

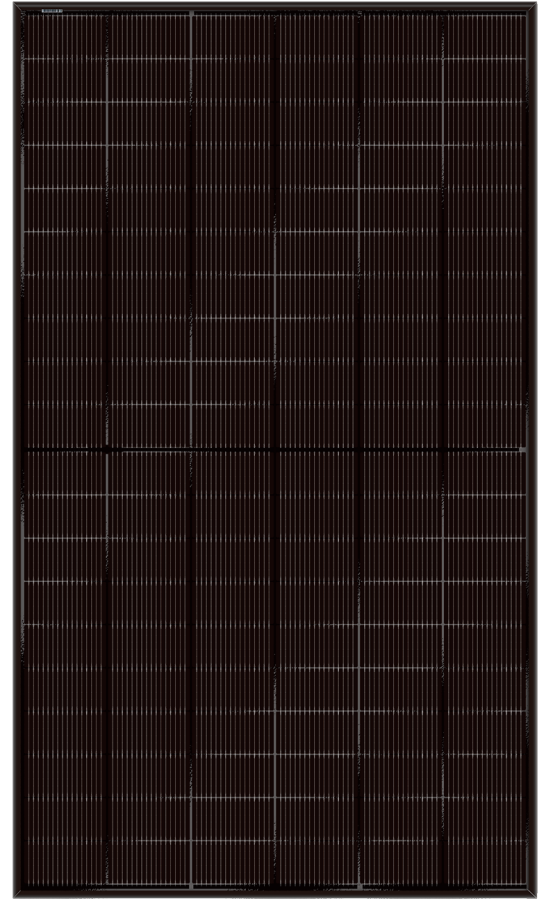
Black Jade^{Flow} series

Double Glass BiFacial N-Type TOPCon Solar Module

480~505W

Model: UL-***M-120BDGN

Maximum Efficiency: **22.81%**



Cutting Free Technology

The half cells are made directly from half silicon wafer, reducing power losses and hidden cracks



Longer Term Reliability

Passed the IEC63209-1:2021 standard test (With testing standards 2 to 3 times stricter than regular IEC requirements)



Outstanding Mechanical load Resistance

2mm+2mm front and back sides tempered glass, sturdy and durable, resistant to hail impact, with a snow load of 5400Pa and a wind load of 2400Pa



Anti-PID(potential induced degradation)

Passed anti-PID test under 85°C damp heat 85% relative humidity for 192 hours



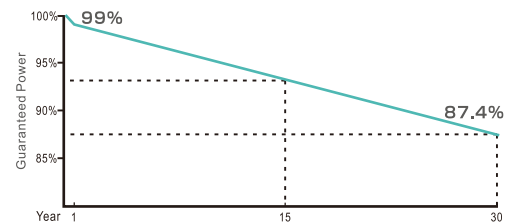
Lower LCOE

Lower shading and resistive loss Lower temperature coefficient



Full-Scenario Resilience

Proven through rigorous resistance tests for salt mist, ammonia corrosion, sand & dust, and LeTID degradation.



15 Year Product Warranty **1%** Power Degradation In The First Year

30 Year Linear Power Warranty **0.4%** Linear Power Degradation

IEC 61215, IEC 61730

ISO 9001: 2015(Quality management systems)

ISO 14001: 2015 (Environmental management systems)

ISO45001: 2018 (Occupational health and safety)

UNI 9177 Fire Test: Class 1



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ELECTRICAL SPECIFICATIONS

Module Type	UL-480M-120BDGN		UL-485M-120BDGN		UL-490M-120BDGN		UL-495M-120BDGN		UL-500M-120BDGN		UL-505M-120BDGN		
	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	
Maximum Power(Pmax)	W	480	364	485	368	490	371	495	375	500	379	505	383
Maximum Power Voltage(Vmp)	V	36.35	33.44	36.52	33.60	36.68	33.75	36.85	33.90	37.02	34.06	37.18	34.21
Maximum Power Current(Imp)	A	13.20	10.88	13.28	10.94	13.36	11.00	13.43	11.06	13.51	11.13	13.58	11.19
Open-circuit Current(Voc)	V	43.02	39.15	43.18	39.29	43.35	39.45	43.52	39.60	43.78	39.84	43.98	40.02
Short-circuit Current(Isc)	A	14.25	11.49	14.30	11.53	14.35	11.58	14.43	11.64	14.48	11.68	14.54	11.73
Module Efficiency STC	%	21.68		21.91		22.14		22.36		22.59		22.81	

