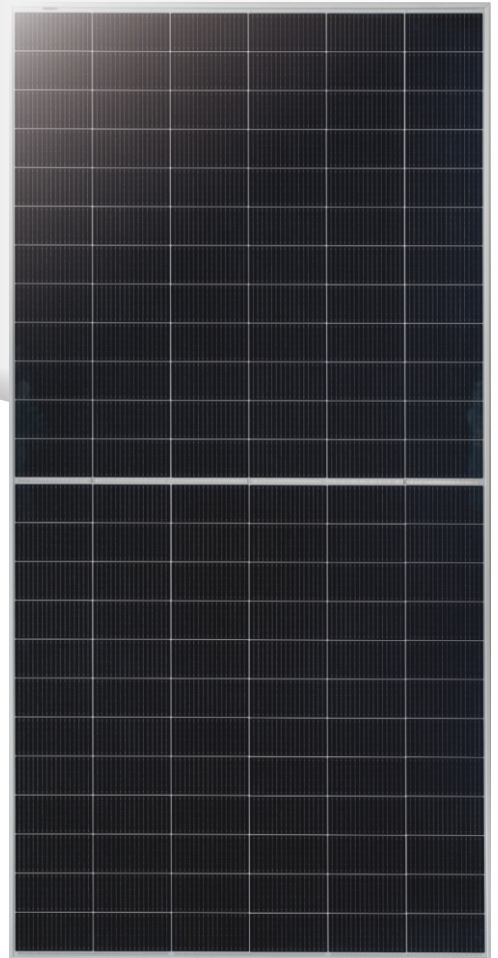
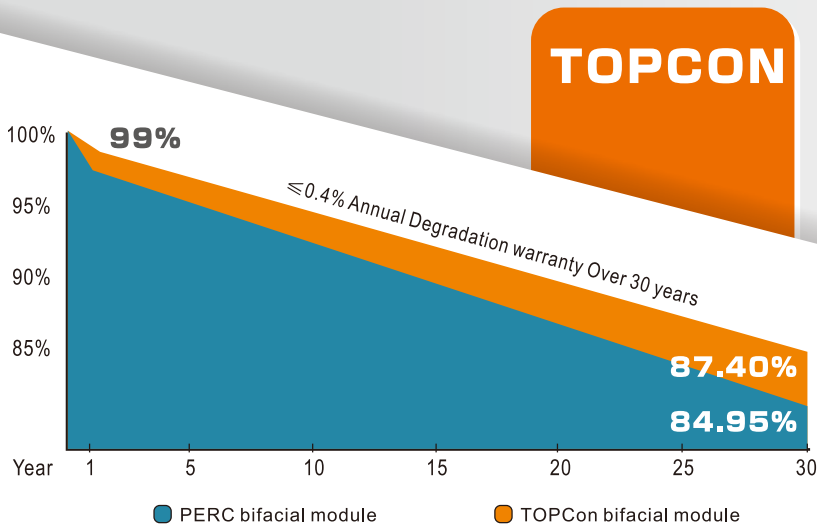


DOUBLE-GLASS BIFACIAL N-TYPE 610~620 Watt



15-year product warranty
30-year linear power output



Global Tier 1 brand as announced by Bloomberg NEF



Higher Power Output
Lower shading and resistive loss



Anti-PID(potential induced degradation)
Passed anti-PID test under 85% damp heat
85% relative humidity for 96 hours



Outstanding mechanical load resistance
2400 Pa wind load, 5400 Pa snow load



Cutting Free Technology
Minimized micro-crack



CEC Listed



IEC 61215, IEC 61730

ISO 9001: 2015(Quality management systems)

ISO 14001: 2015 (Environmental management systems)

ISO45001: 2018 (Occupational health and safety)

