

# onix<sup>®</sup>

## SOLAR MODULE

**30**  
YEARS  
✓  
Warranty  
for Linear  
Performance\*

**12**  
YEARS  
✓  
Product Warranty  
on Materials and  
Workmanship\*



Extra Power  
High Saving



AR Coated Glass  
for Enhanced Power



Extra Life with Up to  
20% Additional Power



Lower Temperature  
Coefficient



Double-Sided  
Power Generation



Lower LCOE  
& System Cost



Excellent Anti-LeTID  
& Anti-PID Performance

## N-TYPE TOPCON 600 to 640 Wp

BIFACIAL (GLASS TO GLASS)

144 Half-cut N-type Topcon  
2278(L) x 1134(W) x 33(T)

### MECHANICAL SPECIFICATION

Front Cover	: 2 mm Low Iron HTAR Semi-tempered Glass
Encapsulate	: PID free & UV Resistant
Solar Cell	: M16 N-type TOPCON Bifacial
Solar PV Photovoltaic Ribbon	: PV Ribbon 0.26mm Round / 4.0*0.30mm
Back Cover	: 2 mm Low Iron Printed Semi-tempered Glass
Frame	: Anodized Aluminium Alloy
Junction Box	: IP68 / Weatherproof PPO
Cable	: 4mm <sup>2</sup> & 300mm
Connectors	: IP68 Rated / MC4 Compatible

## N-TYPE TOPCON 570 to 595 Wp

BIFACIAL (GLASS TO BACKSHEET)

144 Half-cut N-type Topcon  
2278(L) x 1134(W) x 33(T)

### MECHANICAL SPECIFICATION

Front Cover	: 3.2 mm Low Iron ARC Tempered Glass
Encapsulate	: PID Free & UV Resistant
Solar Cell	: M10 / M10R N-type TOPCON Bifacial
Solar PV Photovoltaic Ribbon	: PV Ribbon 0.26mm round / 4.0*0.30mm
Back Cover	: PVDF Base Transparent Backsheet
Frame	: Anodized Aluminium Alloy
Junction Box	: IP68 / Weatherproof
Cable	: 4mm <sup>2</sup> & 300mm
Connectors	: IP68 Rated / MC4 Compatible

## P-TYPE TOPCON 530 to 550 Wp

BIFACIAL (GLASS TO GLASS)

144 Half-cut P-type PERC  
2278(L) x 1134(W) x 33(T)

### MECHANICAL SPECIFICATION

Front Cover	: 2 mm Low Iron HTAR Semi-tempered Glass
Encapsulate	: PID free & UV Resistant
Solar Cell	: M10 / M10R P-type TOPCON
Solar PV Photovoltaic Ribbon	: PV Ribbon 0.26mm Round / 4.0*0.30mm
Back Cover	: 2 mm Low Iron Semi-tempered Glass
Frame	: Anodized Aluminium Alloy
Junction Box	: IP68 / Weatherproof PPO
Cable	: 4mm <sup>2</sup> & 300mm
Connectors	: IP68 Rated / MC4 Compatible

## P-TYPE TOPCON 530 to 550 Wp

BIFACIAL (GLASS TO BACKSHEET)

144 Half-cut P-type PERC  
2278(L) x 1134(W) x 33(T)

### MECHANICAL SPECIFICATION

Front Cover	: 3.2 mm Low Iron ARC Tempered Glass
Encapsulate	: PID free & UV Resistant
Solar Cell	: M10 / M10R P-type TOPCON
Solar PV Photovoltaic Ribbon	: PV Ribbon 0.26mm Round / 4.0*0.30mm
Back Cover	: PVDF Base Transparent Backsheet
Frame	: Anodized Aluminium Alloy
Junction Box	: IP68 / Weatherproof PPO
Cable	: 4mm <sup>2</sup> & 300mm
Connectors	: IP68 Rated / MC4 Compatible



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## N-TYPE TOPCON 16BB 600 Wp – 640 Wp

BIFACIAL (GLASS TO BACK SHEET)



