

### **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



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.

# LR4-72HPH **425~455M**

## 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: Single glass

3.2mm coated tempered glass

Frame: Anodized aluminum alloy frame

Weight: 23.5kg

Dimension: 2094×1038×35mm

Packaging: 30pcs per pallet

150pcs per 20'GP

660pcs per 40'HC

#### Operating Parameters

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

Maximum System Voltage: DC1500V (IEC/UL)

Maximum Series Fuse Rating: 20A Nominal Operating Cell Temperature: 45±2 °C

Safety Class: Class II

Fire Rating: UL type 1 or 2

Electrical Characteristics											Test ı	uncertain	ty for Pma	ax: ±3%
Model Number	LR4-72H	PH-425M	LR4-72H	PH-430M	LR4-72H	PH-435M	LR4-72H	PH-440M	LR4-72H	PH-445M	LR4-72H	PH-450M	LR4-72H	PH-455N
Testing Condition	STC	NOCT	STC	NOCT										
Maximum Power (Pmax/W)	425	317.4	430	321.1	435	324.9	440	328.6	445	332.3	450	336.1	455	339.8
Open Circuit Voltage (Voc/V)	48.3	45.3	48.5	45.5	48.7	45.7	48.9	45.8	49.1	46.0	49.3	46.2	49.5	46.4
Short Circuit Current (Isc/A)	11.23	9.08	11.31	9.15	11.39	9.21	11.46	9.27	11.53	9.33	11.60	9.38	11.66	9.43
Voltage at Maximum Power (Vmp/V)	40.5	37.7	40.7	37.9	40.9	38.1	41.1	38.3	41.3	38.5	41.5	38.6	41.7	38.8
Current at Maximum Power (Imp/A)	10.50	8.42	10.57	8.47	10.64	8.53	10.71	8.59	10.78	8.64	10.85	8.70	10.92	8.75
Module Efficiency(%)	19	6	19	.8	20	1.0	20	0.2	21	0.5	20	0.7	20	).9

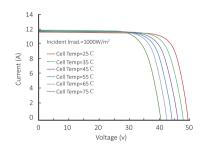
STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25 C, Spectra at AM1.5

NOCT (Nominal Operating Cell Temperature): Irradiance  $800W/m^2$ , Ambient Temperature  $20\,\mathrm{C}$ , Spectra at AM1.5, Wind at  $1\mathrm{m/S}$ 

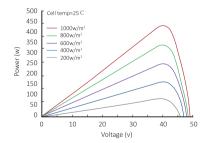
Temperature Ratings (STC)		Mechanical Loading							
Temperature Coefficient of Isc	+0.048%/°C	Front Side Maximum Static Loading	5400Pa						
Temperature Coefficient of Voc	-0.270%/ °C	Rear Side Maximum Static Loading	2400Pa						
Temperature Coefficient of Pmax	-0.350%/˚C	Hailstone Test	25mm Hailstone at the speed of 23m/s						

## I-V Curve

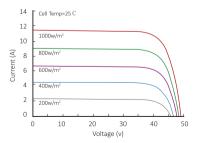
## Current-Voltage Curve (LR4-72HPH-440M)



## Power-Voltage Curve (LR4-72HPH-440M)



## Current-Voltage Curve (LR4-72HPH-440M)





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