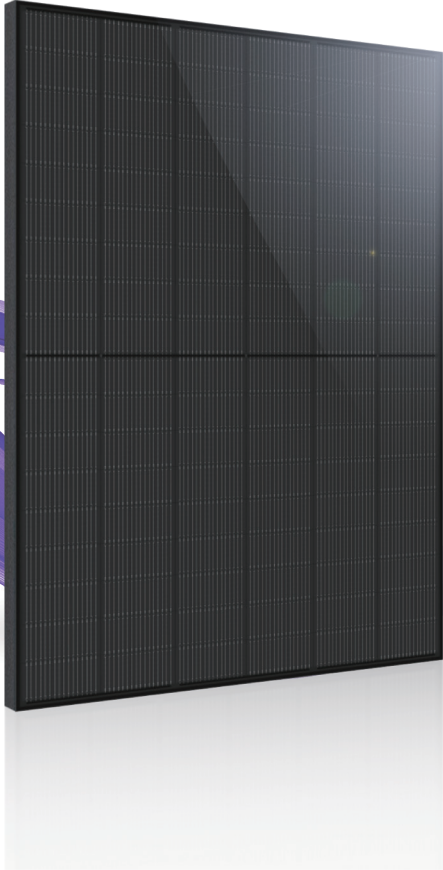




## TOPCon NoIR

FKF\_BFW-BB / 108 cells  
 435 W - 460 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 double glass(G2G) module manufacturing technology.



### Key Features



**Multi-Bus bar/ TLS technology**  
 Increase the stability of outdoor power generation



**Better bifaciality**  
 High bifacial rate



**PID resistance**  
 Excellent PID resistance performance



**Enhanced performance warranty**  
 Zero light induced degradation effect/  
 Excellent low light performance



**30-Year**  
 Power output warranty



**Superior temperature coefficient**  
 Better performance in high temperature



## Electrical Data

Model		Bifacial Gain			Bifacial Gain			Bifacial Gain		
		FKF435BFW-BB	5%	10%	FKF440BFW-BB	5%	10%	FKF445BFW-BB	5%	10%
Maximum Rating Power (Pmax)	[W]	435	457	479	440	462	484	445	467	490
Module Efficiency	[%]	21.77	22.86	23.95	22.02	23.12	24.22	22.27	23.38	24.50
Open Circuit Voltage (Voc)	[V]	39.13	39.13	39.13	39.33	39.33	39.33	39.53	39.53	39.53
Maximum Power Voltage	[V]	32.47	32.47	32.47	32.67	32.67	32.67	32.87	32.87	32.87
Short Circuit Current (Isc)	[A]	14.01	14.71	15.41	14.08	14.78	15.49	14.15	14.86	15.57
Maximum Power Current	[A]	13.40	14.07	14.74	13.47	14.14	14.82	13.54	14.22	14.89
Model		FKF450BFW-BB	5%	10%	FKF455BFW-BB	5%	10%	FKF460BFW-BB	5%	10%
Maximum Rating Power (Pmax)	[W]	450	473	495	455	478	501	460	483	506
Module Efficiency	[%]	22.52	23.65	24.77	22.77	23.91	25.05	23.02	24.17	25.32
Open Circuit Voltage (Voc)	[V]	39.73	39.73	39.73	39.93	39.93	39.93	40.13	40.13	40.13
Maximum Power Voltage	[V]	33.07	33.07	33.07	33.27	33.27	33.27	33.46	33.46	33.46
Short Circuit Current (Isc)	[A]	14.22	14.93	15.64	14.29	15.00	15.72	14.36	15.08	15.80
Maximum Power Current	[A]	13.61	14.29	14.97	13.68	14.36	15.05	13.75	14.44	15.13

\*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	1762 mm (L) <sup>1</sup> x 1134 mm (W) <sup>1</sup> x 30 mm (D) <sup>2</sup> / 69.37" (L) <sup>1</sup> x 44.65" (W) <sup>1</sup> x 1.18" (D) <sup>2</sup>
Weight	21.5 kg / 47.40 lbs
Solar Cell	N-type Mono/ 108 monocrystalline cells
Front Glass	Anti-Reflection Coating glass, 1.6 mm thickness
Rear Glass	Heat Strengthened glass, 1.6 mm thickness
Frame	Black anodized aluminum alloy
Junction Box	IP68 (3 diodes)
Connector Type	MC4 Compatible
Length of Cable	4mm <sup>2</sup> , Portrait: +300mm/ -300mm or customized length
Package Configuration	36 pcs Per Pallet, 936 pcs per 40' HQ container