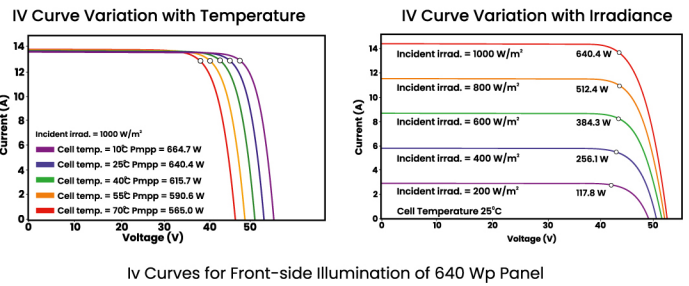
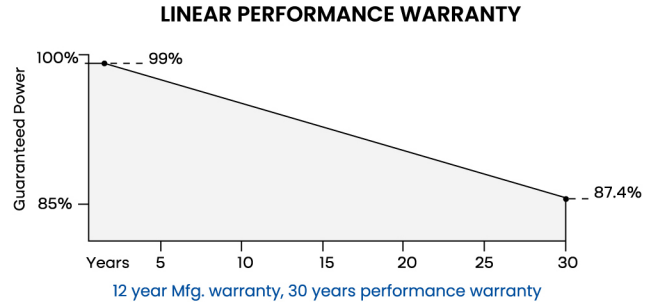
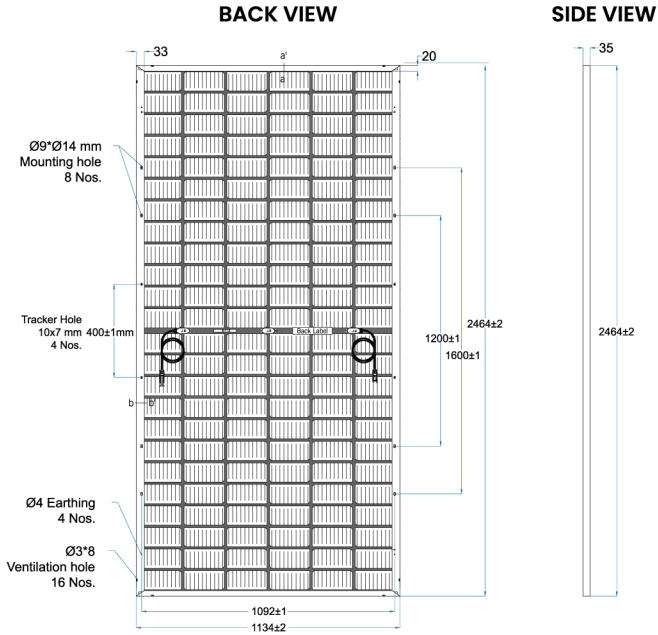
**30**  
YEARS  
✓

Warranty  
for Linear  
Performance\*

**12**  
YEARS  
✓

Product Warranty  
on Materials and  
Workmanship\*

ELECTRICAL CHARACTERISTICS*	OTRPLT16B156-600		OTRPLT16B156-605		OTRPLT16B156-610		OTRPLT16B156-615		OTRPLT16B156-620		OTRPLT16B156-625		OTRPLT16B156-630		OTRPLT16B156-635		OTRPLT16B156-640	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Nominal Maximum Power (Pmax)	600	446	605	449	610	453	615	457	620	461	625	464	630	468	635	472	640	476
Optimum Operating Voltage (Vmp)	47.66	43.88	47.79	44.00	47.92	44.12	48.05	44.24	48.18	44.36	48.31	44.48	48.44	44.60	48.57	44.72	48.70	44.84
Optimum Operating Current (Imp)	12.59	10.17	12.66	10.22	12.73	10.28	12.80	10.34	12.87	10.39	12.94	10.45	13.01	10.51	13.08	10.56	13.15	10.62
Open Circuit Voltage (Voc)	55.41	51.02	55.54	51.14	55.67	51.26	55.80	51.38	55.93	51.50	56.06	51.62	56.19	51.74	56.32	51.86	56.45	51.98
Short Circuit Current (Isc)	13.47	10.88	13.54	10.93	13.61	10.99	13.68	11.05	13.75	11.10	13.82	11.16	13.89	11.22	13.96	11.27	14.03	11.33
Module Efficiency	21.47%		21.65%		21.83%		22.01%		22.19%		22.37%		22.55%		22.74%		22.92%	



