

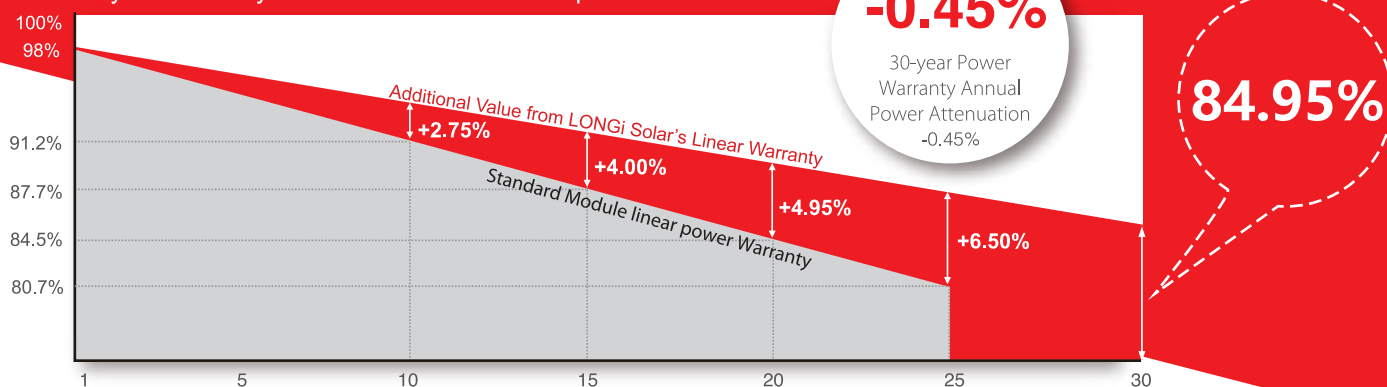
LR4-72HBD 435~465M



**High Efficiency
Low LID Bifacial PERC with
Half-cut Technology**

*Both 6BB & 9BB are available

12-year Warranty for Materials and Processing;
30-year Warranty for Extra Linear Power Output



Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO 9001:2008: ISO Quality Management System

ISO 14001: 2004: ISO Environment Management System

TS62941: Guideline for module design qualification and type approval

OHSAS 18001: 2007 Occupational Health and Safety



* Specifications subject to technical changes and tests. LONGi Solar reserves the right of interpretation.

Front side performance equivalent to conventional low LID mono PERC:

- High module conversion efficiency (up to 21.4%)
- Better energy yield with excellent low irradiance performance and temperature coefficient
- First year power degradation <2%

Bifacial technology enables additional energy harvesting from rear side (up to 25%)

Glass/glass lamination ensures 30 year product lifetime, with annual power degradation < 0.45%, 1500V compatible to reduce BOS cost

Solid PID resistance ensured by solar cell process optimization and careful module BOM selection

Reduced resistive loss with lower operating current

Higher energy yield with lower operating temperature

Reduced hot spot risk with optimized electrical design and lower operating current

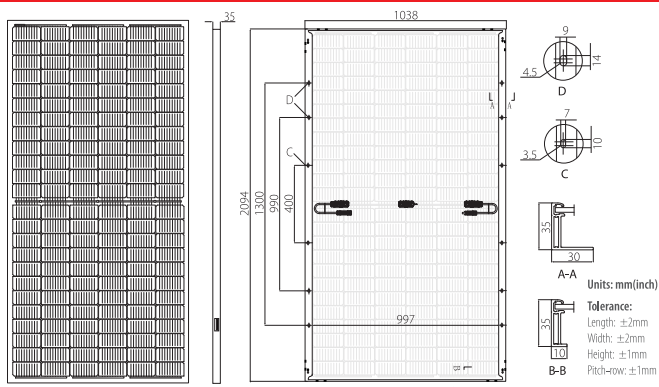
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Note: Due to continuous technical innovation, R&D and improvement, technical data above mentioned may be of modification accordingly. LONGi have the sole right to make such modification at anytime without further notice; Demanding party shall request for the latest datasheet for such as contract need, and make it a consisting and binding part of lawful documentation duly signed by both parties.

