LR7-72HVD-640M wins this comparison

LR7-72HVD-640M delivers 17,498 kWh over 30 years at 0.41 c/kWh, which makes its energy 45% cheaper per kilowatt-hour than the dearest module in this report.

BEST LONG-TERM CHOICE

LONGi **LR7-72HVD-640M** 640 Wp

- **Cheapest energy in the set.** 0.41 c/kWh, 45% below the dearest module in the set.
- **Runs cooler under load.** -0.26 %/°C against -0.30 %/°C, worth 1.2 points of output at 55 °C.

91 OF 100

COST PER KWH
0.41 c/kWh

RANKING LEADER	HIGHEST 30-YEAR YIELD	LOWEST COST PER KWH	MODULES COMPARED
LR7-72HVD-640M Score 91 of 100	17,634 kWh 4,238 kWh above the lowest module	0.41 c/kWh 45% cheaper than the dearest	7 Prices entered by the requester

ASSUMPTIONS Cell temperature 55 °C · Installation Carport · Baseline yield 1,050 kWh/kWp · Horizon 30 years · Currency EUR

01 · SIDE BY SIDE

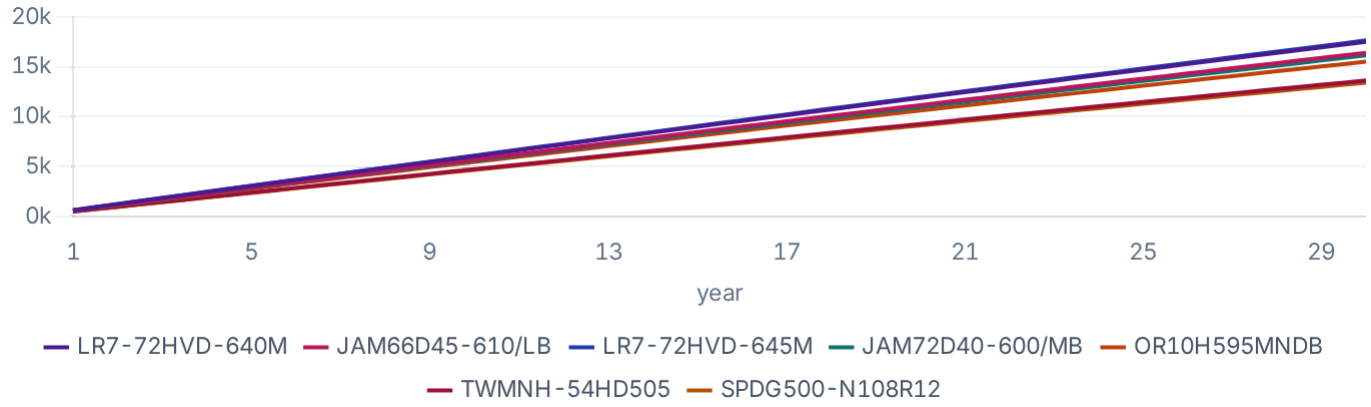
#	MANUFACTURER / MODEL	POWER	PRICE	YEAR 1	30-YEAR	PER KWH (C)	SCORE
1	LONGi LR7-72HVD-640M	640 Wp	€72.13	613	17,498	0.41	91
2	JA SOLAR JAM66D45-610/LB	610 Wp	€86.94	579	16,397	0.53	65
3	LONGi LR7-72HVD-645M	645 Wp	€131.82	618	17,634	0.75	57
4	JA SOLAR JAM72D40-600/MB	600 Wp	€94.94	569	16,128	0.59	56
5	Peimar OR10H595MNDB	595 Wp	€91.60	559	15,498	0.59	49
6	TW SOLAR TWMNH-54HD505	505 Wp	€88.52	481	13,619	0.65	24
7	SUNPRO SPDG500-N108R12	500 Wp	€87.49	473	13,396	0.65	23

better worse — Colours and scores are relative to the 7 modules in this report only.

02 · WHERE THE DIFFERENCE COMES FROM

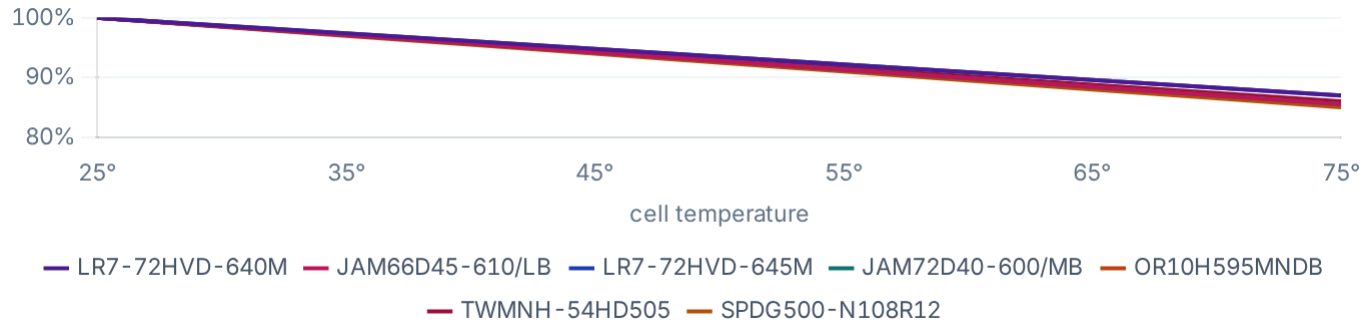
Cumulative energy over 30 years

Kilowatt-hours added up year by year. The gap widens with every year - by year 30 it is 4,238 kWh between the highest and lowest module.



