





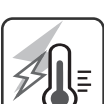





DEF\_OFA / 108 cells  
 425 W - 450 W  
 Mono-Crystalline Bifacial PV Module

United Renewable Energy Co., Ltd. (a company from Taiwan where the sun shines) Glory TOPCon module uses URECO TOPCon monocrystalline bifacial solar cells, and URECO advanced glass(G2G) module manufacturing technology.



## Key Features

- |   |   |
|---|---|
|  <p><b>Multi-Bus bar/ TLS technology</b><br/>             Increase the stability of outdoor power generation</p> |  <p><b>Better bifaciality</b><br/>             High bifacial rate</p>   |
|  <p><b>PID resistance</b><br/>             Excellent PID resistance performance</p>                              |  <p><b>Excellent low light performance</b><br/>             First year power degradation 1%<br/>             Annual degradation 0.4% each year</p>  |
|  <p><b>Superior temperature coefficient</b><br/>             Better performance in high temperature</p>          |  <p><b>Withstand heavy loading</b><br/>             Equivalent to the Beaufort wind scale 17 validation</p>   |
|  <p><b>NO Water pollution concern</b><br/>             PASS the water quality standard by E.P.A</p>              |  <p><b>High Durability</b><br/>             High resistance to salt mist &amp; PID design<br/>             Pass the highest level<br/>             (IEC 61701/ IEC 60068-2-52 Severity 8)</p> |



## Electrical Data

Model		Bifacial Gain			Bifacial Gain			Bifacial Gain		
		DEF425OFA	5%	10%	DEF430OFA	5%	10%	DEF435OFA	5%	10%
Maximum Rating Power (Pmax)	[W]	425	446	468	430	452	473	435	457	479
Module Efficiency	[%]	21.77	22.86	23.95	22.03	23.13	24.23	22.29	23.40	24.52
Open Circuit Voltage (Voc)	[V]	38.95	38.95	38.95	39.15	39.15	39.15	39.35	39.35	39.35
Maximum Power Voltage	[V]	31.90	31.90	31.90	32.11	32.11	32.11	32.32	32.32	32.32
Short Circuit Current (Isc)	[A]	14.32	15.04	15.75	14.40	15.12	15.84	14.48	15.20	15.93
Maximum Power Current	[A]	13.34	14.01	14.67	13.40	14.07	14.74	13.46	14.13	14.81
Model		DEF440OFA	5%	10%	DEF445OFA	5%	10%	DEF450OFA	5%	10%
Maximum Rating Power (Pmax)	[W]	440	462	484	445	467	490	450	473	495
Module Efficiency	[%]	22.55	23.68	24.81	22.81	23.95	25.09	23.07	24.22	25.38
Open Circuit Voltage (Voc)	[V]	39.55	39.55	39.55	39.75	39.75	39.75	39.95	39.95	39.95
Maximum Power Voltage	[V]	32.53	32.53	32.53	32.74	32.74	32.74	32.95	32.95	32.95
Short Circuit Current (Isc)	[A]	14.56	15.29	16.02	14.64	15.37	16.10	14.72	15.46	16.19
Maximum Power Current	[A]	13.52	14.20	14.87	13.58	14.26	14.94	13.64	14.32	15.00
Positive Power Tolerance		0~3%								

\*Standard Test Condition (STC): Cell Temperature 25 °C, Irradiance 1000 W/m<sup>2</sup>, AM 1.5

\*Values without tolerance are typical numbers. Measurement tolerance: ±3%

## Mechanical Data

Item	Specification
Dimensions	1722 mm (L) <sup>1</sup> x 1134 mm (W) <sup>1</sup> x 35 mm (D) <sup>2</sup> / 67.80" (L) <sup>1</sup> x 44.65" (W) <sup>1</sup> x 1.38" (D) <sup>2</sup>
Weight	23.70 kg / 52.25 lbs
Solar Cell	108 half-cut monocrystalline M10 N-type TOPCon cells
Front Glass	2.0mm AR-Coating, strengthened glass
Rear Glass	2.0mm strengthened glass
Frame	Anodized aluminum alloy
Junction Box	IP68, 3diodes
Cables	4.0mm <sup>2</sup> (IEC), 12AWG (UL)
Connectors	EVO2A (1500V)
Package Configuration	30 pcs Per Pallet, 780 pcs per 40' HQ container