UNI 9177 la CLASSE DI REAZIONE AL FUOCO:1



TOPCON (N TYPE) 610~620Watt



ELECTRICAL SPECIFICATIONS

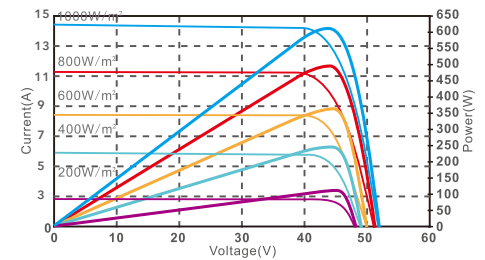
Module Type		UL-610M-144DGN		UL-615M-144DGN		UL-620M-144DGN	
		STC*	NOCT*	STC*	NOCT*	STC*	NOCT*
Maximum Power (Pmax)	W	610	455	615	458	620	462
Maximum Power Voltage (Vmp)	V	44.42	40.9	44.62	41.1	44.82	41.2
Maximum Power Current (Imp)	A	13.73	11.21	13.78	11.16	13.83	11.20
Open-circuit Voltage (Voc)	V	52.22	47.5	52.42	47.7	52.62	47.9
Short-circuit Current (Isc)	A	14.65	11.82	14.70	11.86	14.75	11.90
Module Efficiency STC	%	22.58		22.77		22.95	
Operating Temperature				-40°C~85°C			
Maximum system voltage				DC1500V(IEC)			
Maximum series fuse rating				30A			
Power tolerance				0~+5 Watt			
Temperature coefficients of Pmax				-0.29%/°C			
Temperature coefficients of Voc				-0.250%/°C			
Temperature coefficients of Isc				0.046%/°C			
Nominal operating cell temperature (NOCT)				43±2°C			

*STC : Cell temperature: 25°C, Irradiance: 1000 W/m², Air mass: 1.5G

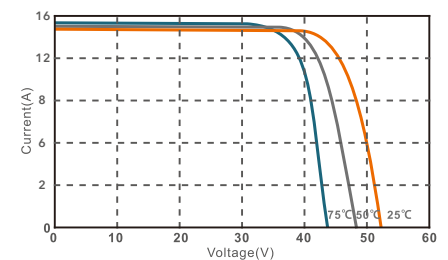
*NOTC : Air temperature: 20°C, Irradiance: 800 W/m², Air mass: 1.5G, Wind speed: 1 m/s

I-V CURVE[615W]

I-V characteristics at different irradiances

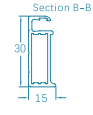
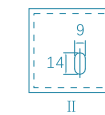
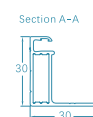
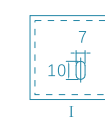
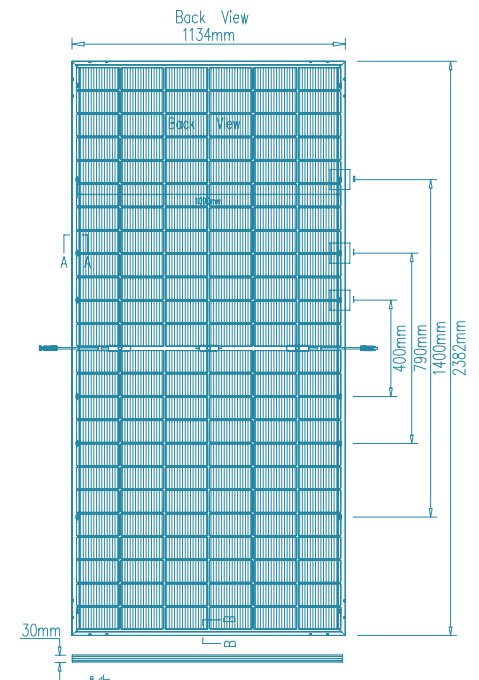


I-V characteristics at different temperature



SPECIFICATIONS

Cell Type	182.2×95.8mm N type Mono-crystalline
No. of cells	144 (6×12×2)
Dimensions	2382*1134*30mm
Weight	33.6Kg
Glass	2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Junction Box	IP68, 3 diodes
Connector	MC4 Compatible
Cable Length (Including Connector)	4mm² Portrait: (+)400 mm/(-) 200mm Landscape: (+) 1400mm/(-)1400 mm
Packaging Configuration	Two Box=One pallet 36pcs/Box, 72pcs/Pallet, 720pcs/40HQ Container



Length: ± 2mm
Width: ± 2mm
Height: ± 1mm
Row Pitch: ± 2mm

Electrical characteristics with different rear side power gain(reference to 610 W front)

Pmax/W	Voc/V	Isc/A	Vmp/V	Imp/A	Pmax gain
610	52.20	14.65	44.40	13.73	0
641	52.20	15.38	44.40	14.42	5%
671	52.20	16.12	44.40	15.11	10%
702	52.20	16.85	44.40	15.79	15%
732	52.20	17.58	44.40	16.48	20%
673	52.20	18.31	44.40	17.17	25%
793	52.20	19.05	44.40	17.85	30%

Specifications included in this datasheet are subject to change without notice.

Ulica Solar reserves the right of final interpretation.

