

# LONGI EcoLife

Define Roof Define Life



X10 Double Glass Premium Black  
(LR7-54HVBB)

470~485M 238<sub>W/m<sup>2</sup></sub>



**Leading**  
Black Module  
Efficiency

Efficiency  
23.8%



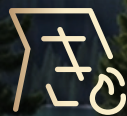
**70%**  
Output Maintained  
when Shaded<sup>1</sup>

Anti  
Shading



**High**  
Corrosion  
Resistance

POE Film



**60°C**  
Lower Temperature  
under Shade<sup>2</sup>

Prevent  
Overheating



**23.8%**  
MAX MODULE  
EFFICIENCY

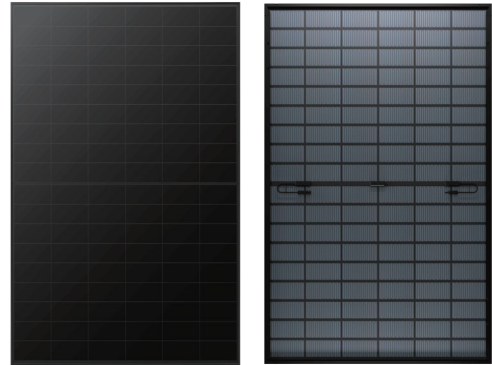
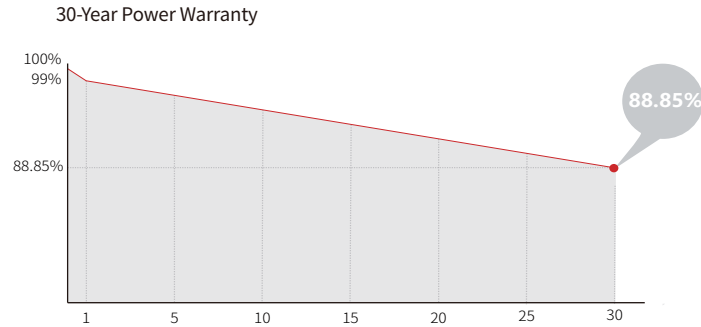
**0~3%**  
POWER  
TOLERANCE

**<1%**  
FIRST YEAR  
POWER DEGRADATION

**0.35%**  
YEAR 2-30  
POWER DEGRADATION

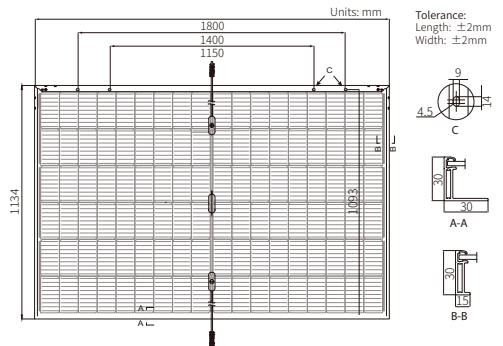
**BC-CELL**  
LOWER OPERATING  
TEMPERATURE

**Additional Value**



**Mechanical Parameters**

Cell Orientation	108 (6×18)
Junction Box	IP68
Output Cable	4mm <sup>2</sup> , +400, -200mm/±1200mm length can be customized
Glass	Double glass 2.0mm semi-tempered glass+1.6mm semi-tempered glass
Frame	Black anodized aluminum alloy frame
Weight	23.5kg
Dimension	1800×1134×30mm
Packaging	36pcs per pallet / 216pcs per 20' GP / 864pcs per 40' HC



**Electrical Characteristics**

STC : AM1.5 1000W/m<sup>2</sup> 25°C Test uncertainty for Pmax: ±3%

Module Type	LR7-54HVBB-470M	LR7-54HVBB-475M	LR7-54HVBB-480M	LR7-54HVBB-485M
Testing Condition	STC	STC	STC	STC
Maximum Power (Pmax/W)	470	475	480	485
Open Circuit Voltage (Voc/V)	40.31	40.42	40.53	40.64
Short Circuit Current (Isc/A)	14.78	14.88	14.98	15.08
Voltage at Maximum Power (Vmp/V)	33.29	33.40	33.51	33.62
Current at Maximum Power (Imp/A)	14.13	14.23	14.33	14.43
Module Efficiency(%)	23.0	23.3	23.5	23.8

**Electrical characteristics with different rear side power gain (reference to 470W front)**

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
494	40.31	15.52	33.29	14.82	5%
517	40.31	16.26	33.29	15.53	10%
541	40.41	17.00	33.39	16.19	15%
564	40.41	17.74	33.39	16.89	20%
588	40.41	18.48	33.39	17.60	25%

**Operating Parameters**

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Maximum System Voltage	DC1500V (IEC)
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	IEC Class A

**Mechanical Loading**

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

**Temperature Ratings (STC)**

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.200%/°C
Temperature Coefficient of Pmax	-0.260%/°C



1. Data source: Test of single-cell shading in LONGI internal Lab. Anti-shading effect vary due to differences in test irradiation conditions, temperature, software, etc.  
2. Data source: Comparison of test temperatures between EcoLife modules and conventional modules based on IEC 61215 Hot-spot endurance test (WBT) – MQT 09. Test data vary due to differences in the tested modules and institution.

Specifications included in this datasheet are subject to change without notice. LONGI reserves the right of final interpretation. ( BGV02 20250820)