**BIFACIAL OUTPUT - BACKSIDE POWER GAIN @ STC\* [BIFACIALITY FACTOR: 80% ± 10%]**

[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component ratings should be selected as per actual Bifacial gain at site (module currents indicated below)]

Capacity Rating	630.04	635.27	640.52	645.79	651.08	656.39	661.71	667.06	672.43
Rated Voltage - Vmp(V)	47.66	47.79	47.92	48.05	48.18	48.31	48.44	48.57	48.70
Rated Current - Imp(A)	13.22	13.29	13.37	13.44	13.51	13.59	13.66	13.73	13.81
Open Circuit Voltage - Voc(V)	55.41	55.54	55.67	55.80	55.93	56.06	56.19	56.32	56.45
Short Circuit Current - Isc(A)	14.14	14.22	14.29	14.36	14.44	14.51	14.58	14.66	14.73
Module Efficiency (%)	22.55%	22.74%	22.92%	23.11%	23.30%	23.49%	23.68%	23.87%	24.07%

Capacity Rating	660.04	665.52	671.02	676.54	682.08	687.64	693.22	698.83	704.45
Rated Voltage - Vmp(V)	47.66	47.79	47.92	48.05	48.18	48.31	48.44	48.57	48.70
Rated Current - Imp(A)	13.85	13.93	14.00	14.08	14.16	14.23	14.31	14.39	14.47
Open Circuit Voltage - Voc(V)	55.41	55.54	55.67	55.80	55.93	56.06	56.19	56.32	56.45
Short Circuit Current - Isc(A)	14.82	14.89	14.97	15.05	15.13	15.20	15.28	15.36	15.43
Module Efficiency (%)	23.62%	23.82%	24.02%	24.21%	24.41%	24.61%	24.81%	25.01%	25.21%

**MECHANICAL SPECIFICATIONS**

- Dimensions : 2464(L) x 1134(W) X 35(T)
- Weight(kg) : 32kg
- Cell Type / No of Cell : 156 Half-cut N-type TOPCon Bifacial Solar cells
- Frame : Anodized Aluminum Alloy (6005, Temper T6, Silver colour)
- Front Cover : Low Iron semi-Tempered AR coated Glass (3.2 mm thick)
- Encapsulate : PID Resistant and UV Resistant Polymeric Film
- Back Cover : PVDF Base UV Protected Backsheet
- Junction Box : 30A Split Junction Box (3 nos. with Individual Bypass Diode) – Weatherproof (IP68)
- Bypass Diode : 60 A, 45 V, 200 °c max. Junction Temperature
- Cable : 4 sq. mm, 300 mm length (Customised Cable Length available on Request)
- Connectors : Mc4 Type
- Application Class Rating : Class A
- Safety Class Rating : Class II
- Mechanical Load Test : 5400 Pa-Front; 2400 Pa-Back (as per IEC & UL)

**MAXIMUM OPERATING CONDITIONS**

- Operating Temperature : -40°C to +85°C
- Maximum System Voltage : 1500V
- Maximum Series Fuse Rating : 30 A

**TEMPERATURE COEFFICIENTS**

- Current α (Isc) : 0.0471%/°C
- Voltage β (Voc) : -0.3021%/°C
- Power γ (Pmax) : -0.3315%/°C

**PACKING STANDARD**

	19FT	20FT	40FT
No. of Modules per Container	248	248	496
No. of Pallets per Container	08	08	16
No. of Modules per Pallet/Weight:	31 Nos./992 Kg		
Pallet Dimensions in mm:	2480(L)*1105(W)*142(H)		