Output retained as the cell heats up

A module is rated at 25 °C; a working roof sits well above it. At 55 °C the -0.26 %/°C module still delivers 92.2% of nameplate, the -0.30 %/°C module 91.0%.



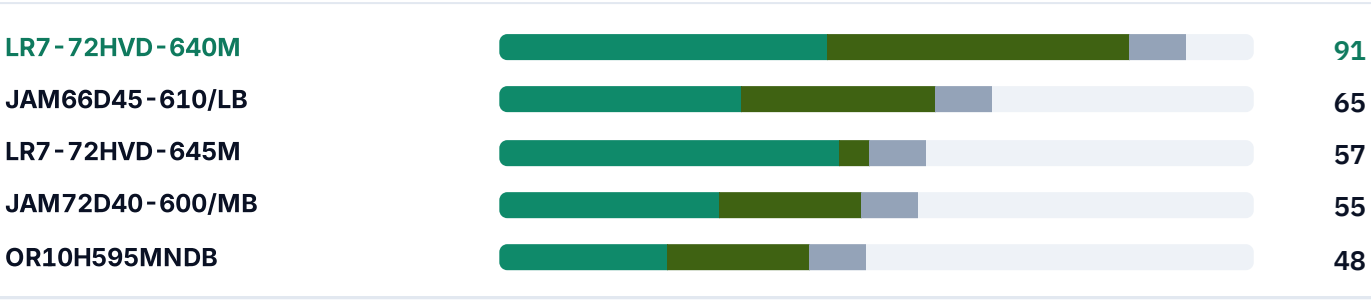
03 · MILESTONES

Cumulative kWh per module

MODULE	Y5	Y10	Y15	Y20	Y25	Y30
LR7-72HVD-640M	3,046	6,038	8,979	11,868	14,708	17,498
JAM66D45-610/LB	2,872	5,686	8,445	11,149	13,799	16,397
LR7-72HVD-645M	3,069	6,085	9,049	11,961	14,823	17,634
JAM72D40-600/MB	2,825	5,593	8,307	10,966	13,573	16,128
OR10H595MNDB	2,764	5,454	8,070	10,614	13,090	15,498
Difference, best to worst	+723	+1,440	+2,150	+2,853	+3,549	+4,238

Ranks 1 to 5 shown. The remaining 2 module(s) are in the table on page 1.

04 · WHAT DRIVES EACH SCORE



Ranks 1 to 5 shown. The remaining 2 module(s) are scored in the table above.

30-year yield · 45% Cost per kWh · 40% Warranty · 15%

05 · HOW EACH FIGURE IS BUILT

1 Annual yield
Panel watts times the installation baseline of 1,050 kWh/kWp, times a temperature factor from the module's own coefficient at 55 °C, times whatever degradation has left that year.

2 Degradation
Each module ages at its own datasheet rate - LR7-72HVD-640M loses 1% in year one, then 0.35% a year. Where a manufacturer publishes no curve, the 2% / 0.55% convention is used.

3 Cost per kWh
Offer price divided by the thirty annual yields added together. The only figure that lets a dearer module win, and often it does.

4 Score
A 0-100 composite: lifetime energy 45%, cost per kWh 40%, warranty 15%, each normalised across this report's modules. A dimension they all tie on splits evenly.

⚠ What this report does not model

Energy price inflation, inverter and installation cost, local irradiance, weather, shading, or a degradation curve worse than the datasheet promises. Prices were entered by whoever requested this report, not quoted or verified by ComparePV. This compares modules against each other, not a full system business case.

06 · TERMS USED IN THIS REPORT

Cost per kWh (LCOE)
Offer price divided by lifetime yield. What one kilowatt-hour from this module actually costs. Lower is better.

Tc Pmax
Temperature coefficient of maximum power, %/°C. How much output drops per degree above 25 °C. Smaller is better in heat.

Baseline yield
Energy one kWp produces per year. Set by installation type: ground mount around 1,100, pitched equator-facing 1,050, east-west 950.

Score
Relative ranking of this offer within this set only. The same module at the same price scores differently against different competition.

The live version stays online

Change the temperature, the installation type or the prices and the comparison recomputes. Anonymous and shareable.

comparepv.com/panel-report/03248389-20ea-4353-8dd1-3577bd2c61c5