

carboncalcpcf.com

# Product Carbon Footprint Dashboard

for vljosjwrmh (Smart Widget Pro)

47.29 kg CO<sub>2</sub>e

Total Footprint

**47.29 kg CO<sub>2</sub>e**

Carbon Intensity

**47.29 kg CO<sub>2</sub>e/unit**

Top Material Hotspot

**Aluminum Casing**

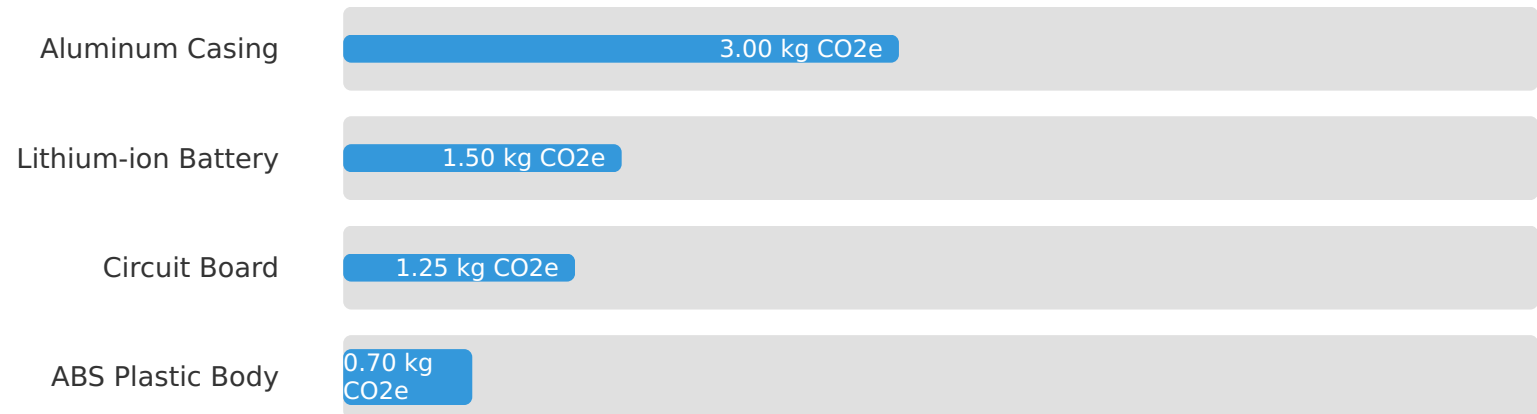
Primary Emission Scope

**Scope 3**

## Lifecycle Stage Breakdown

Materials (12.9%)   Production (5.4%)   Logistics (25.5%)   Use Phase (56.2%)   EoL Credit (-2.56 kg CO2e)

## Material Composition vs. Carbon Impact



## Key Insights & Hotspots

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- **Use Phase Dominance:** The product's operational energy consumption over its 7-year lifespan is the most significant emission hotspot, accounting for 59.2% of the total footprint.
- **Last-Mile Logistics Impact:** Downstream transportation, particularly last-mile delivery, contributes substantially (26.9%), highlighting inefficiencies in current distribution channels.
- **Circular Economy Benefits:** A high recyclability rate (80%) and strong circular programs result in a net carbon credit from the End-of-Life phase, effectively reducing the overall PCF.

## Recommendations for Emission Reduction

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- 1 **Improve Use Phase Energy Efficiency:** Redesign the product for lower energy consumption and provide clear user guidance.
- 2 **Optimize Last-Mile Logistics:** Explore lower-emission delivery options like electric vehicles or local fulfillment centers.
- 3 **Source Lower-Carbon Materials:** Prioritize recycled content and materials produced with renewable energy from suppliers.
- 4 **Increase Renewable Energy in Production:** Aim for 100% renewable energy procurement at the manufacturing facility.
- 5 **Enhance Circularity:** Strengthen take-back programs and partnerships for closed-loop recycling systems.