

TRANSFORMING THE POWER OF SUN



NEXT GEN BIFACIAL SOLAR PV MODULE 540-555 Wp

Best in Class Efficiency **21.50%**

MBB Technology **M10 Half Cut (144 Cells)**
Bifacial Module With Black Transparent Backsheet

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



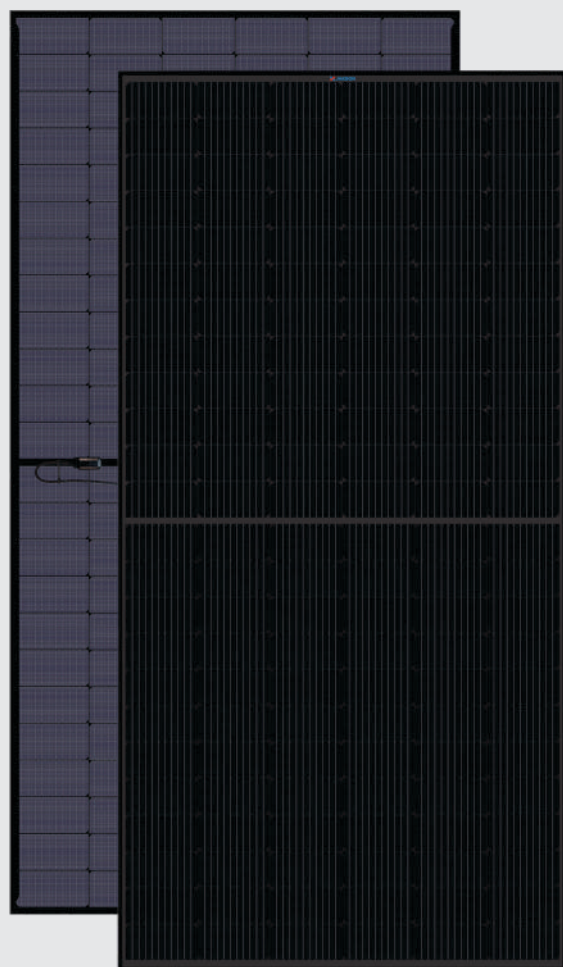
Manufactured using certified Tier 1 BOM Meeting
Highest Quality Standards



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



Bifacial gain of **Up To 25% with Transparent Backsheet Module**, capable of energy generation with both direct and reflected sunlight.



FRAME

BLACK

FRONT
SUPERSTRATE

ARC GLASS

BACK
SUBSTRATE

BLACK
TRANSPARENT
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, CEC, ISO 9001:2015, 14001:2015, 45001:2018 certified



* Under Process



BIFACIAL SOLAR PV MODULES WITH TRANSPARENT BACKSHEET

540-555Wp



ELECTRICAL DATA - STC*

Model	Unit	JH-540BB	JH-545BB	JH-550BB	JH-555BB
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%

BI-FACIAL OUTPUT - REAR SIDE POWER GAIN*

		JH-540BB	JH-545BB	JH-550BB	JH-555BB
10%	Power Output (W)	594	600	605	611
	Module Efficiency (%)	23.01	23.25	23.44	23.67
15%	Power Output (W)	621	627	633	638
	Module Efficiency (%)	24.06	24.29	24.53	24.72
20%	Power Output (W)	648	654	660	666
	Module Efficiency (%)	25.11	25.34	25.57	25.80
25%	Power Output (W)	675	681	688	694
	Module Efficiency (%)	26.15	26.39	26.66	26.89

Bifaciality Factor 70±5%

*Bifaciality gain is dependent on various factors (Ground Reflectance, Tilt Angle, Location, etc.)

