



# SunPower 170W Flexible Solar Panel: Lightweight Energy Solution for Mobile Applications

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### Unlock Portable Power with Thin-Film Innovation

What if you could harness solar energy without compromising mobility? The SunPower 170W flexible solar panel answers this challenge for RV owners, boaters, and off-grid adventurers. Engineered with aerospace-grade materials, this ultrathin (2mm) module delivers 20.5% efficiency - outperforming most rigid panels in its class. In the United States alone, 78% of van conversion builders now prioritize lightweight solar solutions to reduce fuel consumption.

### Why Flexible Design Changes Everything

Traditional glass panels weigh 40 lbs for equivalent output. By contrast, the 170-watt flexible solar panel weighs just 5.6 lbs - light enough to install on curved RV roofs or sailboat biminis. Field tests in California's Mojave Desert demonstrated 167W sustained output at 104°F, proving durability in extreme conditions. The secret? Monocrystalline cells laminated in ETFE polymer instead of tempered glass.

### 3 Installation Scenarios Where Flexibility Wins

- RV/Camper roofs (curved surfaces up to 30° arc)
- Marine applications (saltwater-resistant substrate)
- Temporary field setups (rollable for transport)

### Technical Edge Over Competitors

How does SunPower maintain 170W output in partial shade? Through patented Maxeon(R) cell technology that minimizes power loss from cell-to-cell interconnection failures. Unlike conventional panels using 60 or 72 cells, this flexible variant employs 32 high-density cells arranged in parallel circuits. Result: 92% power retention when 30% of the surface is shaded.

### Durability Metrics That Matter

Withstand hail impacts up to 1" diameter (25mm) at 60 mph - certified through UL 61730 testing. The anti-abrasion coating survives 240 mph wind loads, equivalent to Category 5 hurricane forces. Users in Florida's coastal regions report 8+ years of corrosion-free operation, thanks to marine-grade polymer encapsulation.

### Global Applications & Regional Advantages

In Australia's harsh outback, installers prefer flexible solar panels for dust resistance and easy cleaning. European vanlifers benefit from the 170W model's CE certification for road vehicle integration. Emerging markets like Southeast Asia value its 5,000-cycle bend tolerance - crucial for monsoon-proof mobile installations.



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Q&A: Your Top Questions Answered

Q1: Can I walk on the SunPower flexible panel?

A: Not recommended. While it withstands foot traffic during installation, repeated stepping reduces longevity.

Q2: How does temperature affect performance?

A: Power output decreases 0.38%/°C above 25°C - better than industry average (0.45-0.5%).

Q3: Can it charge lithium batteries directly?

A: Requires MPPT controller (sold separately) to optimize charging for 12V/24V systems.

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