Product Carbon Footprint Dashboard

Product: **otpgqmdqym** | Company: yurspnmioy
Standard: GHG Protocol | Boundary: factory_gate

Total PCF for 1.0 unit

36.15 kg CO2e

Key Metrics Overview

Total Product Footprint

36.15 kg CO2e

Per 1.0 unit of otpgqmdqym

Primary Emission Scope

Scope 3

32.80 kg CO2e (90.73% of total)

Top Lifecycle Hotspot

Transport

15.15 kg CO2e

Production Origin

China

Upstream supply from Europe

Detailed Carbon Breakdown

Carbon by Lifecycle Stage

Transport	15.15 kg CO2e (41.91%)
Material Acquisition & Pre-processing	10.91 kg CO2e (30.18%)
Use Phase	6.25 kg CO2e (17.29%)
Production Phase (Scope 1 & 2)	3.35 kg CO2e (9.27%)
End-of-Life Phase	0.49 kg CO2e (1.35%)

Top Material Carbon Impact (from 10.91 kg CO2e)

Aluminum Casing	7.50 kg CO2e (68.74%)
Circuit Board	2.00 kg CO2e (18.33%)
Polymer Housing	1.05 kg CO2e (9.62%)
Copper Wiring	0.20 kg CO2e (1.83%)
Packaging Cardboard	0.16 kg CO2e (1.47%)

Key Carbon Highlights

- **Transport Emissions Dominate:** The transportation phase, especially last-mile delivery, accounts for the largest share (41.91%) of the total PCF, at 15.15 kg CO2e.
- **Material Impacts are Significant:** Raw material acquisition, driven by energy-intensive materials like Aluminum Casing, is the second-largest contributor (30.18%) with 10.91 kg CO2e.
- **Use Phase Energy is a Factor:** Energy consumption during the product's 5-year lifespan contributes 17.29% (6.25 kg CO2e) to the overall footprint, depending on the end-user region's energy mix.

Recommendations for Emission Reduction

- **Material Optimization:** Explore lighter, lower-impact materials or those with higher recycled content; engage with greener suppliers.
- **Supply Chain Logistics:** Optimize routes and modes (prioritize rail/sea for upstream/downstream), consolidate shipments, and reduce last-mile delivery impacts.
- **Manufacturing Efficiency:** Increase renewable energy procurement beyond 50% and invest in energy-efficient machinery at the China facility.
- **Use Phase Design:** Design products for greater energy efficiency during use and promote sustainable user behavior through product information.
- **Circular Economy:** Strengthen take-back and recycling programs (product buy-back, component reuse) to maximize material recovery and reuse.

- **Detailed Scope 3 Analysis:** Conduct a comprehensive assessment of all 15 Scope 3 categories to meet and exceed the 95% coverage requirement.