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 / 1200 mm (Higher cable option available on request)
Front Superstrate	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (144 pcs Half Cut)
Cell Encapsulation	PID & UV Resistant
Back Substrate	Transparent Backsheet - 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	30 A

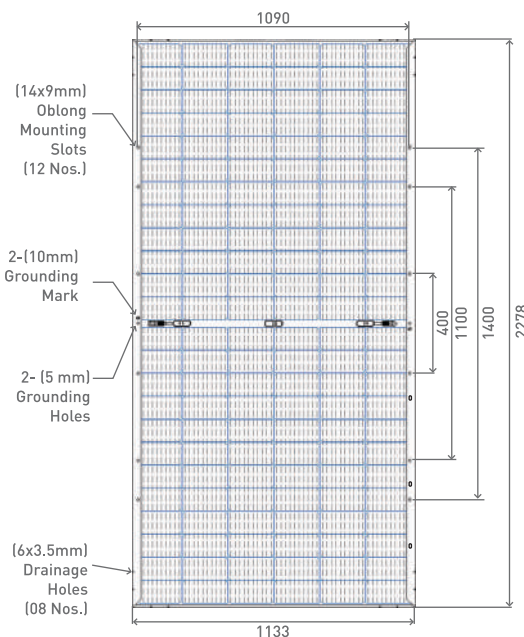
WARRANTY AND CERTIFICATIONS

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

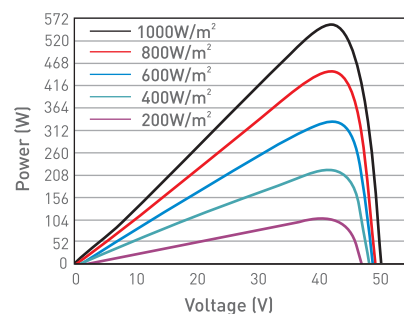
PACKAGING CONFIGURATION

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

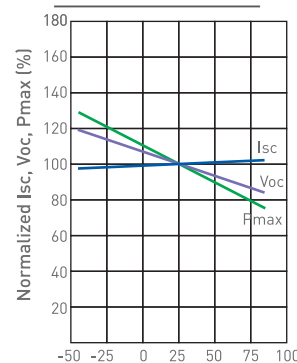
Dimension of PV Module
Unit: mm



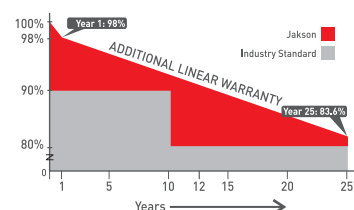
Power-Voltage Curve



Cell Temperature (°C)



Linear Performance Warranty



JAKSON ENGINEERS LIMITED

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TRANSFORMING THE POWER OF SUN



NEXT GEN BIFACIAL SOLAR PV MODULE 490-510 Wp

Best in Class Efficiency **21.50%**

MBB Technology **M10 Half Cut (132 Cells)**
Bifacial Module With Black Transparent Backsheet

Latest Water-less
Non-Destructive Cell Cutting (NDC)

FEATURES



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* Under Process



BIFACIAL SOLAR PV MODULES WITH TRANSPARENT BACKSHEET 490-510Wp



ELECTRICAL DATA - STC*

Model		JH-490BB	JH-495BB	JH-500BB	JH-505BB	JH-510BB
Capacity rating Wp	Pmax	490	495	500	505	510
Max. Power Voltage in V	Vmp	38.2	38.3	38.4	38.52	38.64
Max. Power Current in A	Imp	12.83	12.93	13.03	13.12	13.2
Open Circuit Voltage in V	Voc	45.5	45.62	45.75	45.99	46.1
Short Circuit Current in A	Isc	13.74	13.8	13.86	13.9	13.97
Module Efficiency	%	20.65	20.86	21.07	21.29	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%

BI-FACIAL OUTPUT - REAR SIDE POWER GAIN*

Model		JH-490BB	JH-495BB	JH-500BB	JH-505BB	JH-510BB
10%	Power Output (W)	539	545	550	556	561
	Module Efficiency (%)	22.72	22.97	23.18	23.44	23.65
15%	Power Output (W)	564	569	575	581	587
	Module Efficiency (%)	23.77	23.98	24.24	24.49	24.74
20%	Power Output (W)	588	594	600	606	612
	Module Efficiency (%)	24.78	25.04	25.29	25.54	25.80
25%	Power Output (W)	613	619	625	631	638
	Module Efficiency (%)	25.84	26.09	26.34	26.60	26.89
Bifaciality Factor		70±5%				

*Bifaciality gain is dependent on various factors (Ground Reflectance, Tilt Angle, Location, etc.)

