

TRANSFORMING THE POWER OF SUN



MONOFACIAL SOLAR PV MODULE 400-415 Wp

Best in Class Efficiency **21.27%**

MBB Technology **M10 Half Cut (108 Cells)**

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



Certified for Salt Mist Resistant (Severity 6),
Ammonia & PID Resistant



Better reliability under Extreme Environmental
Conditions



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, DEWA Approved

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
Frame	Anodized Aluminium Alloy
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

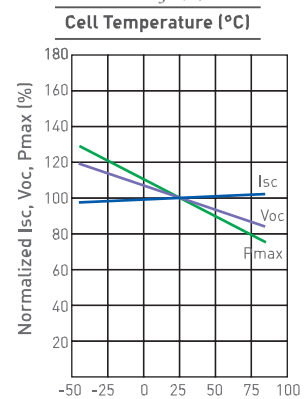
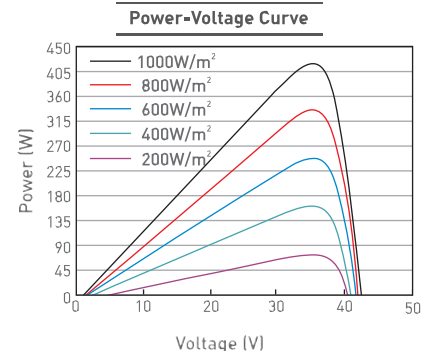
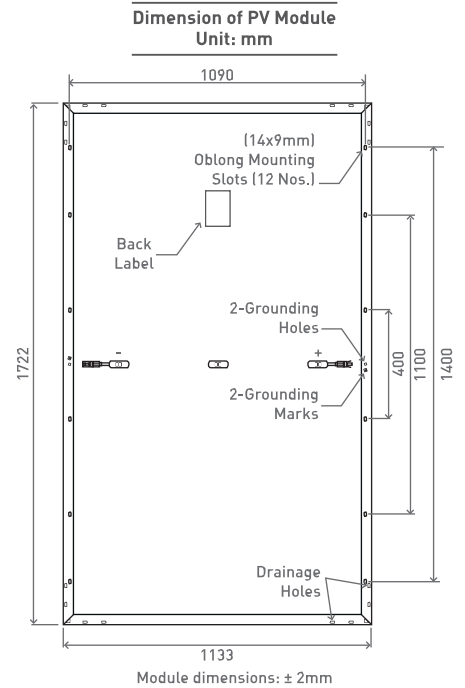
Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

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

PACKAGING CONFIGURATION

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



TRANSFORMING THE POWER OF SUN



MONOFACIAL SOLAR PV MODULE 440-460 Wp

Best in Class Efficiency **21.23%**

MBB Technology **M10 Half Cut (120 Cells)**

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



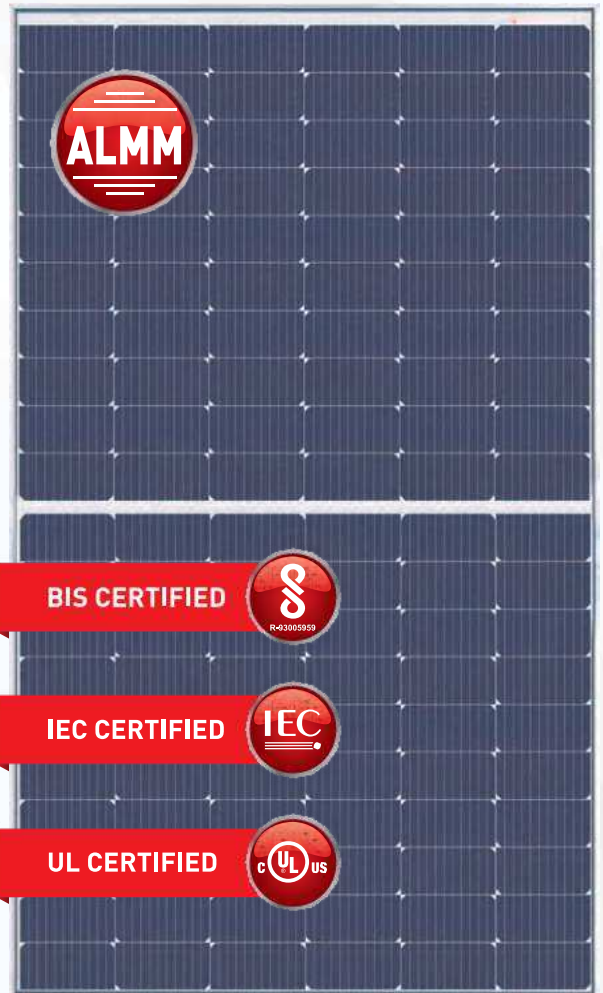
Manufactured using certified Tier 1 BOM Meeting
Highest Quality Standards



