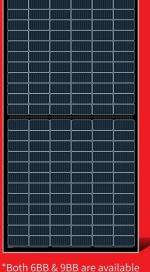




High Efficiency Low LID Mono PERC with Half-cut Technology



12-year Warranty for Materials and Processing; 25-year Warranty for Extra Linear Power Output -0.55% 25-year Power Additional Value from LONGi Solar's Linear Warranty Warranty Annual Power Attenuation Standard Module linear power Warranty -0.55% 91 2% 87.7% +3.35% 84.5% 80.7% 15 20 25

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. Positive power tolerance (0 ~ +5W) guaranteed

High module conversion efficiency (up to 20.9%)

Slower power degradation enabled by Low LID Mono PERC technology: first year <2%, 0.55% year 2-25

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.

R4-72HPB **415~445M**

Design (mm)

Units: mm(inch) Tolerance: 单位:n

Mechanical Parameters

Cell Orientation: 144 (6×24)

Junction Box: IP68, three diodes Output Cable: 4mm², 1400mmn length,

length can be customized

Glass: Single glass

3.2mm coated tempered glass

Frame: Anodized aluminum allov frame

Weight: 25.3kg

Dimension: 2094×1038×40mm

Packaging: 27 pcs per pallet

135 pcs per 20'GP

594 pcs per 40'HC

Operating Parameters

Operational Temperature: -40 $^{\circ}\text{C}\,$ $^{\sim}$ +85 $^{\circ}\text{C}\,$ Power Output Tolerance: 0 ~ +5 W Voc and Isc Tolerance: ±3%

Maximum System Voltage: DC1000V (IEC/UL)

Maximum Series Fuse Rating: 20A

Nominal Operating Cell Temperature: 45 \pm 2 °C

Safety Class: Class II

Fire Rating: UL type 1 or 2 $\,$

Electrical Characteristics Test uncertainty for Pmax: ±3%															
Model Number	LR4-72H	PB-415M	LR4-72H	PB-420M	LR4-72H	PB-425M	LR4-72H	PB-430 M	LR4-72HI	PB-435M	LR4-72H	PB-440M	LR4-72H	PB-445N	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
Maximum Power (Pmax/W)	415	309.9	420	313.7	425	317.4	430	321.1	435	324.9	440	328.6	445	332.3	
Open Circuit Voltage (Voc/V)	48.35	45.33	48.5	45.47	48.65	45.61	48.8	45.75	48.95	45.89	49.1	46.03	49.25	46.17	
Short Circuit Current (Isc/A)	11.07	8.95	11.16	9.02	11.24	9.09	11.32	9.15	10.40	9.22	11.48	9.29	11.56	9.35	
Voltage at Maximum Power (Vmp/V)	40.75	37.94	40.7	38.08	41.05	38.2	41.2	38.36	41.35	38.5	41.5	38.64	41.65	38.78	
Current at Maximum Power (Imp/A)	10.19	8.17	10.27	8.24	10.36	8.30	10.44	8.37	10.52	8.44	10.61	8.51	10.69	8.57	
Module Efficiency(%)	19	19.1		19.3		19.6		19.8		20.0		20.2		20.5	

Mechanical Loading Temperature Ratings (STC) Temperature Coefficient of Isc +0.048%/°C Front Side Maximum Static Loading 5400Pa 2400Pa **Rear Side Maximum Static Loading**

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

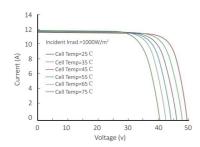
-0.270%/°C

Temperature Coefficient of Pmax -0.350%/°C **Hailstone Test** 25mm Hailstone at the speed of 23m/s

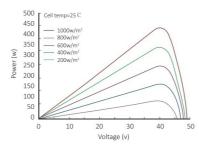
I-V Curve

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

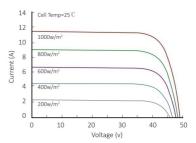
Temperature Coefficient of Voc



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



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





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