# A close run between ten modules

JW-HD132N-705W delivers 18,550 kWh over 30 years at 0.47 c/kWh, which makes its energy 6% cheaper per kilowatt-hour than the dearest module in this report. It is not the cheapest sticker price in the set - €73.44 is - and it still wins.

BEST LONG-TERM CHOICE

Jolywood **JW-HD132N-705W** 705 Wp

- **Runs cooler under load.** -0.28 %/°C against -0.29 %/°C, worth 0.2 points of output at 47 °C.
- **Best composite in the set.** It scores highest across lifetime energy, cost per kWh and warranty length taken together, even though it is not the cheapest energy in the set.

66 OF 100

COST PER KWH
0.47 c/kWh

| RANKING LEADER | HIGHEST 30-YEAR YIELD | LOWEST COST PER KWH | MODULES COMPARED |
|---|---|---|---|
| JW-HD132N-705W<br>Score 66 of 100 | 18,945 kWh<br>2,763 kWh above the lowest module | 0.45 c/kWh<br>9% cheaper than the dearest | 10<br>Prices entered by the requester |

ASSUMPTIONS Cell temperature 47 °C · Installation Ground mount · Baseline yield 1,000 kWh/kWp · Horizon 30 years · Currency EUR

01 · SIDE BY SIDE

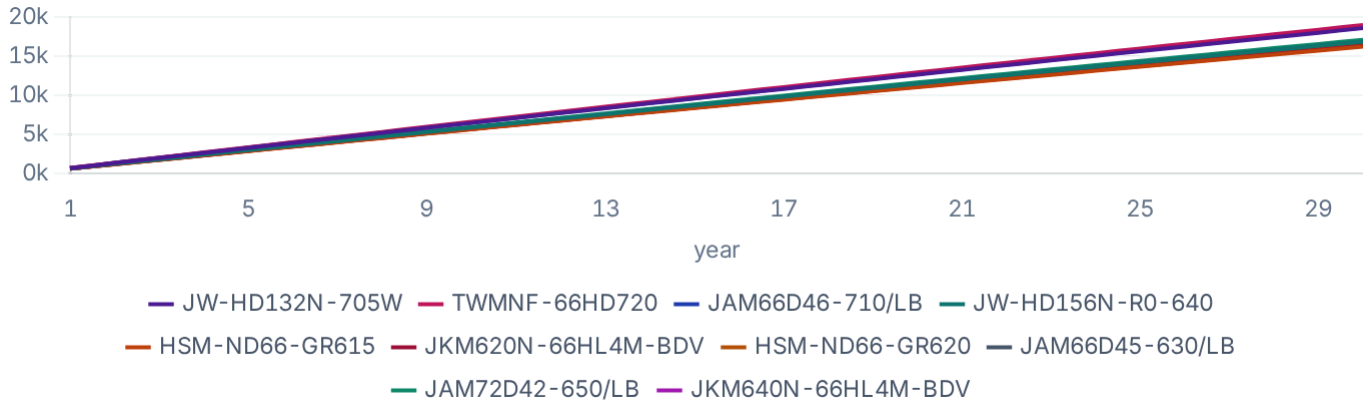
| # | MANUFACTURER / MODEL | POWER | PRICE | YEAR 1 | 30-YEAR | PER KWH (C) | SCORE |
|---|---|---|---|---|---|---|---|
| 1 | Jolywood JW-HD132N-705W | 705 Wp | €86.32 | 655 | 18,550 | 0.47 | 66 |
| 2 | TW SOLAR TWMNF-66HD720 | 720 Wp | €92.98 | 669 | 18,945 | 0.49 | 60 |
| 3 | JA SOLAR JAM66D46-710/LB | 710 Wp | €92.57 | 658 | 18,638 | 0.50 | 54 |
| 4 | Jolywood JW-HD156N-R0-640 | 640 Wp | €77.81 | 595 | 16,840 | 0.46 | 47 |
| 5 | TCL 中环 HSM-ND66-GR615 | 615 Wp | €73.44 | 571 | 16,182 | 0.45 | 42 |
| 6 | JinkoSolar JKM620N-66HL4M-BDV | 620 Wp | €75.01 | 575 | 16,276 | 0.46 | 41 |
| 7 | TCL 中环 HSM-ND66-GR620 | 620 Wp | €75.62 | 576 | 16,314 | 0.46 | 40 |
| 8 | JA SOLAR JAM66D45-630/LB | 630 Wp | €79 | 584 | 16,538 | 0.48 | 37 |
| 9 | JA SOLAR JAM72D42-650/LB | 650 Wp | €84.81 | 602 | 17,063 | 0.50 | 35 |
| 10 | JinkoSolar JKM640N-66HL4M-BDV | 640 Wp | €83.12 | 593 | 16,801 | 0.49 | 33 |

better worse — Colours and scores are relative to the 10 modules in this report only.