ELECTRICAL PERFORMANCE [Note: Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty: < ±3% Average value of NOCT: 45.00 ± 2 °C]

Caution: Please read safety and installation instructions before using the product. \*Warranty. Linear performance warranty for 30 years, with degradation up to 1% in 1st year and 0.4%/year from year 2 to year 30. Please read ONIX warranty documents thoroughly. Disclaimer: Specifications included in the datasheet are subject to change without prior notice owing to continuous innovation in the Product Development and R&D Activities. ONIX-TECH RENEWABLE PVT. LTD. reserves the right to make any adjustment to the information described here. Dataset contained in this specification do not form a representative of a single module data. @T&C Apply.

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## P-TYPE PERC 10BB 530 Wp – 560 Wp

BIFACIAL (GLASS TO TRANSPARENT BACK SHEET)



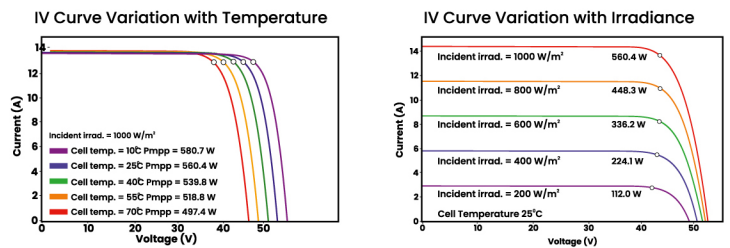
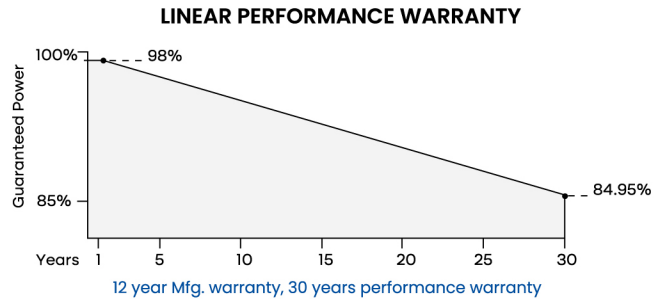
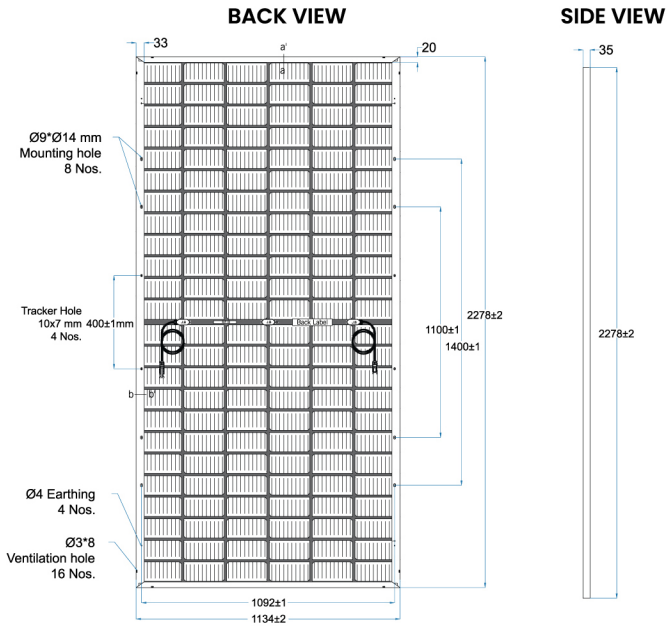
**30**  
YEARS