Certified for Salt Mist Resistant (Severity 6),
Ammonia & PID Resistant



Better reliability under Extreme Environmental
Conditions



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, DEWA Approved

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 ±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
Frame	Anodized Aluminium Alloy
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

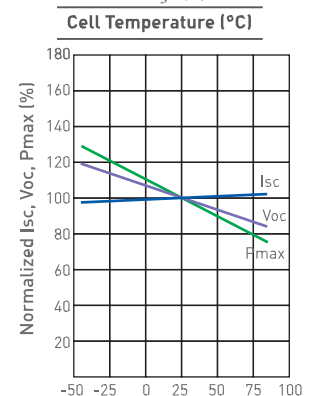
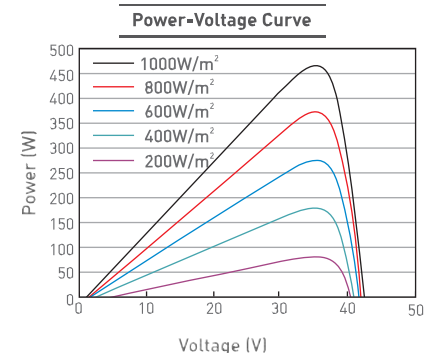
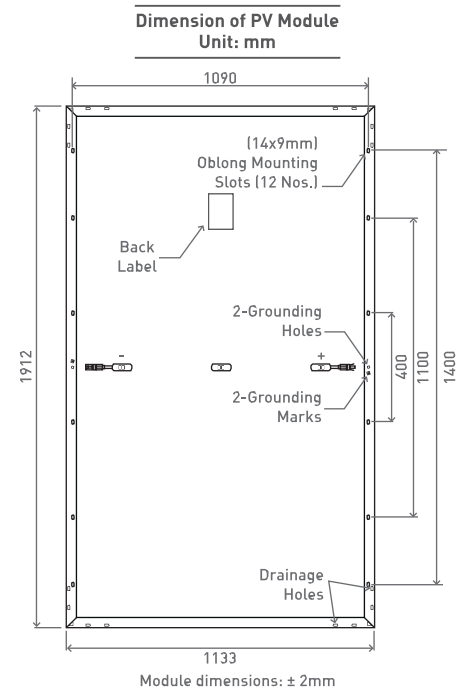
Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

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

PACKAGING CONFIGURATION

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



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MONOFACIAL SOLAR PV MODULE 490-510 Wp





Best in Class Efficiency **21.50%**

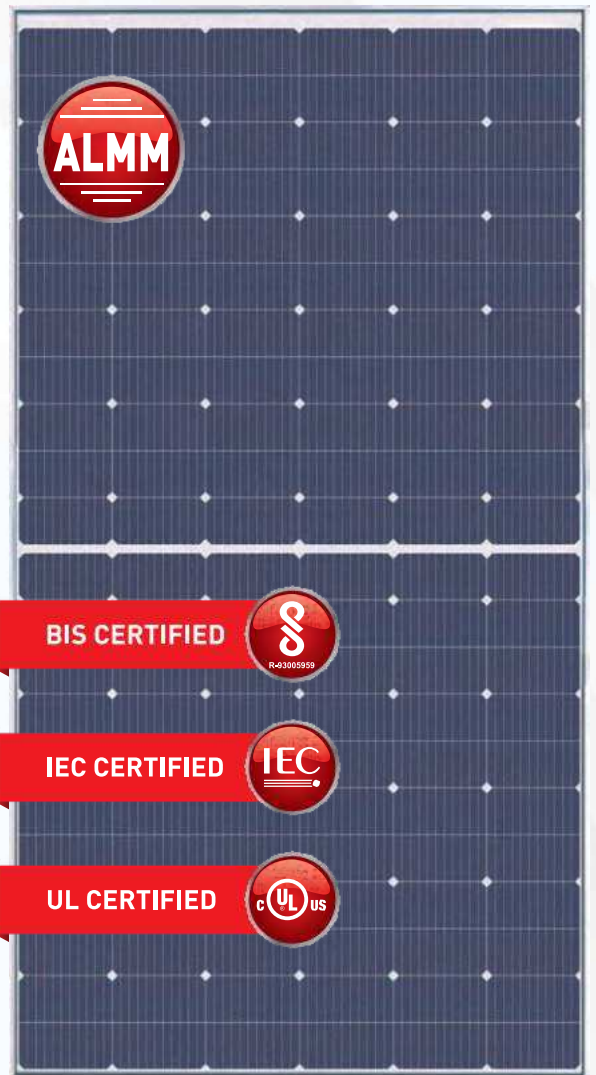
MBB Technology **M10 Half Cut (132 Cells)**