LR4-72HBD 435~465M

Design (mm)



Mechanical Parameters

Cell Orientation: 144 (6×24)
 Junction Box: IP68, three diodes
 Output Cable: 4mm², 300mm in length,
 length can be customized
 Glass: Dual glass
 2.0mm coated tempered glass
 Frame: Anodized aluminum alloy frame
 Weight: 27.5kg
 Dimension: 2094×1038×35mm
 Packaging: 30pcs per pallet
 150pcs per 20'GP
 660pcs per 40'HC

Operating Parameters

Operational Temperature: -40 °C ~ +85 °C
 Power Output Tolerance: 0 ~ +5 W
 Voc and Isc Tolerance: ±3%
 Maximum System Voltage: DC1500V (IEC/UL)
 Maximum Series Fuse Rating: 25A
 Nominal Operating Cell Temperature: 45±2 °C
 Safety Protection Class: Class II
 Fire Rating: UL type 3
 Bifaciality: Glazing 70±5%

Electrical Characteristics

Test uncertainty for Pmax: ±3%

Model Number	LR4-72HBD-435M		LR4-72HBD-440M		LR4-72HBD-445M		LR4-72HBD-450M		LR4-72HBD-455M		LR4-72HBD-460M		LR4-72HBD-465M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	435	324.9	440	328.6	445	332.3	450	336.1	455	339.8	460	343.5	465	347.3
Open Circuit Voltage (Voc/V)	49.1	45.9	49.2	46.0	49.4	46.2	49.6	46.4	49.8	46.6	50.0	46.8	50.2	47.0
Short Circuit Current (Isc/A)	11.36	9.18	11.45	9.25	11.52	9.30	11.58	9.36	11.65	9.41	11.73	9.48	11.79	9.52
Voltage at Maximum Power (Vmp/V)	40.8	38.0	41.0	38.2	41.2	38.4	41.4	38.6	41.6	38.8	41.8	39.0	42.0	39.2
Current at Maximum Power (Imp/A)	10.66	8.54	10.73	8.60	10.80	8.65	10.87	8.70	10.93	8.76	11.01	8.82	11.08	8.88
Module Efficiency(%)	20.0		20.2		20.5		20.7		20.9		21.2		21.4	

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 °C, Spectra at AM1.5

NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20 °C, Spectra at AM1.5, Wind at 1m/s

Electrical characteristics with different rear side power gain (reference to 445W front)

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
467	49.4	12.09	41.2	11.34	5%
490	49.4	12.67	41.2	11.88	10%
512	49.5	13.24	41.3	12.42	15%
534	49.5	13.82	41.3	12.96	20%
556	49.5	14.40	41.3	13.50	25%

Temperature Ratings (STC)

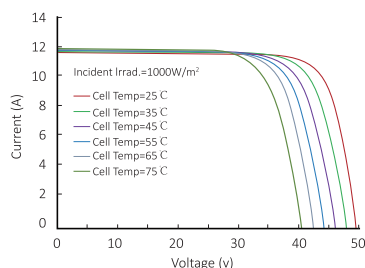
Temperature Coefficient of Isc	+0.050%/ °C
Temperature Coefficient of Voc	-0.284%/ °C
Temperature Coefficient of Pmax	-0.350%/ °C

Mechanical Loading

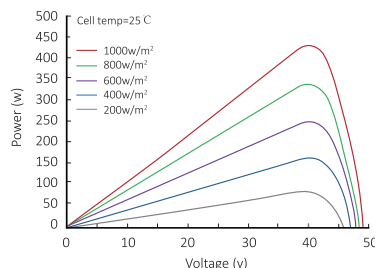
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

I-V Curve

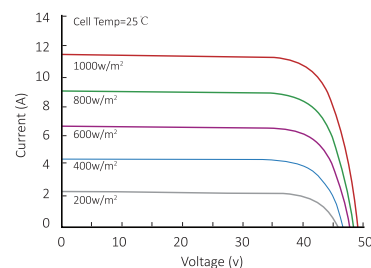
Current-Voltage Curve (LR4-72HBD-440M)



Power-Voltage Curve (LR4-72HBD-440M)



Current-Voltage Curve (LR4-72HBD-440M)



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