

# Qin series (Preview Version)

Double Glass BiFacial N-Type TOPCon Solar Module

# 635~660 Watt

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**  
2400 Pa wind load, 5400 Pa snow load



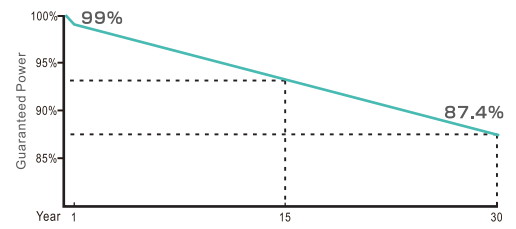
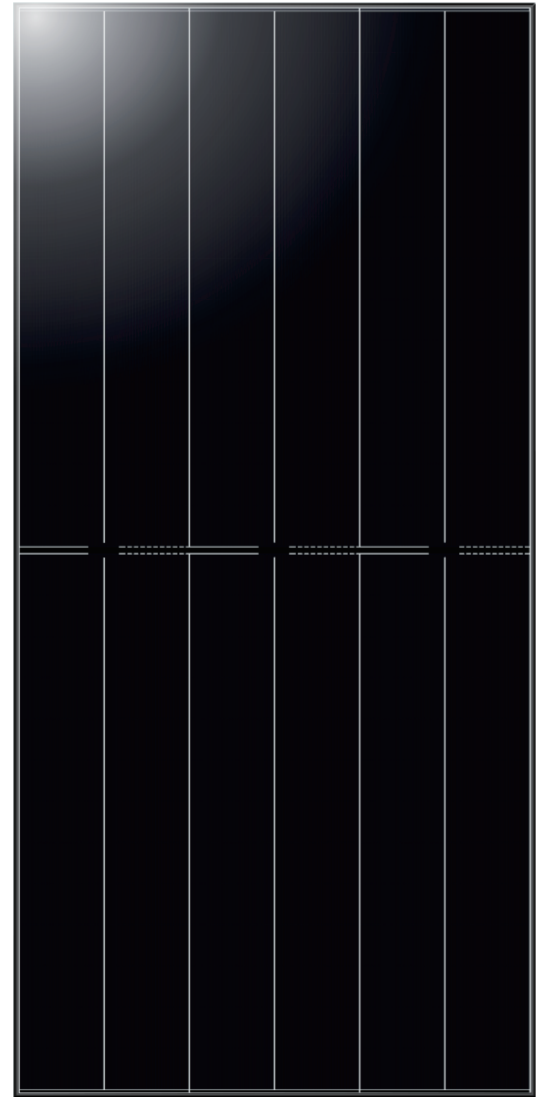
**Anti-PID (potential induced degradation)**  
Passed anti-PID test under 85°C damp heat 85%  
relative humidity for 192 hours



**Lower LCOE**  
Lower shading and resistive loss Lower temperature coefficient



**Widely Applied To Various Scenarios**  
Flexibly applied to roofs, ground surfaces, water surfaces, mountainous  
areas, and other diverse environments



**15** Year Product Warranty    **1%** Power Degradation In The First Year  
**30** Year Linear Power Warranty    **0.4%** Linear Power Degradation



CEC Listed



IEC 61215, IEC 61730

ISO 9001: 2015 (Quality management systems)  
 ISO 14001: 2015 (Environmental management systems)  
 ISO 45001: 2018 (Occupational health and safety)  
 UNI 9177 Ia CLASSE DI REAZIONE AL FUOCO: 1



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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

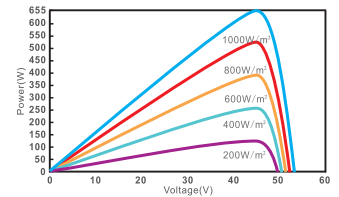
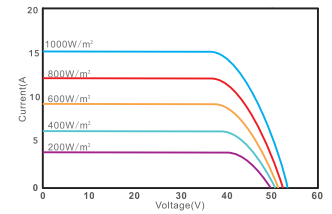
Operating Temperature	-40°C~85°C
Maximum system voltage	DC1500V(IEC)
Maximum series fuse rating	30A
Nominal operating cell temperature	43±2°C
Power tolerance	0~+5Watt

## 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 655 W)

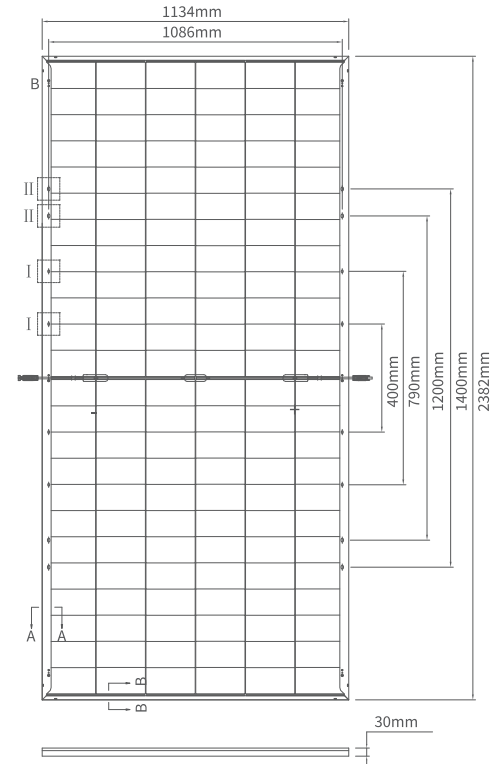


## REAR SIDE POWER GAIN(REFERENCE TO 655W FRONT SIDE)

	655	688	721	753	786	819	852
Pmax/W	655	688	721	753	786	819	852
Pmax gain	0%	5%	10%	15%	20%	25%	30%
Voc/V	53.78	53.78	53.78	53.78	53.78	53.78	53.78
Isc/A	15.20	15.96	16.72	17.48	18.24	19.00	19.76
Vmp/V	45.28	45.28	45.28	45.28	45.28	45.28	45.28
Imp/A	14.47	15.19	15.92	16.64	17.36	18.09	18.81

## SPECIFICATIONS

Cell Type	N-type TOPCon Mono Half Cell	
No. of cells	144(6×12×2)	
Dimensions	2382*1134*30mm	
Weight	32.0kg	
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-EVO2
Cable Length (Including Connector)	4mm <sup>2</sup> Short Cable:(+)400/(-)200mm or Long Cable:(+)1400/(-)1400mm or Customized Length	



## PACKAGING INFORMATION



36 Pcs/Pallet



72 Pcs/Stack



Length:2390mm



Width:1130mm



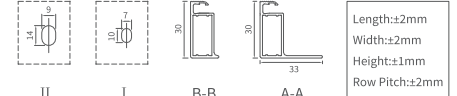
Height:2540mm



Weight:2387kg/Stack



10 Stack/40HQ  
720Pcs/40HQ



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-V2.0