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Product Carbon Footprint: rdliznqs

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36.79 kg CO₂e Total PCF for 1.0 unit

Functional Unit

1.0 unit

rdlixznqs

System Boundary

Cradle-to-Grave

Comprehensive lifecycle

Production Country

China

Europe-focused supply chain

Accounting Standard

GHG Protocol

2026 LSR guidelines acknowledged

Lifecycle Stage Breakdown

Use Phase	64.69%
Manufacturing (Scope 2)	25.31%
Material Acquisition (Scope 3, Cat 1)	10.22%
Logistics (T&D)	0.73%
End-of-Life Treatment (Credit)	-0.95%
Direct Emissions (Scope 1)	0.00%

Material Carbon Impact

Circuit Board	39.9%
Steel Component	26.6%
Plastic Housing	23.9%
Wiring	5.3%
Packaging	4.3%

Key Insights & Hotspots

- The **Use Phase** accounts for the majority (64.69%) of the product's carbon footprint, driven by energy consumption over its 5-year lifespan.
- **Manufacturing (Scope 2)** emissions are significant (25.31%), highlighting the impact of purchased electricity despite 70% renewable energy use.
- **Material Acquisition (10.22%)** is another critical area, with Circuit Board (1.5 kgCO₂e) and Plastic Housing (0.9 kgCO₂e) being the largest material contributors.

Action Plan for Reduction

- **Enhance Energy Efficiency:** Focus on reducing the product's energy consumption during its use phase through design improvements and user education.
- **Decarbonize Manufacturing:** Invest in further increasing renewable energy sourcing or on-site generation at the production facility in China.
- **Optimize Material Selection:** Prioritize lower-carbon alternatives, reduce material intensity, and increase recycled content, especially for circuit boards and plastic housing.