

# AIKO SOLAR PRODUCT SPECIFICATION



Aiko Solar has quickly moved from being a "newcomer" to a dominant force in the Australian solar market. As of early 2026, they have solidified their reputation for producing the world's most efficient mass-produced panels, consistently topping global rankings.

Here is the updated review with the latest 2026 data, technology updates, and market standing.

## AIKO Solar: 2026 Review & Analysis

Aiko Solar is no longer just "the new kid on the block." Since their official Australian launch in March 2024, they have become a staple for premium residential and commercial installations. Known for their ABC (All Back Contact) technology, they currently hold the world record for mass-produced module efficiency, reaching up to 24.8% - 25.2% in their latest commercial and residential releases.

## About Aiko Solar

Founded in 2009, Shanghai Aiko Solar Energy Co. Ltd spent over a decade as a massive cell manufacturer for other brands before launching their own panels. Their Australian presence is anchored by a Melbourne office, which provides local warranty support—a crucial safety net for homeowners.

## Pros & Cons

World-Leading Efficiency: Consistently #1 on the TaiyangNews global rankings for nearly three years running.

Pros	Cons
<ul style="list-style-type: none"> <li>✔ <b>Industry-Best Warranties:</b> 25-year product and 30-year performance warranties are standard for the Neostar residential range.</li> <li>✔ <b>Elite Heat Tolerance:</b> A temperature coefficient of -0.26%/°C, meaning they outperform almost every other panel on a 40°C Australian summer day.</li> <li>✔ <b>Installer's Choice:</b> Winner of the 2025 SolarQuotes Installers' Choice Award, proving that the people who get on roofs for a living trust the build quality.</li> </ul>	<ul style="list-style-type: none"> <li>✘ <b>Premium Price Point:</b> They are more expensive than "value" brands like Jinko or Trina, though the gap has narrowed as production has scaled.</li> <li>✘ <b>Shade Claims vs. Reality:</b> While their new "Controlled Avalanche" technology handles minor shade better than older tech, it is not a magic fix for heavy shading.</li> </ul>

## The 2026 Product Lineup

Aiko has streamlined its range into three distinct "Generations," with the Gen 2 and Gen 3 panels now dominating the Australian market:

Series	Primary Use	Max Efficiency	Warranty (Product/Perf)
<b>Neostar (2S/3S)</b>	Residential	Up to 25.2%	25 Years / 30 Years
<b>Comet (2N/3N)</b>	Commercial	Up to 24.8%	15 Years / 30 Years
<b>Stellar</b>	Utility/Bifacial	Up to 24.4%	15 Years / 30 Years

Neostar remains the flagship for homes. The newest Neostar 3S series hits nearly 500W in a standard residential footprint, making it ideal for small or complex roofs where you need to maximize every square meter.

## Technical Deep Dive

### 1. ABC Technology & Shade Performance

Aiko's All Back Contact (ABC) cells move all electrical contacts to the rear. This creates a sleek, "pure black" look with no silver lines.

- **The Shade Update:** In 2025/2026, Aiko introduced "Partial Shading Optimization." This uses a controlled avalanche breakdown to let current flow through a shaded cell without triggering the bypass diode immediately.
- **The Reality Check:** While lab tests show a 30% improvement in output when one cell is shaded, real-world Australian testing (like those from MC Electrical) suggests the benefit is closer to 3–5% in typical daily conditions. It's better than standard tech, but you still shouldn't install them behind a chimney.

## 2. Durability & Hail Resistance

Aiko panels are certified for 40mm hail at 27.5m/s. For context, a golf ball is roughly 42mm. They also feature improved micro-crack resistance due to the structural nature of the back-contact cell design.

## 3. Temperature Performance

Most panels lose significant power when they get hot. Aiko's  $-0.26\%/^{\circ}\text{C}$  coefficient is top-tier. On a  $40^{\circ}\text{C}$  day (where panels hit  $65^{\circ}\text{C}+$ ), an Aiko panel will produce roughly 3-4% more power than a standard budget panel just by staying "cooler" electrically.

## Australian Support & Warranty

Aiko maintains a physical office in Melbourne, ensuring they comply with Australian Consumer Law. Aiko Solar Australia

- Address: Level 12, 360 Elizabeth Street, Melbourne VIC 3000
- Phone: 1300 245 628 / (03) 5219 2402
- Email: [aus.service@aikosolar.com](mailto:aus.service@aikosolar.com)

**Note on Coastal Installs:** While Aiko panels are durable, their manual still suggests additional anti-corrosion treatment for installations within 500m of the ocean. If you live beachfront, ensure your installer uses the "Dual-Glass" (2S+) versions for better salt-mist resistance.

## Final Verdict: Is it worth it in 2026?

Two years ago, Aiko was a "calculated risk." Today, they are a top-tier recommendation. They offer the highest efficiency currently available to the public, backed by a strong local presence and the 2025 Installers' Choice Award.

If you have limited roof space or simply want the best tech available without paying "luxury boutique" prices (like SunPower/Maxeon), Aiko is likely your best bet.