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 / 1200 mm (Higher cable option available on request)
Front Superstrate	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (132 pcs Half Cut)
Cell Encapsulation	PID & UV Resistant
Back Substrate	Transparent Backsheet - 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

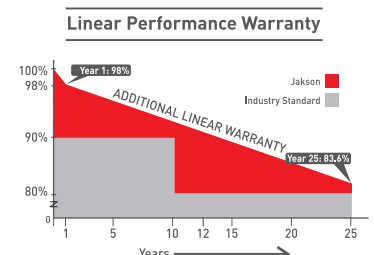
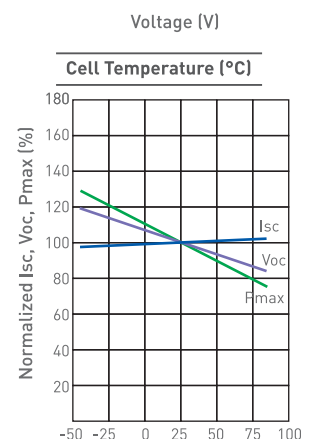
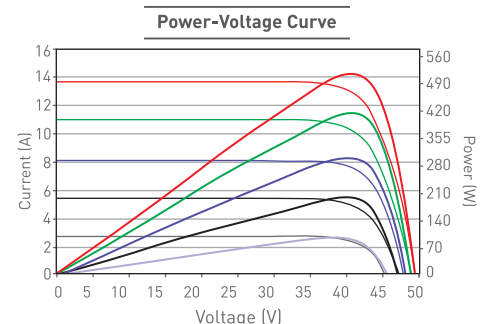
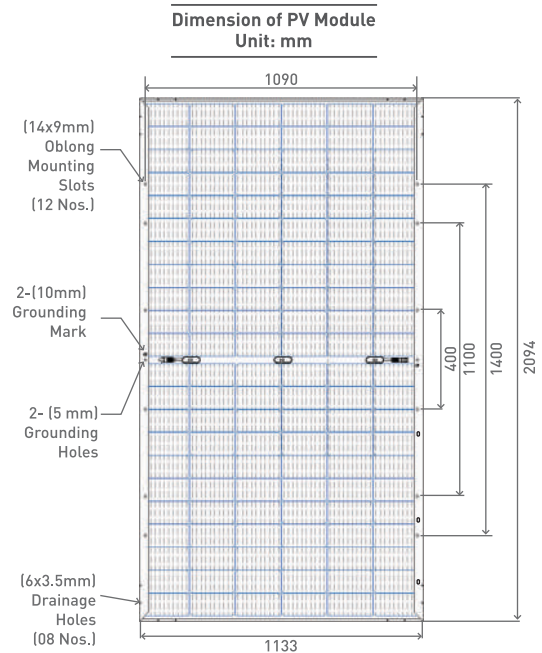
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	30 A

WARRANTY AND CERTIFICATIONS

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

PACKAGING CONFIGURATION

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



JAKSON ENGINEERS LIMITED

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TRANSFORMING THE POWER OF SUN



NEXT GEN BIFACIAL SOLAR PV MODULE 440-460 Wp

Best in Class Efficiency **21.23%**

MBB Technology **M10 Half Cut (120 Cells)**
Bifacial Module With Black Transparent Backsheet

Latest Water-less
Non-Destructive Cell Cutting (NDC)

