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Product Carbon Footprint Dashboard

for **izrnufelzv** by **hxezfnwumx**

12.90 kg CO₂e

Total Carbon Footprint for 1.0 unit (factory_gate, China, GHG Protocol)

TOTAL FOOTPRINT

12.90 kg CO₂e

Overall lifecycle emissions for one unit.

CARBON INTENSITY

12.90 kg CO₂e/unit

Emissions per functional unit of product.

TOP MATERIAL HOTSPOT

PCB Assembly

Significant contributor in material production.

PRIMARY EMISSION SCOPE

Scope 3 (Use Phase)

Largest emission category by GHG Protocol.

Emission Breakdown

By Lifecycle Stage

Percentages indicate contribution to the total net PCF. End-of-Life shows avoided emissions.

Key Material Carbon Impact

ABS Plastic Casing

0.56 kg CO2e

Copper Wiring

0.15 kg CO2e

PCB Assembly

1.50 kg CO2e

Aluminum Heat Sink

0.24 kg CO2e

Lithium-ion Battery

0.58 kg CO2e

Highlights & Hotspots

Use Phase Dominance: The product's ongoing energy consumption over its 3-year lifespan accounts for 65.1% of the total PCF, making it the largest emission hotspot.

Material Impact: Raw material acquisition, particularly for PCB assembly, ABS plastic, and the lithium-ion battery, constitutes a significant 23.5% of the total footprint.

Manufacturing Efficiency: Purchased electricity for manufacturing contributes 16.6%, indicating room for decarbonization despite 30% assumed renewable energy use.

Action Plan: Reducing Footprint

Enhance Product Energy Efficiency: Prioritize design improvements to reduce energy consumption during the 3-year lifespan of izrnufelzv.

Decarbonize Supply Chain: Engage with suppliers to secure lower-carbon materials and optimize usage for components like PCB assembly and battery.

Increase Renewable Energy: Aim for higher renewable energy procurement at the China manufacturing facility, beyond the current 30% assumed.

Strengthen Circular Economy: Expand take-back and refurbishment programs (e.g., rerwrugsxh) to maximize material recovery and reuse.

Improve Data Quality: Implement systems for collecting primary activity data for all Scope 3 categories to meet GHG Protocol's 2026 requirements.