

carboncalcpcf.com

Product Carbon Footprint for svlufitfrf

Report for zngogipzrl | Standard: GHG Protocol | Country: China

Total Product Carbon Footprint

41.259 kg CO₂e

Total Footprint

41.259

kg CO2e

Carbon Intensity

41.259

kg CO2e / unit

Top Material Hotspot

Aluminum Casing

(5.0 kg CO2e)

Primary Emission Scope

Scope 3

(Use Phase: 20.0 kg CO₂e)

Lifecycle Emissions Breakdown

Use of Product	20.000 kg CO ₂ e
Downstream Trai	12.467 kg CO ₂ e
Materials (Purcha	9.400 kg CO ₂ e
Production (Scop	0.543 kg CO ₂ e
Upstream Transp	0.255 kg CO ₂ e
End-of-Life (Redu	** -1.406 kg CO ₂ e**

Material Carbon Impact

Aluminum Casings	5.0 kg CO2e
PCB Assembly	2.0 kg CO2e
Li-ion Battery	1.5 kg CO2e
ABS Plastic	0.7 kg CO2e
Copper Wiring	0.2 kg CO2e

Highlights & Hotspots

- The **Use Phase** contributes 20.0 kg CO2e, representing the largest emission hotspot due to energy consumption over the product's 5-year lifespan.
- **Downstream Transportation** accounts for 12.467 kg CO2e, highlighting the high impact of last-mile delivery via parcel carriers.
- **Material Sourcing**, particularly aluminum, plastics, and electronics, is a significant contributor at 9.4 kg CO2e.
- An active **End-of-Life take-back program** yields a net reduction of -1.406 kg CO2e, showcasing successful circular economy initiatives.

Recommendations for Reduction

- **Product Design for Energy Efficiency:** Focus on innovative design to reduce svlufitfrf's energy consumption during its use phase.
- **Sustainable Logistics Optimization:** Explore electric last-mile delivery fleets, consolidate shipments, and optimize routes to minimize transport emissions.
- **Supply Chain Engagement:** Collaborate with suppliers to identify and procure lower-carbon alternatives for high-impact materials and components.
- **Enhance Circularity:** Continue strengthening take-back and recycling programs, aiming for closed-loop systems for key materials to maximize avoided emissions.