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Product Carbon Footprint Dashboard

Product: xotrwpdejp | **Company:** qsioufujpj | **Standard:** GHG Protocol

10.475 kg CO2e

Total Product Footprint

10.475 kg CO2e / unit

Carbon Intensity

10.475 kg CO2e / unit

Top Material Hotspot

Lithium-ion Battery

0.90 kg CO2e (55.5% of materials)

Primary Emission Scope

Scope 3

88.9% of total footprint

Carbon Footprint by Lifecycle Stage

Use Phase	7.500 kg CO2e (71.6%)
Material Acquisition & Pre-processing	1.622 kg CO2e (15.5%)
Manufacturing (Scope 2)	1.160 kg CO2e (11.1%)
Downstream Transportation	0.115 kg CO2e (1.1%)
Upstream Transportation	0.048 kg CO2e (0.5%)
End-of-Life	0.030 kg CO2e (0.3%)

Material Impact Breakdown (kg CO2e)

Lithium-ion Battery	0.90 kg CO2e
ABS Plastic Casing	0.45 kg CO2e
Packaging Cardboard	0.12 kg CO2e
Copper Wire	0.07 kg CO2e
Printed Circuit Board	0.06 kg CO2e
Screws (Steel)	0.022 kg CO2e

Total Material Carbon Footprint: 1.622 kg CO2e

Highlights and Key Findings

- The **Use Phase** dominates the product's carbon footprint, contributing 71.6% (7.500 kg CO2e) of the total, primarily due to energy consumption over its 3-year lifespan.
- **Scope 3 emissions** represent the vast majority of the impact (88.9%), indicating significant environmental responsibility across the value chain, from materials to end-of-life.
- **Material Acquisition** (15.5%) and **Manufacturing** (11.1% from purchased electricity) are the next most significant hotspots, with the Lithium-ion Battery being the single largest material contributor.

Action Plan: Recommendations for Emission Reduction

- **Prioritize Use Phase Efficiency:** Invest in R&D for more energy-efficient designs and components to drastically reduce energy consumption during product use.
- **Optimize Material Selection & Sourcing:** Investigate lower-carbon alternative materials, especially for the battery and plastic casing, and push for higher recycled content.
- **Expand Renewable Energy in Manufacturing:** Accelerate efforts to achieve 100% renewable electricity at the China manufacturing facility to eliminate Scope 2 emissions.
- **Enhance Circular Economy Initiatives:** Continuously improve take-back and recycling programs, exploring opportunities for material upcycling and refurbishment.
- **Refine Logistics for Efficiency:** Optimize transport routes, consolidate shipments, and consider lower-emission transport modes for both upstream and downstream activities.