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
-  Certified for Salt Mist Resistant (Severity 6), Ammonia & PID Resistant
-  Better reliability under Extreme Environmental Conditions



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, DEWA Approved

ELECTRICAL DATA - STC*

Model		JH-490M	JH-495M	JH-500M	JH-505M	JH-510M
Capacity Rating Wp	Pmax	490	495	500	505	510
Max. Power Voltage in V	Vpm	38.20	38.30	38.40	38.52	38.64
Max. Power Current in A	Ipm	12.83	12.93	13.03	13.12	13.20
Open Circuit Voltage in V	Voc	45.50	45.62	45.75	45.99	46.10
Short Circuit Current in A	Isc	13.74	13.80	13.86	13.90	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%

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
Frame	Anodized Aluminium Alloy
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

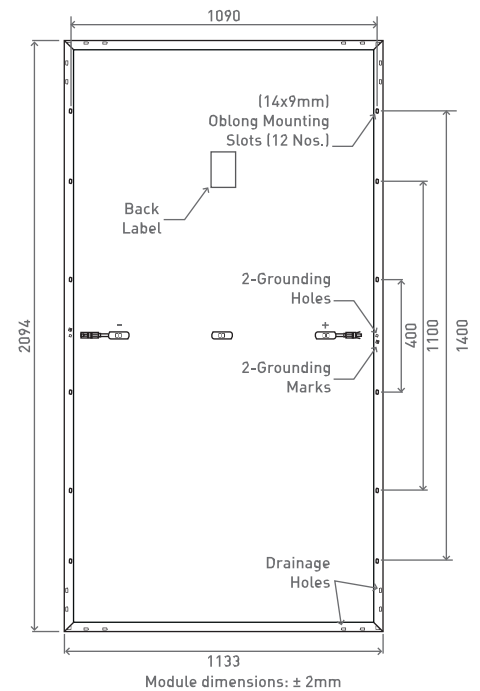
PERMISSIBLE OPERATING CONDITIONS

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

PACKAGING CONFIGURATION

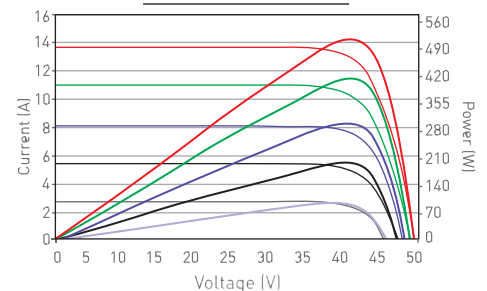
Container Size	40' HQ
Modules per Pallet	31
Modules per Container	682

Dimension of PV Module
Unit: mm

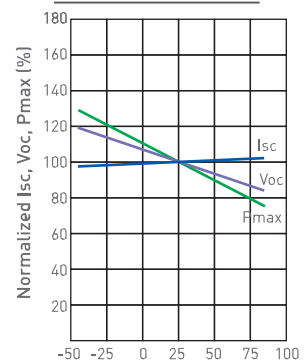


Module dimensions: ± 2mm

Power-Voltage Curve



Cell Temperature [°C]



