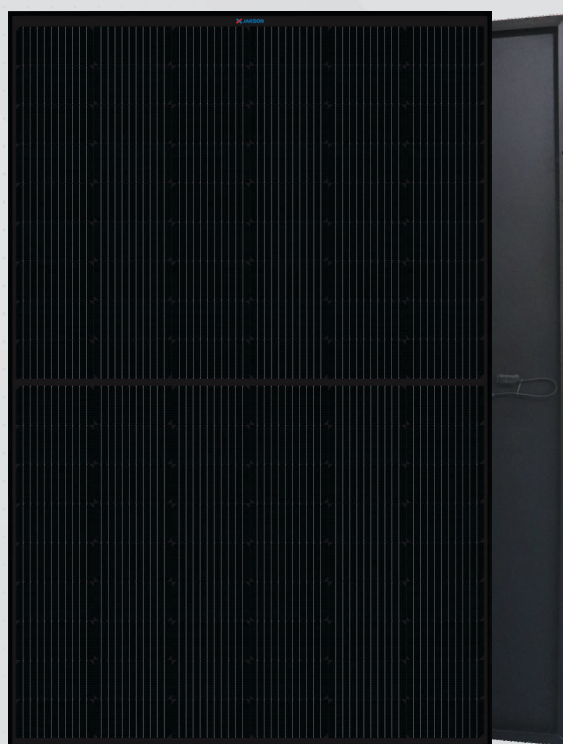
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* Under Process



MONOFACIAL ALL BLACK SOLAR PV MODULES 400-415Wp

NEXT GEN BLACK SERIES



ELECTRICAL DATA - STC*

Model		JH-400M	JH-405M	JH-410M	JH-415M
Capacity Rating Wp	Pmax	400	405	410	415
Max. Power Voltage in V	Vpm	30.85	31.06	31.26	31.42
Max. Power Current in A	Ipm	12.97	13.04	13.12	13.21
Open Circuit Voltage in V	Voc	36.76	36.94	37.12	37.30
Short Circuit Current in A	Isc	13.86	13.92	13.98	14.05
Module Efficiency	%	20.50	20.76	21.01	21.27
Power Tolerance	Wp	-0/+4.99			

*STC: Irradiance 1000 W/m², cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3. Average efficiency reduction of 4.5 % at 200 W/m² according to EN 60904-1. Measurement uncertainty ±3%

MECHANICAL DATA

Dimensions (L x W x H)	1722 mm x 1133 mm x 35 mm (optional 40 mm)
Weight	21.5 kgs
Junction Box	Split JB, IP 68 with 3 bypass diodes
Cable	Solar Cable 4.0 mm ² , 400 mm (Higher cable option available on request)
Front Glass	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (108 pcs Half Cut)
Cell Encapsulation	EVA - Ethylene Vinyl Acetate
Backsheet	Composite Film - Black
Frame	Anodized Aluminium Alloy - Black
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

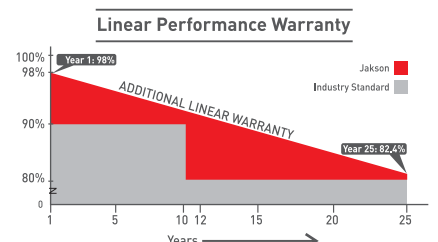
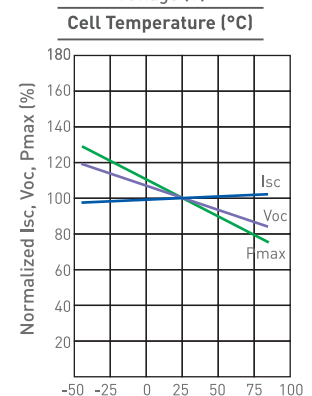
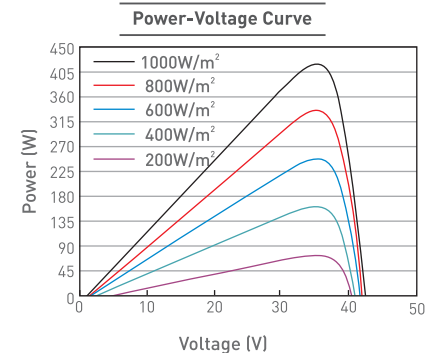
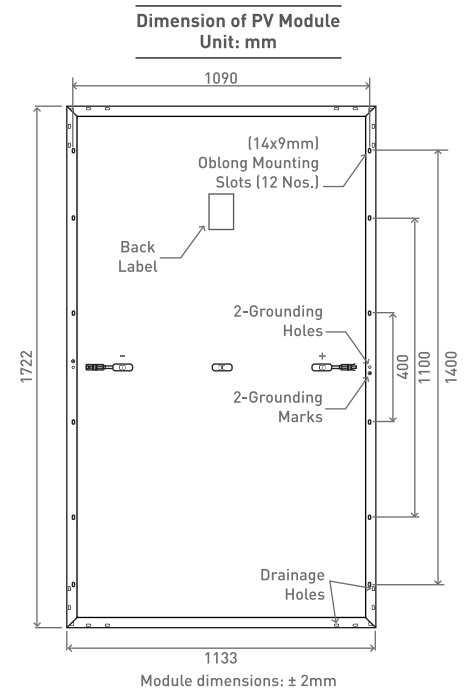
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	25 A

WARRANTY AND CERTIFICATIONS

Product Warranty	12 years Product Workmanship Warranty
Performance Guarantee	25 year Linear Performance Warranty

PACKAGING CONFIGURATION

Container Size	40' HQ
Modules per Pallet	31
Modules per Container	806



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