<sup>1</sup> : With assembly tolerance of ± 2 mm [ ± 0.08" ]

<sup>2</sup> : With assembly tolerance of ± 0.8 mm [ ± 0.03" ]

## Operating Conditions

Item	Specification
Mechanical Load	5400 Pa
Maximum System Voltage	1500 VDC
Series Fuse Rating	30 A
Operating Temperature	-40 to 85 °C

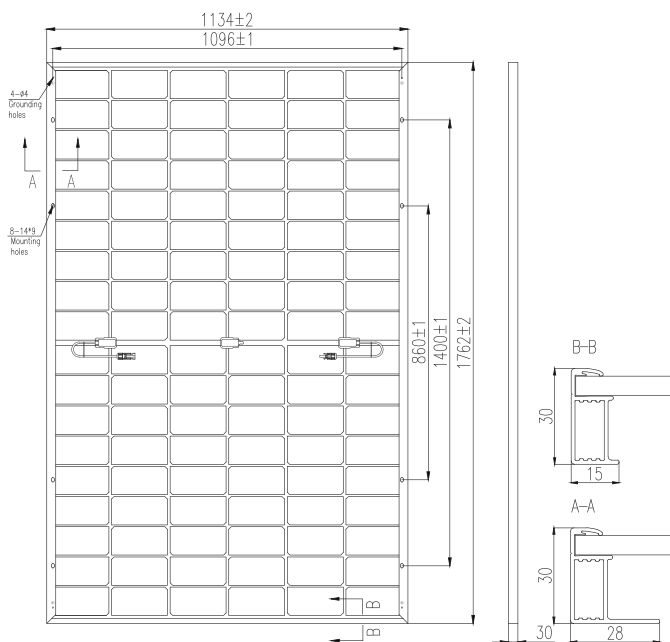
## Temperature Characteristics

Item	Specification
Nominal Module Operating Temperature	42°C ± 2°C
Temperature Coefficient of Isc	0.046 % / °C
Temperature Coefficient of Voc	-0.26 % / °C
Temperature Coefficient of Pmax	-0.31 % / °C

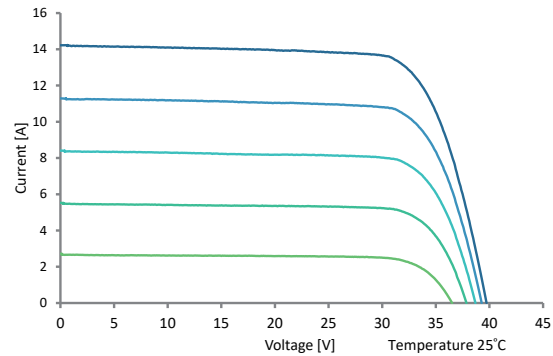
\*Nominal module operating temperature (NMOT): Air mass AM 1.5, irradiance 800W/m<sup>2</sup>, temperature 20°C, windspeed 1 m/s.

\*Reduction in efficiency from 1000W/m<sup>2</sup> to 200W/m<sup>2</sup> at 25°C: 3.5 ± 2%.

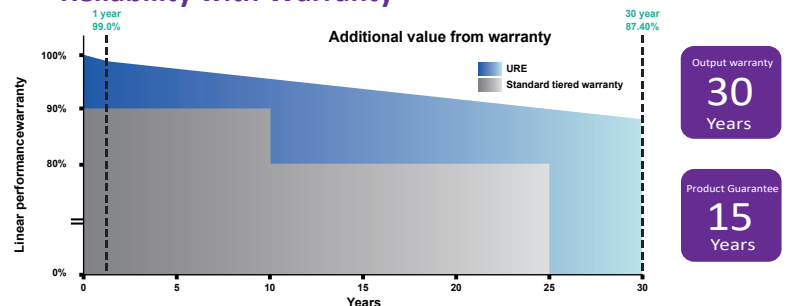
## Engineering Drawing (mm)



## Dependence on Irradiance



## Reliability with Warranty



For more information, please visit us at [www.urecorp.com](http://www.urecorp.com)