

FBF\_BFD-BW / 108 cells

410 W - 430 W

Mono-Crystalline Bifacial PV Module

URECO Glory TOPCon module uses URECO TOPCon monocrystalline bifacial solar cells, and URECO advanced glass(G2G) module manufacturing technology.



## Key Features



SMBB cell design  
Half-cut cell technology



Better bifaciality  
Up to 85% bifaciality



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		
		FBF410BFD-BW	5%	10%	FBF415BFD-BW	5%	10%	FBF420BFD-BW	5%	10%
Maximum Rating Power (Pmax)	[W]	410	431	451	415	436	457	420	441	462
Module Efficiency	[%]	21.00	22.05	23.10	21.25	22.31	23.38	21.51	22.59	23.66
Open Circuit Voltage (Voc)	[V]	37.65	37.65	37.65	37.84	37.84	37.84	38.03	38.03	38.03
Maximum Power Voltage	[V]	31.09	31.09	31.09	31.28	31.28	31.28	31.47	31.47	31.47
Short Circuit Current (Isc)	[A]	13.98	14.68	15.38	14.07	14.77	15.48	14.16	14.87	15.58
Maximum Power Current	[A]	13.19	13.85	14.51	13.27	13.93	14.60	13.35	14.02	14.69
Model		FBF425BFD-BW	5%	10%	FBF430BFD-BW	5%	10%			
Maximum Rating Power (Pmax)	[W]	425	446	468	430	452	473			
Module Efficiency	[%]	21.76	22.85	23.94	22.02	23.12	24.22			
Open Circuit Voltage (Voc)	[V]	38.21	38.21	38.21	38.39	38.39	38.39			
Maximum Power Voltage	[V]	31.65	31.65	31.65	31.83	31.83	31.83			
Short Circuit Current (Isc)	[A]	14.24	14.95	15.66	14.32	15.04	15.75			
Maximum Power Current	[A]	13.43	14.10	14.77	13.51	14.19	14.86			

\*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 30 mm (D) <sup>2</sup> / 67.80" (L) <sup>1</sup> x 44.65" (W) <sup>1</sup> x 1.18" (D) <sup>2</sup>
Weight	24.2 kg / 53.35 lbs
Solar Cell	N-type Mono/ 182mm x 91mm, 108 monocrystalline cells
Front Glass	2.0mm thickness
Rear Glass	2.0mm thickness
Cell Encapsulation	POE/ EPE/ EVA
Frame	Black anodized aluminum alloy
Junction Box	IP68
Connector Type	MC4
Length of Cable	4mm <sup>2</sup> , 1200 mm in 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**

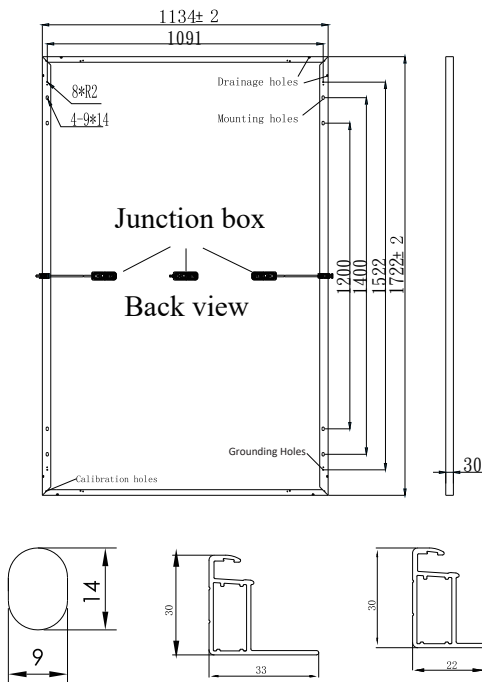
Item	Specification
Mechanical Load	5400 Pa
Maximum System Voltage	1500 VDC
Series Fuse Rating	25 A
Operating Temperature	-40 to 85 °C

**Temperature Characteristics**

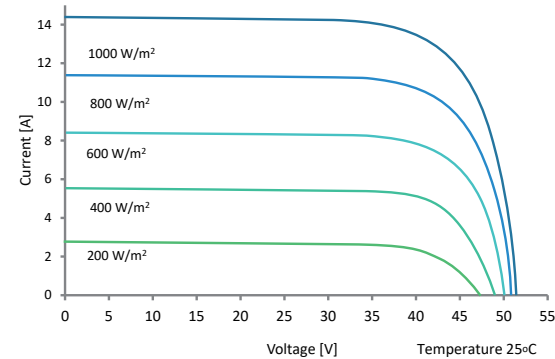
Item	Specification
Nominal Module Operating Temperature	44 °C ± 2 °C
Temperature Coefficient of Isc	0.046 % / °C
Temperature Coefficient of Voc	-0.25 % / °C
Temperature Coefficient of Pmax	-0.30 % / °C

\*Nominal module operating temperature (NMOT): Air mass AM 1.5, irradiance 800W/m<sup>2</sup>, temperature 20°C, windspeed 1 m/s.  
 \*Reduction in efficiency from 1000W/m<sup>2</sup> to 200W/m<sup>2</sup> at 25°C: 3.5 ± 2%.

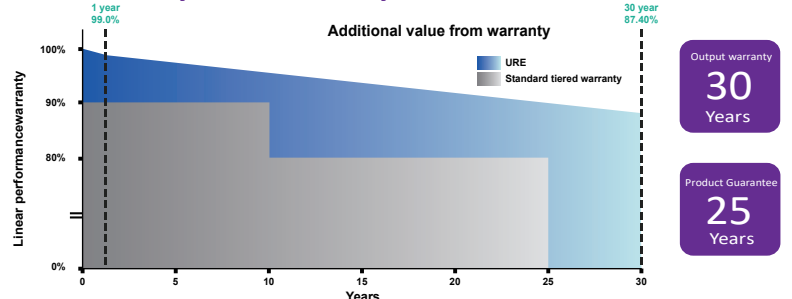
**Engineering Drawing (mm)**



**Dependence on Irradiance**



**Reliability with Warranty**



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