

Qin series (Preview Version)

Double Glass BiFacial N-Type TOPCon Solar Module

635~660Watt

Model: QIN-UL-***M-144CDGN

Maximum Efficiency: **24.43%**



Global Patent

Innovation Composite Finger Technology



Higher Output

Same dimension 40W higher, Module power up to 660W
Module efficiency up to 24.43%



Bifacial Mono Module

Capable of generating power at back side,
80±5% efficiency of the front side



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



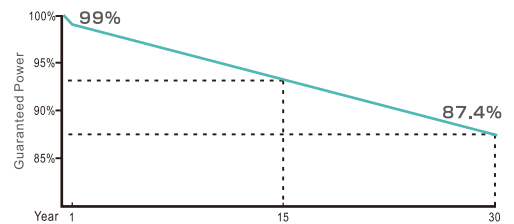
Lower LCOE

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



CEC Listed



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DOUBLE GLASS BIFACIAL 635~660Watt (Preview Version)

ELECTRICAL SPECIFICATIONS

Module Type	UL-635M-144CDGN		UL-640M-144CDGN		UL-645M-144CDGN		UL-650M-144CDGN		UL-655M-144CDGN		UL-660M-144CDGN		
	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	STC*	NOCT*	
Maximum Power(Pmax)	W	635	481	640	485	645	489	650	493	655	496	660	500
Maximum Power Voltage(Vmp)	V	44.88	41.29	44.98	41.38	45.08	41.47	45.18	41.57	45.28	41.66	45.38	41.75
Maximum Power Current(Imp)	A	14.15	11.65	14.23	11.72	14.31	11.79	14.39	11.85	14.47	11.92	14.54	11.98
Open-circuit Current(Voc)	V	53.38	48.58	53.48	48.67	53.58	48.76	53.68	48.85	53.78	48.94	53.88	49.03
Short-circuit Current(Isc)	A	14.87	11.99	14.96	12.07	15.04	12.14	15.12	12.20	15.20	12.27	15.28	12.33
Module Efficiency STC	%	23.51		23.69		23.88		24.06		24.25		24.43	

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

OPERATING PARAMETERS

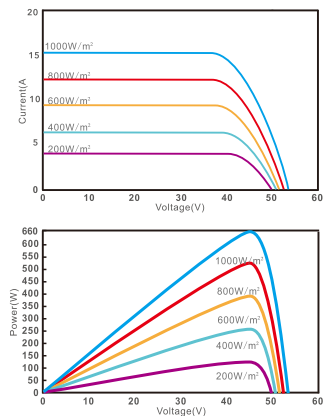
Operating Temperature	-40°C~85°C
Maximum system voltage	DC1500V(IEC)
Maximum series fuse rating	30A
Nominal operating cell temperature	43±2°C
Power tolerance	0~+5Watt

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 irradiances (reference to 660 W)



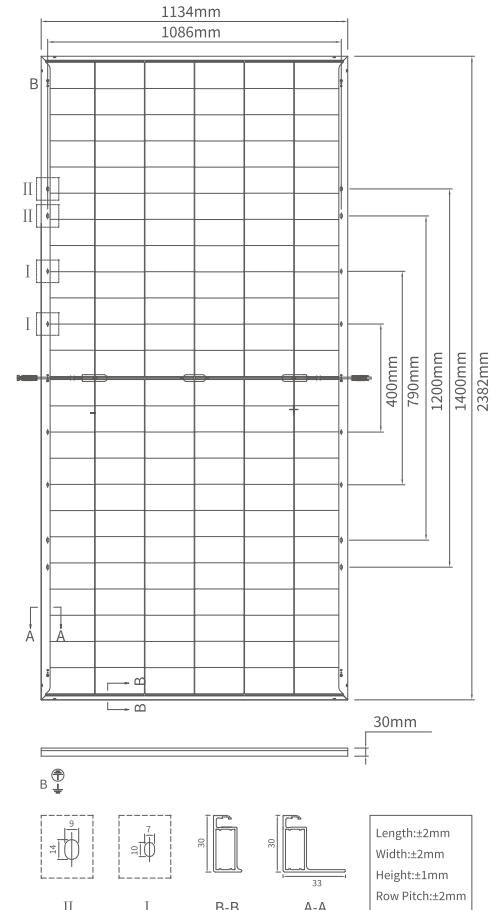
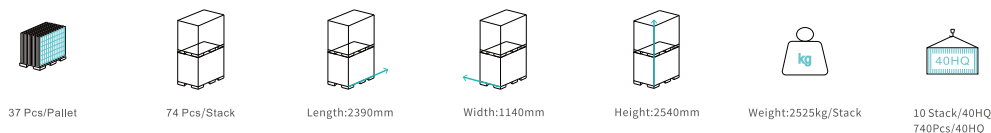
REAR SIDE POWER GAIN(REFERENCE TO 660W FRONT SIDE)

	660	693	726	759	792	825	858
Pmax/W	660	693	726	759	792	825	858
Pmax gain	0%	5%	10%	15%	20%	25%	30%
Voc/V	53.88	53.88	53.88	53.88	53.88	53.88	53.88
Isc/A	15.28	16.04	16.81	17.57	18.34	19.10	19.86
Vmp/V	45.38	45.38	45.38	45.38	45.38	45.38	45.38
Imp/A	14.54	15.27	15.99	16.72	17.45	18.18	18.90

SPECIFICATIONS

Cell Type	N-type TOPCon Mono Half Cell	
No. of cells	144(6×12×2)	
Dimensions	2382*1134*30mm	
Weight	33.0kg	
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	IP68,3diodes	
Connector	MC4 Compatible:PV-UL608 or others	Original:MC4-EVO2A
Cable Length (Including Connector)	4mm² Short Cable:(+)400/(-)200mm or Long Cable:(+)1400/(-)1400mm or Customized Length	

PACKAGING INFORMATION



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

Ulica Solar reserves the right of final interpretation.

Version number: QIN-UL-2382-144CDGNYB-30-EN-V3.1