*STC: Cell temperature: 25°C, Irradiance: 1000W/m², Air mass: 1.5G, Power measurement tolerance: ±3%
 *NOCT: Air temperature: 20°C, Irradiance: 1000W/m², Air mass: 1.5G, Wind speed: 1m/s

OPERATING PARAMETERS

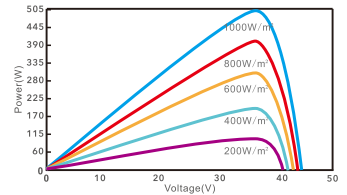
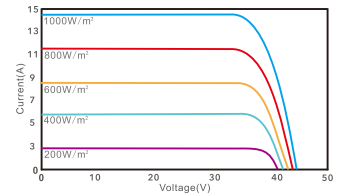
Operating Temperature	-40°C~85°C
Maximum system voltage	DC1500V(IEC)
Maximum series fuse rating	30A
Nominal operating cell temperature	43±2°C
Power tolerance	0~+5Watt

TEMPERATURE RATINGS

Temperature coefficients of Pmax	-0.29%/°C
Temperature coefficients of Voc	-0.25%/°C
Temperature coefficients of Isc	0.046%/°C

I-V CURVE

I-V characteristics at different irradianations (reference to 505 W)



REAR SIDE POWER GAIN(REFERENCE TO 505W FRONT SIDE)

Pmax/W	505	530	556	581	606	631	657
Pmax gain	0%	5%	10%	15%	20%	25%	30%
Voc/V	43.98	43.98	43.98	43.98	43.98	43.98	43.98
Isc/A	14.54	15.27	15.99	16.72	17.45	18.18	18.90
Vmp/V	37.18	37.18	37.18	37.18	37.18	37.18	37.18
Imp/A	13.58	14.26	14.94	15.62	16.30	16.98	17.66

SPECIFICATIONS

Cell Type	N-type TOPCon Mono Half Cell	
No. of cells	120(6×10×2)	
Dimensions	1952*1134*30mm	
Weight	26.5kg	
Front Glass	2.0mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass	
Back Glass	2.0mm, High Transmission, Low Iron, Tempered Glass	
Frame	Anodized Aluminium Alloy	
Junction Box	IP68, 3 diodes	
Connector	MC4 Compatible: PV-UL608 or others _____	Original: MC4-EVO2A
Cable Length (Including Connector)	4mm² Short Cable: (+)400/(-)200mm or Long Cable: (+)1200/(-)1200mm or Customized Length _____	

PACKAGING INFORMATION



37 Pcs/Pallet



74 Pcs/Stack



Length: 1955mm



Width: 1140mm



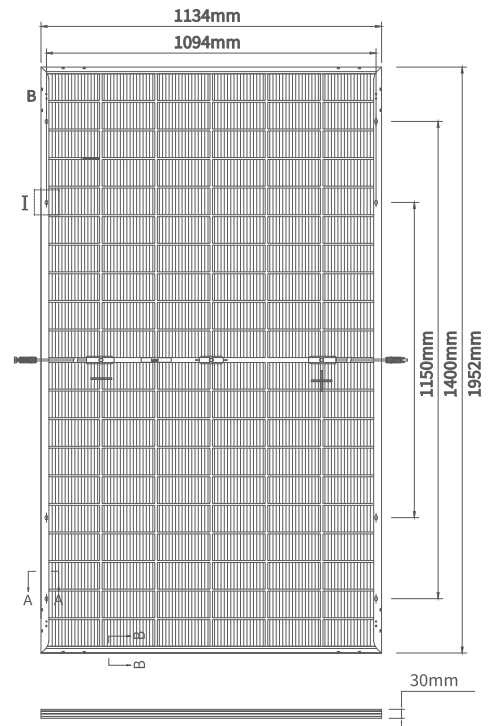
Height: 2550mm



Weight: 2029kg/Stack



12 Stack/40HQ
888Pcs/40HQ



B-B

B-B

A-A

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



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

Ulica Solar reserves the right of final interpretation.

Version number: UL-1952-120BDGNTH-30-EN-V3.1