

A close run between five modules

TWMNF-66HD725 delivers 19,552 kWh over 30 years at 0.00 ¢/kWh, which makes its energy 16% cheaper per kilowatt-hour than the dearest module in this report.

BEST LONG-TERM CHOICE

 **TW SOLAR** **TWMNF-66HD725** 725 Wp

✓

Cheapest energy in the set. 0.00 ¢/kWh, 16% below the dearest module in the set.

✓

Most energy produced. 19,552 kWh over 30 years, 388 kWh ahead of the next module.

82

OF 100

COST PER KWH

0.00 ¢/kWh

RANKING LEADER	HIGHEST 30-YEAR YIELD	LOWEST COST PER KWH	MODULES COMPARED
TWMNF-66HD725 Score 82 of 100	19,552 kWh 2,752 kWh above the lowest module	0.00 ¢/kWh 16% cheaper than the dearest	5 Prices entered by the requester

ASSUMPTIONS

Cell temperature 55 °C

Installation Pitched, equator

Baseline yield 1,050 kWh/kWp

Horizon 30 years

Currency USD

01 · SIDE BY SIDE

#	MANUFACTURER / MODEL	POWER	PRICE	YEAR 1	30-YEAR	PER KWH	SCORE (¢)
1	 TW SOLAR TWMNF-66HD725	725 Wp	\$0.11	690	19,552	0.00	82
2	 HUASUN RS725S9-132GANT	725 Wp	\$0.11	677	19,165	0.00	78
3	 LONGi LR7-72HYD-660M	660 Wp	\$0.11	633	18,044	0.00	43
4	 risen RSM132-11-605-630BNDG-625	625 Wp	\$0.11	593	16,800	0.00	27
5	 JA SOLAR JAM66D45-630/LB	630 Wp	\$0.11	598	16,935	0.00	20
better worse		Colours and scores are relative to the 5 modules in this report only.					

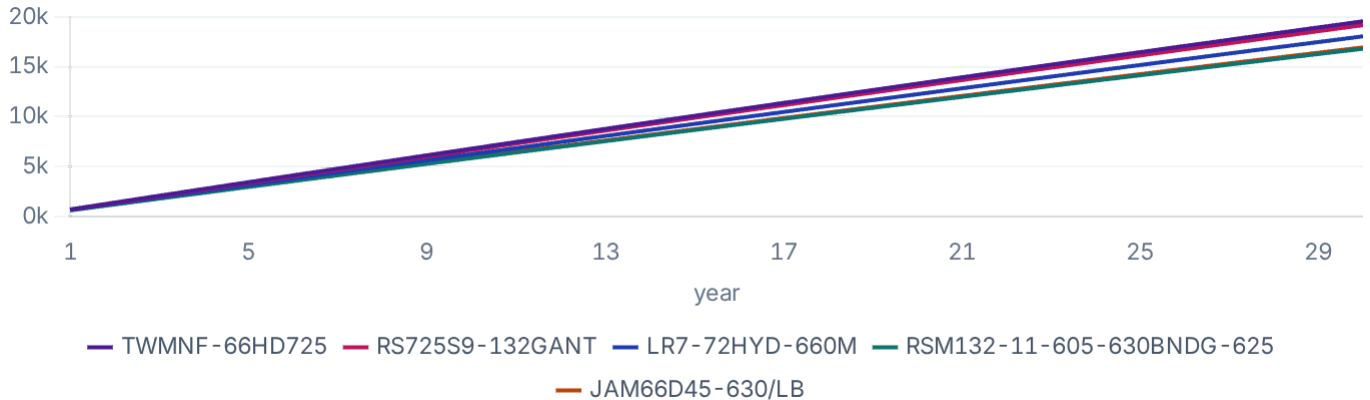
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02 • WHERE THE DIFFERENCE COMES FROM

