

# 520 Watt 144 Half Cell Monocrystalline Module

BF-520J



### Ultraight

Aerospace polymer composite module weighs just 17 pounds—nearly 70% lighter than conventional glass-framed modules.



### High Efficiency: 19.3%

Utilizing trusted, industry-leading monocrystalline cells, we deliver efficiencies rivaling traditional panels.



### No Roof Penetration

Seamless integration with underlying installation surface ensures the waterproof and safety performance of the roof.



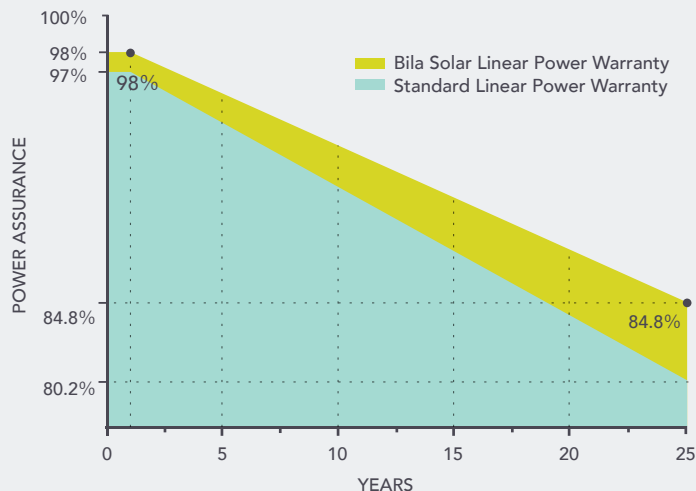
### Durability Standards & Certifications

The first glass-free laminated solar panel to pass the same durability tests as conventional glass panels, including IEC 61215:2016, IEC61730:2016, UL61730 (USA), PID, and salt mist level 8 tests.



## LINEAR PERFORMANCE WARRANTY

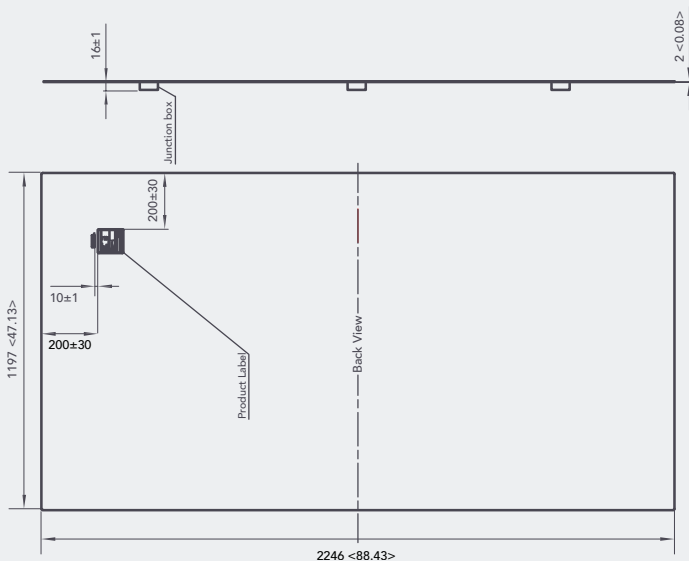
12 Year Product Warranty  
25 Year Linear Power Warranty



### Power Characteristics

Power Output Range	520 W
Power Tolerance	0-5 W

Caution: Read installation manual before using the product. © 2023 Bila Solar, Inc. All rights reserved. Specifications included in this datasheet are subject to change without notice.



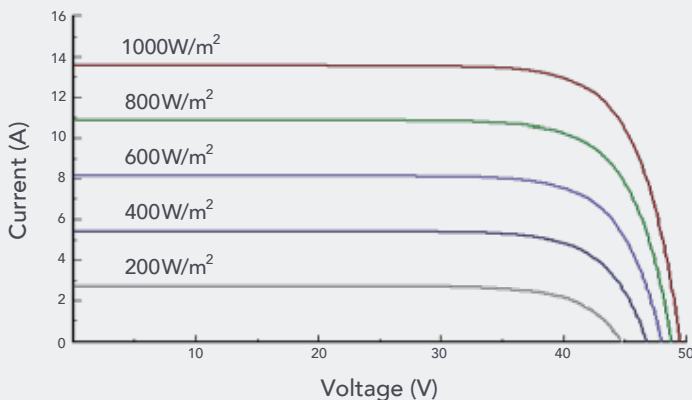
## Mechanical Characteristics

Solar Cell	Monocrystalline silicon, 182 mm half cell
Number of Cells	144 (12×12)
Module Dimensions	2246×1197×2 mm (88.4×47.1×0.08 inches)
Weight	7.7kg (17 lbs)
Backsheet	White
Frame	Frameless
J-Box	IP 68 Rated
Output Cables	Photovoltaic technology cable 4.0 mm <sup>2</sup> , (+)450/(-)450 mm (17.7 in)
Connector	MC4 compatible

## Electrical Characteristics

	STC	NMOT
Maximum Power ( $P_{max}$ )	520 W	418.8 W
Maximum Power Voltage ( $V_{mp}$ )	42.3 V	41.4 V
Maximum Power Current ( $I_{mp}$ )	12.31 A	10.11 A
Open-Circuit Voltage ( $V_{oc}$ )	49.5 V	49.6 V
Short-Circuit Current ( $I_{sc}$ )	13.56 A	10.82 A
Module Efficiency (%)	19.3	<b>STC:</b> Irradiance 1000W/m <sup>2</sup> , Cell Temperature 25°C, AM=1.5. Tolerances of $P_{max}$ , $V_{oc}$ and $I_{sc}$ are within ±5%
Operating Temperature	-40° to 85°C	
Maximum System Voltage	1500 V DC (IEC)	<b>NMOT:</b> Irradiance 800W/m <sup>2</sup> , Ambient Temperature 20°C, AM=1.5, Wind Speed 1m/s.
Maximum Series Fuse Rating	25 A	
Application Class	Class A	
Power Tolerance	0/+5 W	

## I-V Curve (520 W)



## Temperature Characteristics

Nominal Module Operating Temperature (NMOT)	41±2°C
Temperature Coefficient of $P_{max}$	-0.34%/°C
Temperature Coefficient of $V_{oc}$	-0.26%/°C
Temperature Coefficient of $I_{sc}$	0.033%/°C

## Packaging Configuration

	20' GP	40' HC
Modules Per Pallet	66	66
Pieces Per Container	264	1122

Interim data sheet (Sept 2023)