FEATURES



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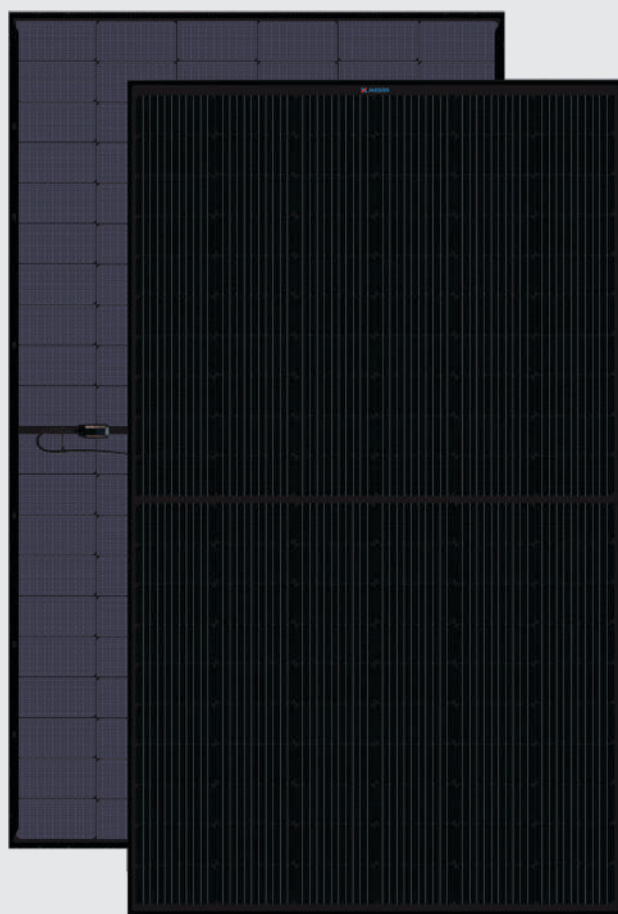
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Approvals and Certificates:

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* Under Process



BIFACIAL SOLAR PV MODULES WITH TRANSPARENT BACKSHEET 440-460Wp



ELECTRICAL DATA - STC*

Model		JH-440BB	JH-445BB	JH-450BB	JH-455BB	JH-460BB
Capacity rating Wp	Pmax	440	445	450	455	460
Max. Power Voltage in V	Vmp	34.11	34.26	34.43	34.58	34.83
Max. Power Current in A	Imp	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 ±3%

BI-FACIAL OUTPUT - REAR SIDE POWER GAIN*

Model		JH-440BB	JH-445BB	JH-450BB	JH-455BB	JH-460BB
10%	Power Output (W)	484	490	495	501	506
	Module Efficiency (%)	22.34	22.62	22.85	23.13	23.36
15%	Power Output (W)	506	512	518	523	529
	Module Efficiency (%)	23.36	23.63	23.91	24.14	24.42
20%	Power Output (W)	528	534	540	546	552
	Module Efficiency (%)	24.37	24.65	24.93	25.20	25.48
25%	Power Output (W)	550	556	563	569	575
	Module Efficiency (%)	25.39	25.67	25.99	26.27	26.54
Bifaciality Factor		70±5%				

*Bifaciality gain is dependent on various factors (Ground Reflectance, Tilt Angle, Location, etc.)

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 / 1200 mm (Higher cable option available on request)
Front Superstrate	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (120 pcs Half Cut)
Cell Encapsulation	PID & UV Resistant
Back Substrate	Transparent Backsheet - 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