Warranty  
for Linear  
Performance\*

**12**  
YEARS

Product Warranty  
on Materials and  
Workmanship\*

ELECTRICAL CHARACTERISTICS*	OTRPLM10B144-530		OTRPLM10B144-535		OTRPLM10B144-540		OTRPLM10B144-545		OTRPLM10B144-545		OTRPLM10B144-555		OTRPLM10B144-555	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Nominal Maximum Power - Pmax(Wp)	530	395	535	398	540	402	545	406	550	410	555	413	560	417
Optimum Operating Voltage - Vmp(V)	41.55	38.34	41.68	38.46	41.81	38.58	41.94	38.70	42.07	38.82	42.20	38.94	42.33	39.06
Optimum Operating Current - Imp(A)	12.76	10.29	12.84	10.36	12.92	10.42	13.00	10.49	13.08	10.55	13.16	10.62	13.24	10.68
Open Circuit Voltage - Voc(V)	49.46	45.64	49.59	45.76	49.72	45.88	49.85	46.00	49.98	46.12	50.11	46.24	50.24	46.36
Short Circuit Current - Isc(A)	13.44	10.86	13.52	10.92	13.60	10.98	13.68	11.05	13.76	11.11	13.84	11.18	13.92	11.24
Module Efficiency (%)	20.52%		20.72%		20.91%		21.11%		21.30%		21.50%		21.70%	



**BIFACIAL OUTPUT - BACKSIDE POWER GAIN @ STC\* [BIFACIALITY FACTOR: 70% ± 10%]**

[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component ratings should be selected as per actual Bifacial gain at site (module currents indicated below)]

	Capacity Rating - Pmax(Wp)	Rated Voltage - Vmp(V)	Rated Current - Imp(A)	Open Circuit Voltage - Voc(V)	Short Circuit Current - Isc(A)	Module Efficiency (%)
5%	557	41.55	13.40	49.46	14.11	22.61%
	562	41.68	13.48	49.59	14.28	21.81%
	567	41.81	13.57	49.72	14.28	22.01%
	572	41.94	13.65	49.85	14.36	22.22%
	578	42.07	13.73	49.98	14.45	22.43%
	583	42.20	13.82	50.11	14.53	22.63%
10%	588	42.33	13.90	50.24	14.62	22.84%
	583	42.20	13.82	50.11	14.53	22.63%
	611	42.20	14.48	50.11	15.22	23.71%
	616	42.33	14.56	50.24	15.31	23.93%
	600	41.94	14.30	49.85	15.05	23.28%
	605	42.07	14.39	49.98	15.14	23.49%

**MECHANICAL SPECIFICATIONS**

Dimensions	: 2278(L) x 1134(W) X 35(T)
Weight(kg)	: 28kg
Cell type / No of Cell	: 144 Half-cut P-type MONO PERC Bifacial Solar cells
Frame	: Anodized Aluminum Alloy (6005, Temper T6, Silver colour)
Front Cover	: Low Iron semi-Tempered AR coated Glass (3.2 mm thick)
Encapsulate	: PID Resistant and UV Resistant Polymeric Film
Back Cover	: PVDF Base UV Protected Backsheet
Junction Box	: 25A Split Junction Box (3 nos. with Individual Bypass Diode) — Weatherproof (IP68)
Bypass Diode	: 60 A, 45 V, 200 °c max. Junction Temperature
Cable	: 4 sq. mm, 300 mm length (Customised Cable Length available on Request)
Connectors	: Mc4 Type
Application Class Rating	: Class A
Safety Class Rating	: Class II
Mechanical Load Test	: 5400 Pa-Front; 2400 Pa-Back (as per IEC & UL)

**MAXIMUM OPERATING CONDITIONS**

Operating Temperature	-40°C to +85°C
Maximum System Voltage	1500V
Maximum Series Fuse Rating	25 A

**TEMPERATURE COEFFICIENTS**

Current α (Isc)	0.0482%/°C
Voltage β (Voc)	-0.2917%/°C
Power γ (Pmax)	-0.3425%/°C

**PACKING STANDARD**

	19FT	20FT	40FT
No. of Modules per Container	248	310	682
No. of Pallets per Container	08	10	22
No. of Modules per Pallet/Weight:	31 Nos./868 Kg		
Pallet Dimensions in mm:	2290(L)*1105(W)*142(H)		

ELECTRICAL PERFORMANCE [Note: Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty: < ±3% Average value of NOCT: 45.00 ± 2 °C]

Caution: Please read safety and installation instructions before using the product. \*Warranty. Linear performance warranty for 30 years, with degradation up to 1% in 1st year and 0.4%/year from year 2 to year 30. Please read ONIX warranty documents thoroughly. Disclaimer: Specifications included in the datasheet are subject to change without prior notice owing to continuous innovation in the Product Development and R&D Activities. ONIX-TECH RENEWABLE PVT. LTD. reserves the right to make any adjustment to the information described here.

