LONGi EcoLife

Define Roof Define Life

THE smarter E AWARD

X10 Double Glass Premium Black
(LR7-54HVBB)

470~485M 238W/m²

Leading
Black Module Efficiency

Efficiency 23.8%

70%
Output Maintained when Shaded[1]

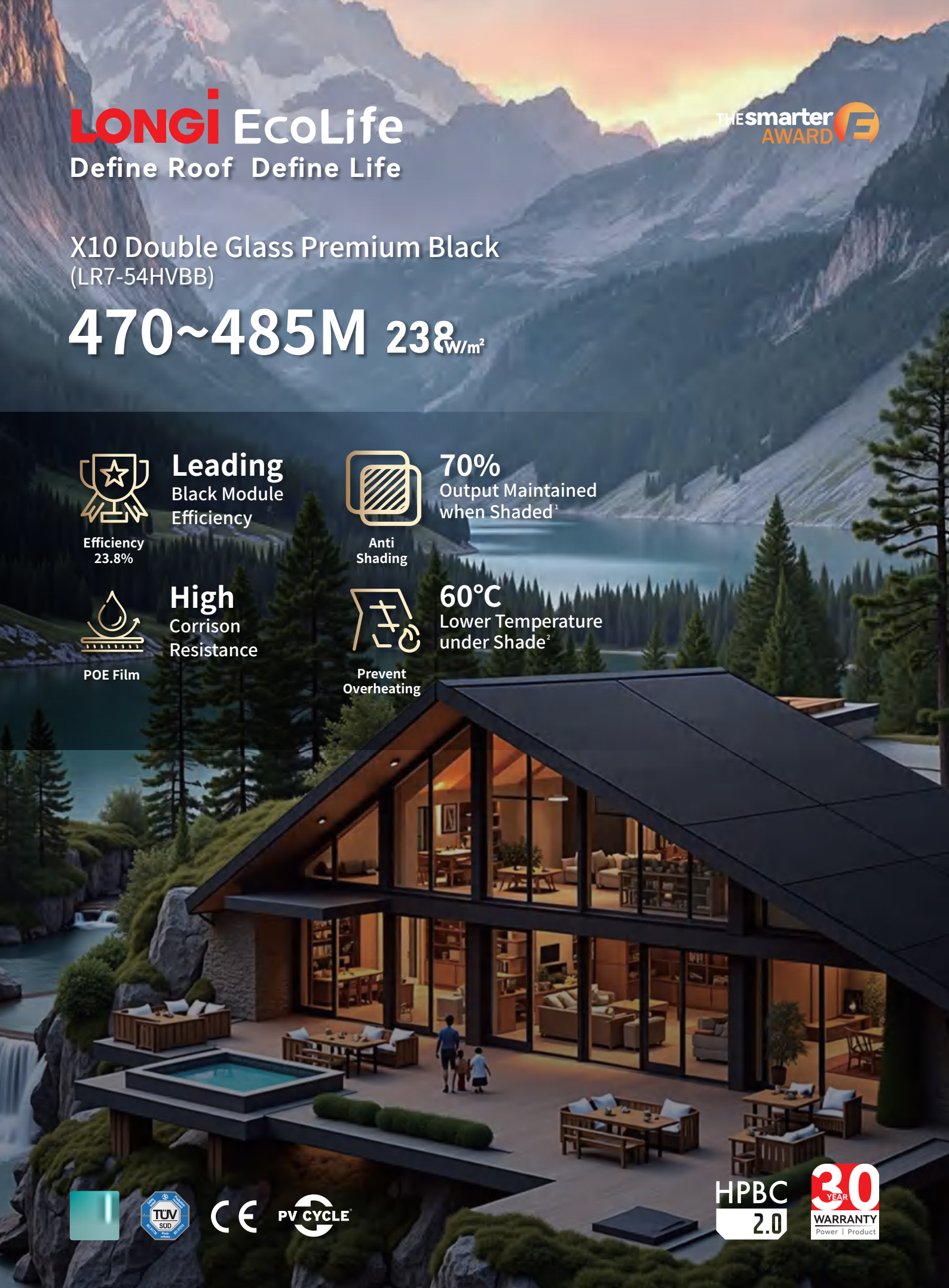
Anti Shading

High
Corrison Resistance

POE Film

60°C
Lower Temperature under Shade[2]

Prevent Overheating



HPBC 2.0

30 YEAR WARRANTY
Power | Product

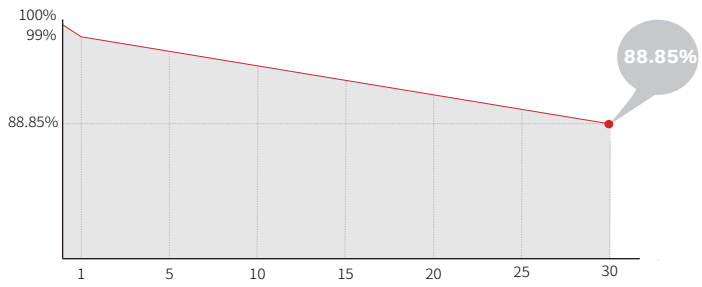
Define Roof Define Life

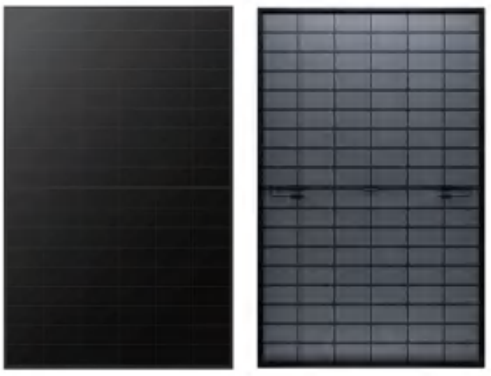
LR7-54HVBB 470~485M

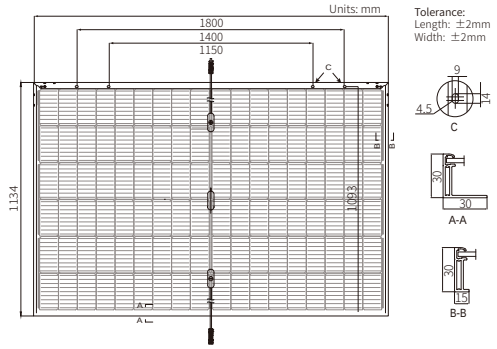
23.8%	0~3%	<1%	0.35%	BC-CELL
MAX MODULE EFFICIENCY	POWER TOLERANCE	FIRST YEAR POWER DEGRADATION	YEAR 2-30 POWER DEGRADATION	LOWER OPERATING TEMPERATURE

Additional Value

30-Year Power Warranty







Mechanical Parameters

Cell Orientation	108 (6×18)
Junction Box	IP68
Output Cable	4mm², +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/m² 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 C

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

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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)