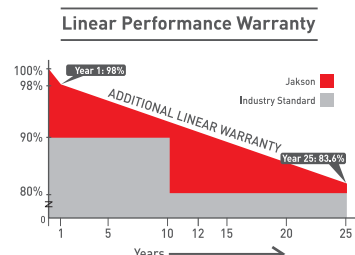
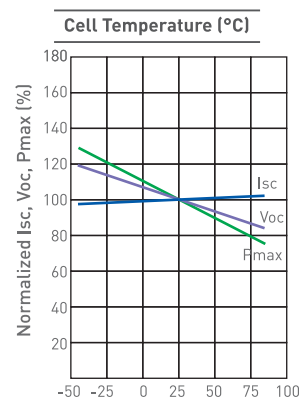
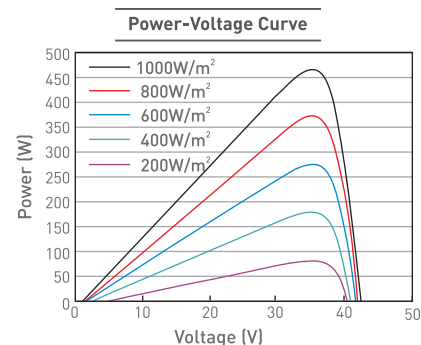
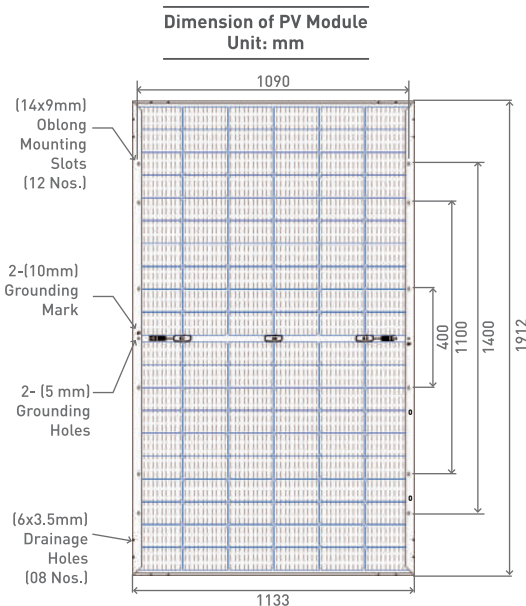
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	30 A

WARRANTY AND CERTIFICATIONS

Product Warranty	12 years Product 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 BIFACIAL SOLAR PV MODULE 400-415 Wp

Best in Class Efficiency **21.27%**

MBB Technology **M10 Half Cut (108 Cells)**
Bifacial Module With Black Transparent Backsheet

Latest Water-less
Non-Destructive Cell Cutting (NDC)

FEATURES



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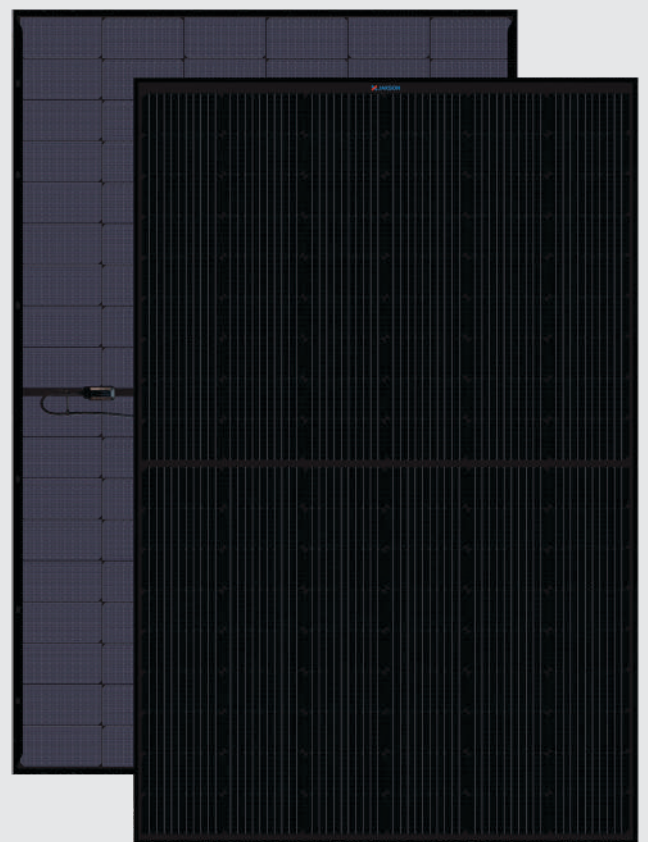
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* Under Process



