

carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: jltojemzjt | Quantity: 1.0 unit | Standard: GHG Protocol

Total PCF: 37.17 kg CO₂e

Total Footprint

37.17 kg CO2e
for 1.0 unit

Carbon Intensity

37.17 kg CO2e/unit
Production Country: China

Top Material Hotspot

Aluminum Casing

3.75 kg CO2e (47.17% of material impact)

Primary Emission Scope

Scope 3

92.20% of total PCF

Lifecycle Stage Breakdown

- Materials (21.39%)
- Manufacturing (7.80%)
- Upstream Transport (0.38%)
- Downstream Transport (1.96%)

Material Carbon Impact

Aluminum
Casing

Circuit Board
(PCB)

Plastic
Enclosure

Copper Wiring

Packaging
Cardboard

Highlights & Key Insights

- **Dominant Use Phase Emissions:** The product's operational use accounts for 67.26% (25.00 kg CO₂e) of its total carbon footprint, making it the primary hotspot.
- **Significant Material Impact:** Materials Acquisition & Processing contribute 21.39% (7.95 kg CO₂e), with Aluminum Casing being the largest single material contributor.
- **Scope 3 Dominance:** Value chain (Scope 3) emissions represent 92.20% (34.27 kg CO₂e) of the total PCF, emphasizing the need for comprehensive supply chain engagement.

Recommendations for Carbon Reduction

1. **Optimize Use Phase Efficiency:** Focus on reducing energy consumption during the 5-year operational life of the product through efficient components or user behavior education.
2. **Sustainable Material Sourcing:** Explore and integrate lower-carbon alternative materials or increase recycled content for components like the aluminum casing and plastic enclosure.
3. **Enhance Circularity:** Leverage and expand existing circular/take-back programs (e.g., take-back) to maximize material recovery and re-use, improving recycling rates beyond 70%.
4. **Supply Chain Engagement:** Collaborate with suppliers to understand and reduce emissions related to purchased goods and services and transportation.
5. **Renewable Energy Integration:** Increase the percentage of renewable energy used in manufacturing facilities in China beyond 50% to further reduce Scope 2 emissions.