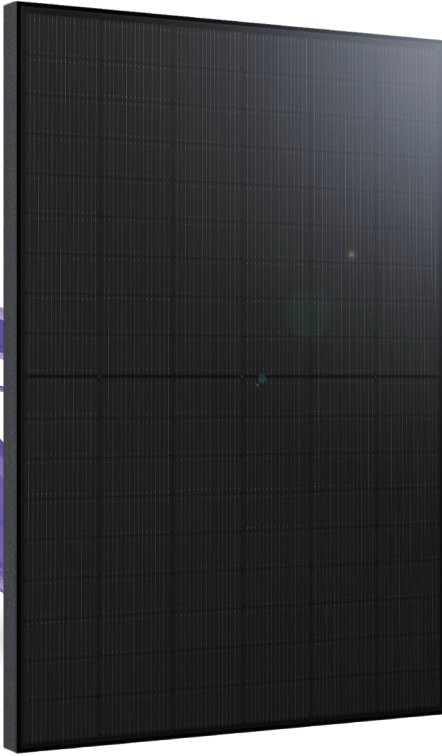




## TOPCon Noir



FBF\_MF1-BB / 108 cells  
 420W- 435W  
 Mono-Crystalline PV Module

United Renewable Energy Co., Ltd. (a company from Taiwan where the sun shines) TOPCon Noir module uses URECO TOPCon monocrystalline bifacial solar cells, and URECO power generation module process.



### Key Features



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



**Fire resistance**  
 Class of reaction to Type 1



**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 - STC		FBF420MF1-BB	FBF425MF1-BB	FBF430MF1-BB	FBF435MF1-BB
Maximum Rating Power (Pmax)	[W]	420	425	430	435
Module Efficiency	[%]	21.29	21.54	21.79	22.05
Open Circuit Voltage (Voc)	[V]	38.26	38.37	38.58	38.66
Maximum Power Voltage	[V]	32.62	32.89	33.13	33.40
Short Circuit Current (Isc)	[A]	13.71	13.72	13.74	13.76
Maximum Power Current	[A]	12.89	12.94	12.99	13.02

\*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	1740 mm (L) <sup>1</sup> x 1134 mm (W) <sup>1</sup> x 35 mm (D) <sup>2</sup> / 68.50" (L) <sup>1</sup> x 44.65" (W) <sup>1</sup> x 1.38" (D) <sup>2</sup>
Weight	21.30 kg / 46.96 lbs
Frame	Black anodized aluminum profile
Junction Box	IP68
Connector	Staubli EVO-2A
Cable	12AWG / 1200 mm in length (length can be customized)
Package Configuration	28 pcs Per Pallet, 728 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

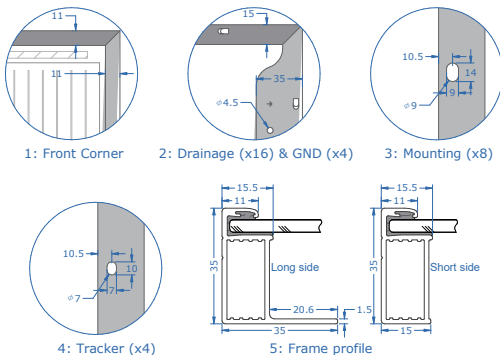
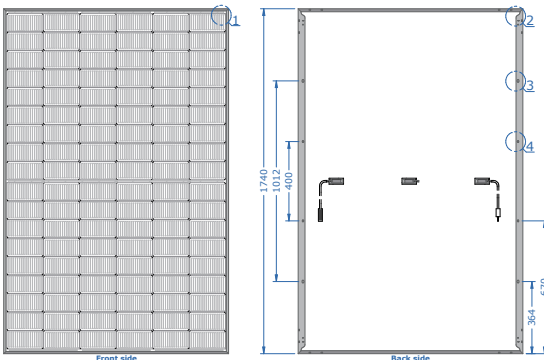
Item	Specification
Mechanical Load	5400 Pa
Maximum System Voltage	1500 VDC
Series Fuse Rating	30 A
Operating Temperature	-40 to 85 °C

## Temperature Characteristics

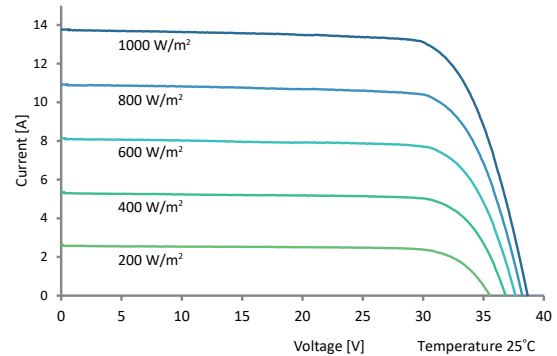
Item	Specification
Nominal Module Operating Temperature	45°C ± 2°C
Temperature Coefficient of Isc	0.05 % / °C
Temperature Coefficient of Voc	-0.25 % / °C
Temperature Coefficient of Pmax	-0.29 % / °C

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

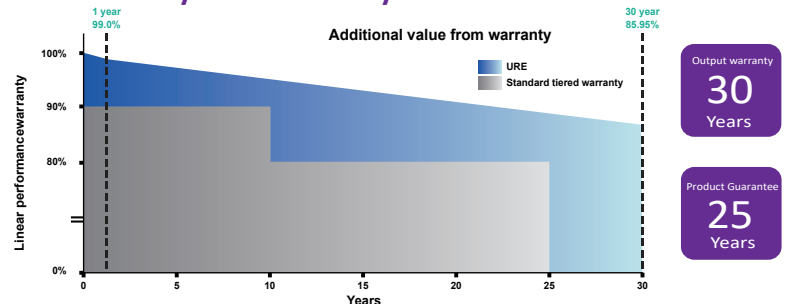
## Engineering Drawing (mm)



## Dependence on Irradiance



## Reliability with Warranty



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