02 · WHERE THE DIFFERENCE COMES FROM

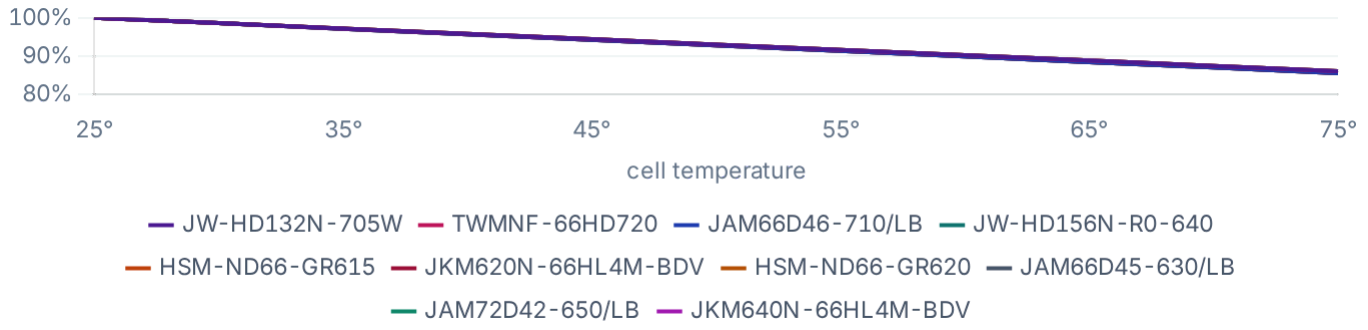
## Cumulative energy over 30 years

Kilowatt-hours added up year by year. The gap widens with every year - by year 30 it is 2,763 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 47 °C the -0.28 %/°C module still delivers 93.8% of nameplate, the -0.29 %/°C module 93.6%.



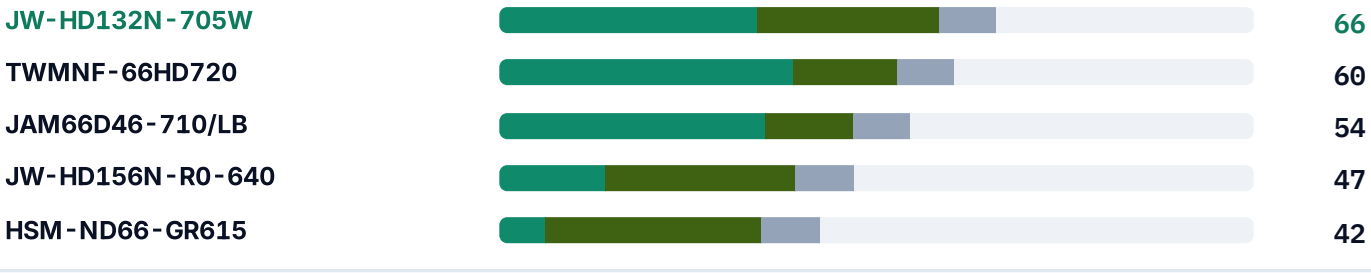

03 · MILESTONES

### Cumulative kWh per module

| MODULE | Y5 | Y10 | Y15 | Y20 | Y25 | Y30 |
|---|---|---|---|---|---|---|
| JW-HD132N-705W | 3,249 | 6,433 | 9,554 | 12,613 | 15,612 | 18,550 |
| TWMNF-66HD720 | 3,318 | 6,570 | 9,757 | 12,881 | 15,944 | 18,945 |
| JAM66D46-710/LB | 3,264 | 6,463 | 9,599 | 12,673 | 15,685 | 18,638 |
| JW-HD156N-R0-640 | 2,949 | 5,840 | 8,673 | 11,450 | 14,172 | 16,840 |
| HSM-ND66-GR615 | 2,834 | 5,612 | 8,334 | 11,003 | 13,619 | 16,182 |
| Difference, best to worst | +484 | +958 | +1,423 | +1,879 | +2,325 | +2,763 |

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

## 04 · WHAT DRIVES EACH SCORE




Ranks 1 to 5 shown. The remaining 5 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 1,000 kWh/kWp, times a temperature factor from the module's own coefficient at 47 °C, times whatever degradation has left that year.

**2 Degradation**
Each module ages at its own datasheet rate - JW-HD132N-705W loses 1% in year one, then 0.4% 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.

**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.

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

**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/a0dceed5-6e5f-49f7-ad16-c7f49e759349