1 : With assembly tolerance of ± 2 mm [ ± 0.08" ]

2 : With assembly tolerance of ± 0.8 mm [ ± 0.03" ]

## Operating Conditions

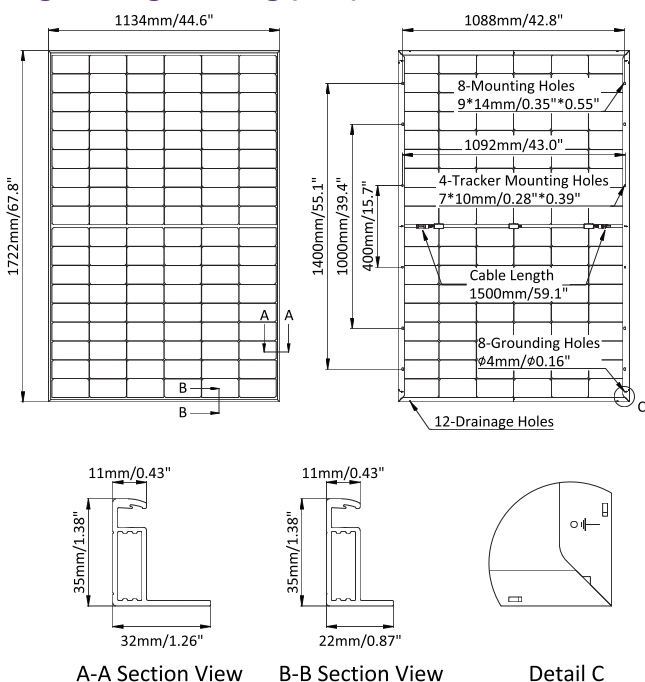
Item	Specification
Mechanical Load	7200 Pa
Maximum System Voltage	1500 VDC
Series Fuse Rating	25 A
Operating Temperature	-40 to 85 °C

## Temperature Characteristics

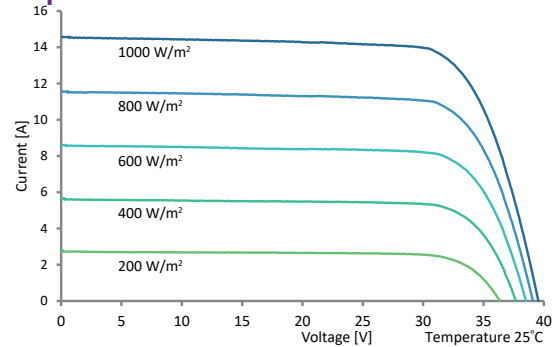
Item	Specification
Nominal Module Operating Temperature	43°C ± 2°C
Temperature Coefficient of Isc	0.05 % / °C
Temperature Coefficient of Voc	-0.25 % / °C
Temperature Coefficient of Pmax	-0.30 % / °C

\*Nominal module operating temperature (NMOT): Air mass AM 1.5, irradiance 800W/m<sup>2</sup>, temperature 20°C, windspeed 1 m/s.

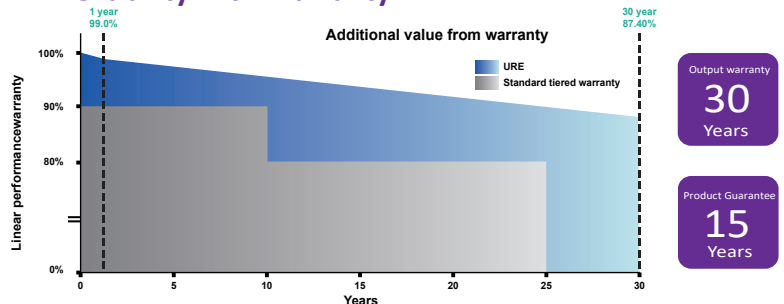
## Engineering Drawing (mm)



## Dependence on Irradiance



## Reliability with Warranty



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