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## N-TYPE TOPCON 16BB 570 Wp - 595 Wp

BIFACIAL (GLASS TO BACK SHEET)



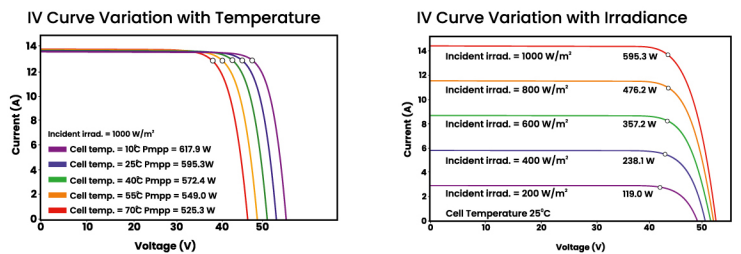
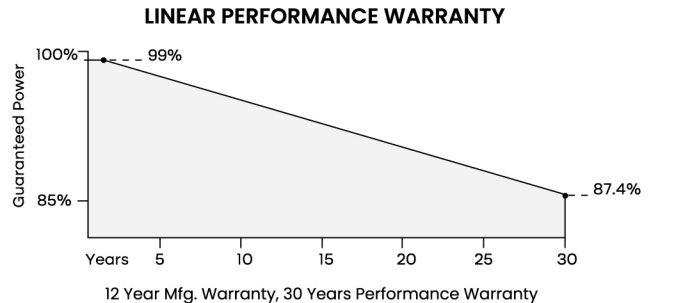
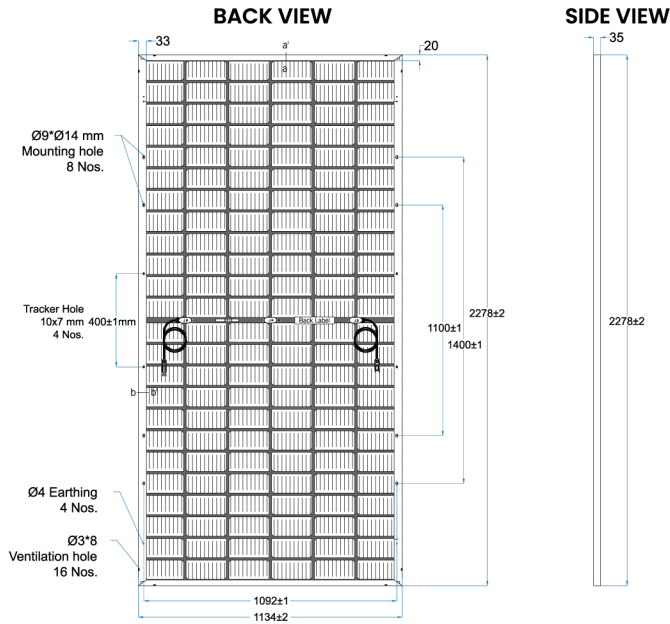
**30**  
YEARS  
✓