TRANSFORMING THE POWER OF SUN



MONOFACIAL SOLAR PV MODULE 540-555 Wp










Best in Class Efficiency **21.50%**

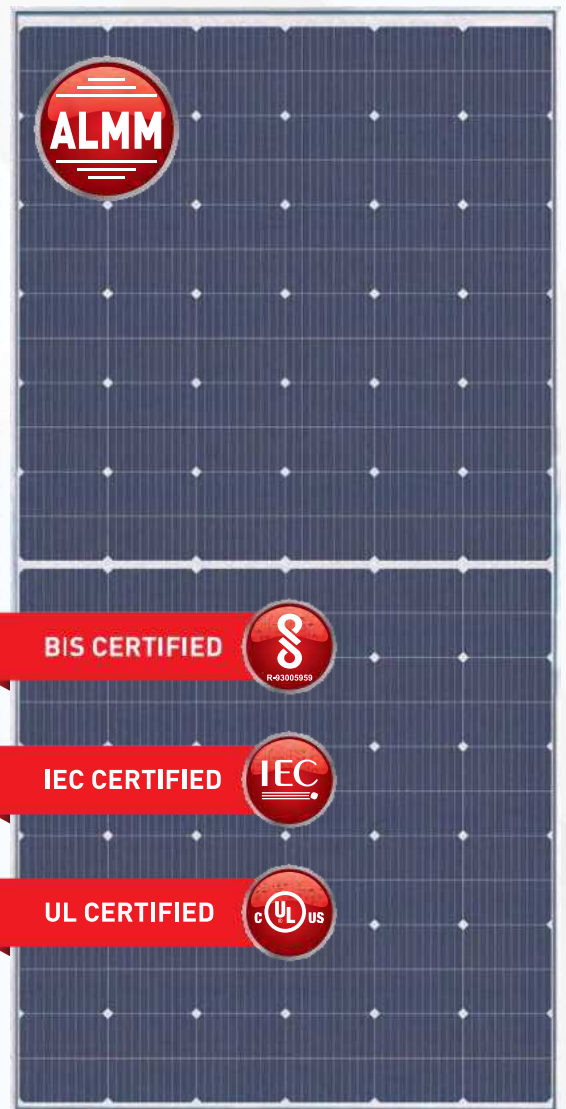
MBB Technology **M10 Half Cut (144 Cells)**

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
-  Certified for Salt Mist Resistant (Severity 6), Ammonia & PID Resistant
-  Better reliability under Extreme Environmental Conditions



Approvals and Certificates:

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ELECTRICAL DATA - STC* & NOCT**

Model	Unit	JH-540M		JH-545M		JH-550M		JH-555M	
		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Capacity Rating Wp	Pmax	540	399	545	403	550	407	555	410
Max. Power Voltage in V	Vpm	41.64	39.35	41.80	39.50	41.93	39.62	42.05	39.74
Max. Power Current in A	Ipm	12.97	10.15	13.04	10.20	13.12	10.26	13.20	10.33
Open Circuit Voltage in V	Voc	49.60	46.59	49.75	46.74	49.90	46.88	50.00	46.97
Short Circuit Current in A	Isc	13.86	10.87	13.92	10.92	13.98	10.97	14.05	11.02
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%

**NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec.

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
Frame	Anodized Aluminium Alloy
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

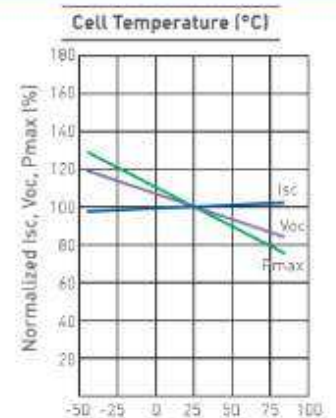
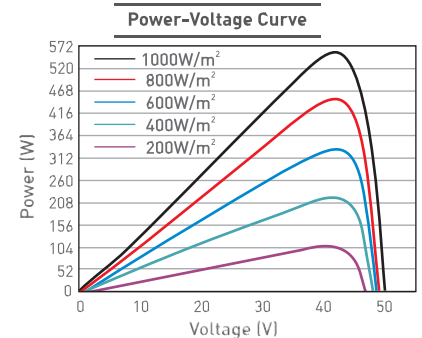
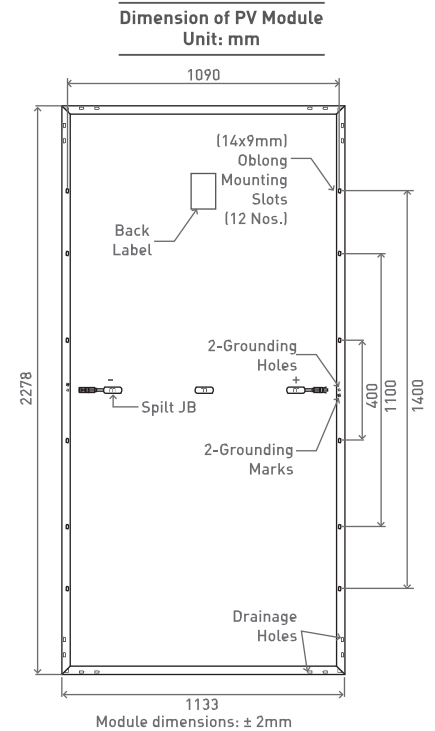
Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