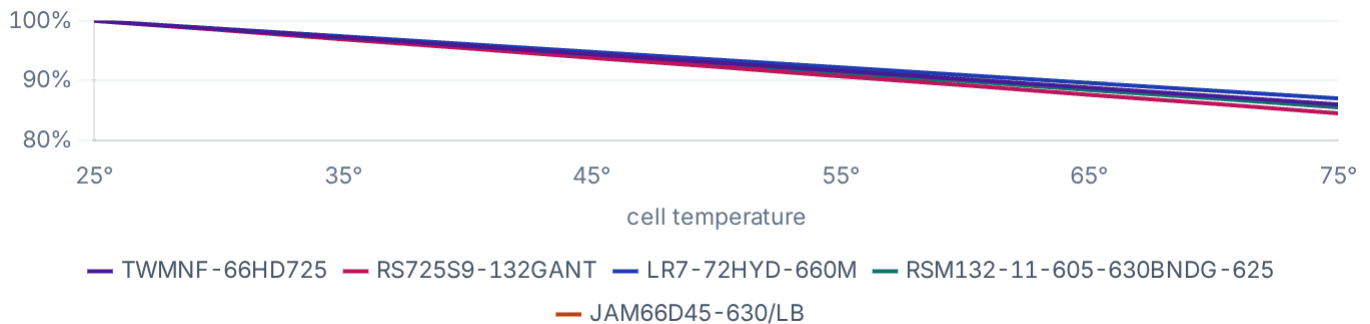
Cumulative energy over 30 years

Kilowatt-hours added up year by year. The gap widens with every year - by year 30 it is 2,752 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 -0.31 %/°C module 90.7%.

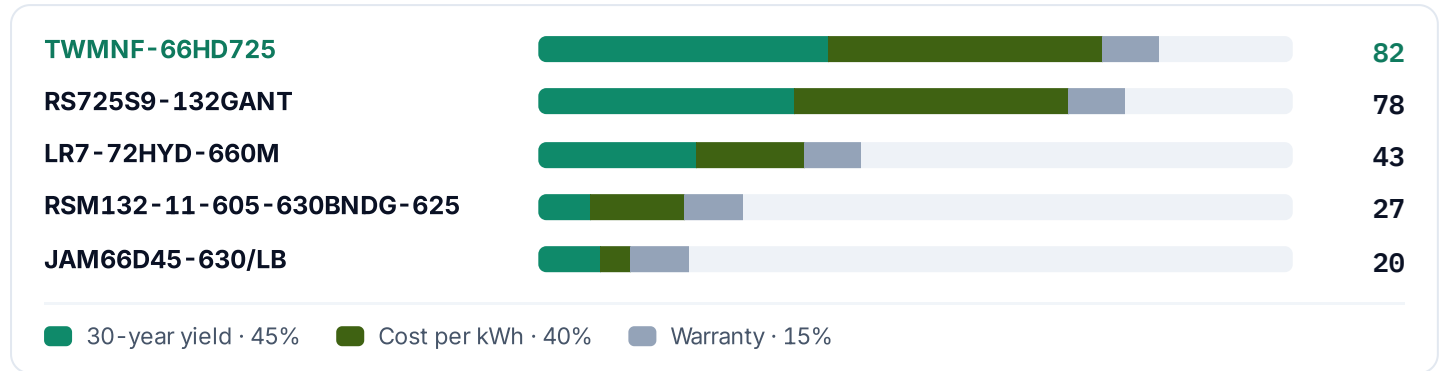


03 • MILESTONES

Cumulative kWh per module

MODULE	Y5	Y10	Y15	Y20	Y25	Y30
TWMNF-66HD725	3,424	6,780	10,070	13,294	16,455	19,552
RS725S9-132GANT	3,356	6,646	9,870	13,031	16,129	19,165
LR7-72HYD-660M	3,141	6,227	9,259	12,239	15,167	18,044
RSM132-11-605-630BNDG-625	2,942	5,826	8,653	11,423	14,139	16,800
JAM66D45-630/LB	2,966	5,873	8,722	11,515	14,252	16,935
Difference, best to worst	+482	+954	+1,417	+1,871	+2,316	+2,752

04 • WHAT DRIVES EACH SCORE



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 - TWMNF-66HD725 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/7918eae7-c236-4996-950e-cb5d499334d0