BIFACIAL SOLAR PV MODULES WITH TRANSPARENT BACKSHEET 400-415Wp



ELECTRICAL DATA - STC

Model		JH-400BB	JH-405BB	JH-410BB	JH-415BB
Capacity rating Wp	Pmax	400	405	410	415
Max. Power Voltage in V	Vmp	30.85	31.06	31.26	31.42
Max. Power Current in A	Imp	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%

BI-FACIAL OUTPUT - REAR SIDE POWER GAIN*

Model		JH-400BB	JH-405BB	JH-410BB	JH-415BB
10%	Power Output (W)	440	446	451	457
	Module Efficiency (%)	22.55	22.86	23.12	23.42
15%	Power Output (W)	460	466	472	477
	Module Efficiency (%)	23.58	23.88	24.19	24.45
20%	Power Output (W)	480	486	492	498
	Module Efficiency (%)	24.60	24.91	25.22	25.53
25%	Power Output (W)	500	506	513	519
	Module Efficiency (%)	25.63	25.94	26.29	26.60
Bifaciality Factor		70±5%			

*Bifaciality gain is dependent on various factors (Ground Reflectance, Tilt Angle, Location, etc.)

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 / 1200 mm (Higher cable option available on request)
Front Superstrate	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (108 pcs Half Cut)
Cell Encapsulation	PID & UV Resistant
Back Substrate	Transparent Backsheet - 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

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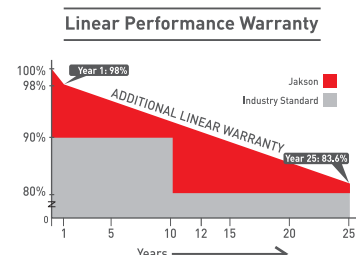
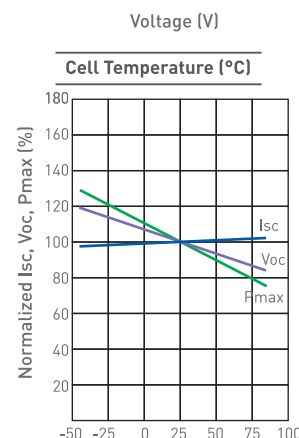
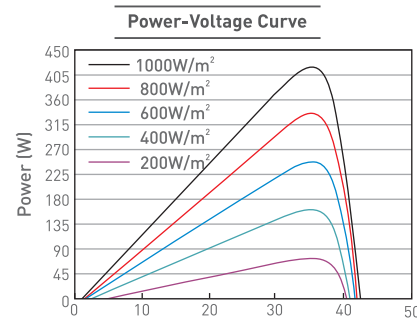
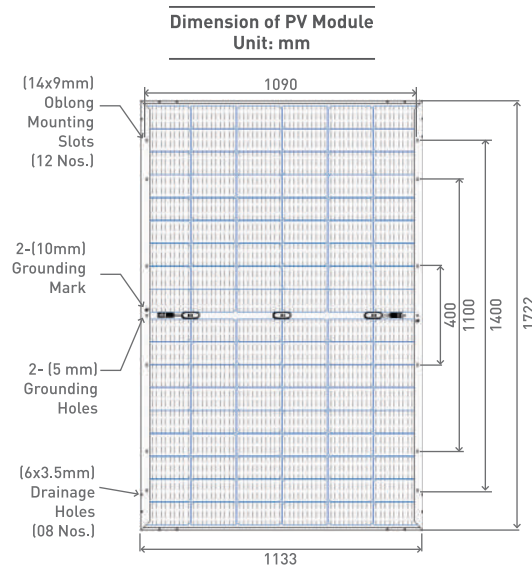
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Performance Guarantee	25 year Linear Performance Warranty

PACKAGING CONFIGURATION

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



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