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

PACKAGING CONFIGURATION

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



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MONOFACIAL SOLAR PV MODULE 580-600 Wp

Best in Class Efficiency **21.48%**

MBB Technology **M10 Half Cut (156 Cells)**

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



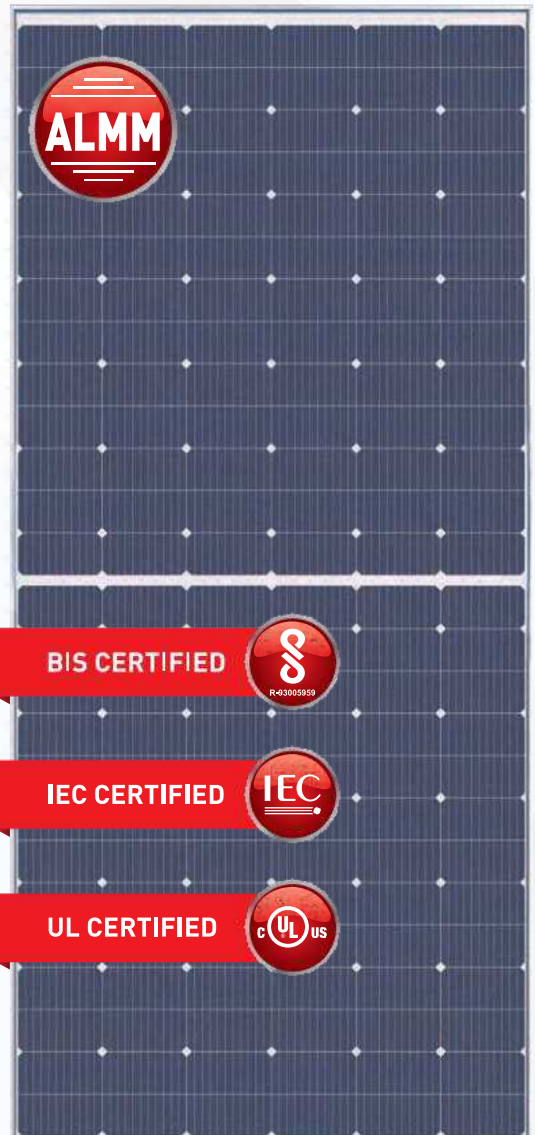
Manufactured using certified Tier 1 BOM Meeting
Highest Quality Standards



Certified for Salt Mist Resistant (Severity 6),
Ammonia & PID Resistant



Better reliability under Extreme Environmental
Conditions



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, DEWA Approved

ELECTRICAL DATA - STC*

Model		JH-580M	JH-585M	JH-590M	JH-595M	JH-600M
Capacity Rating Wp	Pmax	580	585	590	595	600
Max. Power Voltage in V	Vpm	44.72	44.83	44.94	45.11	45.29
Max. Power Current in A	Ipm	12.97	13.05	13.13	13.19	13.25
Open Circuit Voltage in V	Voc	53.54	53.65	53.77	53.87	54.00
Short Circuit Current in A	Isc	13.79	13.86	13.92	13.99	14.05
Module Efficiency	%	20.77	20.95	21.13	21.30	21.48
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)	2465 mm x 1133 mm x 35 mm (optional 40 mm)
Weight	31 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 (156 pcs Half Cut)
Cell Encapsulation	EVA - Ethylene Vinyl Acetate
Backsheet	Composite Film
Frame	Anodized Aluminium Alloy
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

PACKAGING CONFIGURATION

Container Size	40' HQ
Modules per Pallet	31
Modules per Container	496