Warranty  
for Linear  
Performance\*

**12**  
YEARS  
✓

Product Warranty  
on Materials and  
Workmanship\*

ELECTRICAL CHARACTERISTICS*	OTRPLT16B144-570		OTRPLT16B144-575		OTRPLT16B144-580		OTRPLT16B144-585		OTRPLT16B144-590		OTRPLT16B144-595	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Nominal Maximum Power (Pmax)	570	424	575	428	580	431	585	435	590	439	595	443
Optimum Operating Voltage (Vmp)	44.25	40.74	44.38	40.86	44.51	40.98	44.64	41.10	44.77	41.22	44.90	41.34
Optimum Operating Current (Imp)	12.89	10.41	12.96	10.47	13.03	10.52	13.11	10.59	13.18	10.64	13.26	10.71
Open Circuit Voltage (Voc)	51.55	47.47	51.68	47.59	51.81	47.71	51.94	47.83	52.07	47.95	52.20	48.07
Short Circuit Current (Isc)	13.85	11.18	13.92	11.24	13.99	11.30	14.06	11.35	14.13	11.41	14.20	11.47
Module Efficiency	22.08%		22.27%		22.45%		22.65%		22.84%		23.05%	



IV Curves for Front-Side Illumination of 595 Wp Panel

**BIFACIAL OUTPUT - BACKSIDE POWER GAIN @ STC\* [BIFACIALITY FACTOR: 80% ± 10%]**

[Note: The bifacial gain depends on the power plant design and site conditions. Electrical component ratings should be selected as per actual Bifacial gain at site (module currents indicated below)]

	Capacity Rating - Pmax(Wp)	599	604	609	614	620	625
5%	Rated Voltage - Vmp(V)	44.25	44.38	44.51	44.64	44.77	44.90
	Rated Current - Imp(A)	13.53	13.61	13.68	13.77	13.84	13.92
	Open Circuit Voltage - Voc(V)	51.55	51.68	51.81	51.94	52.07	52.20
	Short Circuit Current - Isc(A)	14.54	14.62	14.69	14.76	14.84	14.91
	Module Efficiency (%)	23.18%	23.38%	23.58%	23.79%	23.98%	24.20%
10%	Capacity Rating - Pmax(Wp)	627	633	638	644	649	655
	Rated Voltage - Vmp(V)	44.25	44.38	44.51	44.64	44.77	44.90
	Rated Current - Imp(A)	14.18	14.26	14.34	14.42	14.50	14.59
	Open Circuit Voltage - Voc(V)	51.55	51.68	51.81	51.94	52.07	52.20
	Short Circuit Current - Isc(A)	15.24	15.31	15.39	15.47	15.54	15.62
	Module Efficiency (%)	24.29%	24.49%	24.70%	24.92%	25.13%	25.35%

**MECHANICAL SPECIFICATIONS**

- Dimensions : 2278(L) x 1134(W) X 35(T)
- Weight(kg) : 28kg
- Cell type / NO of Cell : 144 Half-cut N-type TOPCon Bifacial Solar cells
- Frame : Anodized Aluminum Alloy (6005, Temper T6, Silver colour)
- Front Cover : Low Iron semi-Tempered AR coated Glass (3.2 mm thick )
- Encapsulate : PID Resistant and UV Resistant Polymeric Film
- Back Cover : PVDF Base UV Protected Backsheet
- Junction Box : 30A Split Junction Box (3 nos. with Individual Bypass Diode) – Weatherproof (IP68)
- Bypass Diode : 60 A, 45 V, 200 °c max. Junction Temperature
- Cable : 4 sq. mm, 300 mm length (Customised Cable Length available on Request)
- Connectors : Mc4 Type
- Application Class Rating : Class A
- Safety Class Rating : Class II
- Mechanical Load Test : 5400 Pa-Front; 2400 Pa-Back (as per IEC & UL)

**MAXIMUM OPERATING CONDITIONS**

- Operating Temperature : -40°C to +85°C
- Maximum System Voltage : 1500V
- Maximum Series Fuse Rating : 30 A

**TEMPERATURE COEFFICIENTS**

- Current α (Isc) : 0.0471%/C
- Voltage β (Voc) : -0.3021%/C
- Power γ (Pmax) : -0.3315%/C

**PACKING STANDARD**

	19FT	20FT	40FT
No. of Modules per Container	248	310	682
No. of Pallets per Container	08	10	22
No. of Modules per Pallet/Weight:	31 Nos./868 Kg		
Pallet Dimensions in mm:	2290(L)*1105(W)*142(H)		

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