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Product Carbon Footprint Dashboard

Product: **stegwzrrqg** Total PCF: **8.58 kg CO2e** Standard: **GHG Protocol**

Total Footprint

8.58 kg CO2e

Per 1.0 unit (cradle-to-grave)

Primary Hotspot

Use Phase

61.31% of total footprint

Top Material Impact

Circuit Board

1.50 kg CO2e (from 2.90 kg total material)

Main Emission Scope

Scope 3

99.30% of total emissions

Lifecycle Emissions Breakdown

Use Phase (Scope 3): 61.31%

Materials Acquisition (Scope 3): 33.80%

Transport (Scope 3): 2.45%

End-of-Life (Scope 3): 1.75%

Production (Scope 2): 0.70%

Material Carbon Impact (from 2.90 kg CO2e total)

Circuit Board: 1.50 kg CO2e

Plastic Casing: 1.25 kg CO2e

Copper Wire: 0.15 kg CO2e

Key Insights & Highlights

- The **Use Phase** accounts for the majority of the product's carbon footprint, contributing 61.31% (5.26 kg CO2e) of the total, largely due to energy consumption over its 5-year lifespan.
- **Materials Acquisition & Pre-processing** is the second largest contributor at 33.80% (2.90 kg CO2e), emphasizing the importance of sustainable sourcing and design, with the Circuit Board being the highest impact material.
- The analysis achieved over 95% **Scope 3 coverage** (99.30%), aligning with advanced GHG Protocol reporting standards and ensuring a comprehensive view of value chain emissions.

Actionable Reduction Strategies

1. **Optimize Use Phase Efficiency:** Focus on reducing energy consumption during the product's operational life through design improvements (e.g., low-power modes, energy-efficient components) and educating users on efficient use.
2. **Sustainable Material Sourcing & Design:** Explore lower carbon footprint alternatives for high-impact materials like circuit boards and plastic casings. Prioritize recycled content, renewable materials, and design for modularity and repairability.
3. **Enhance Circularity:** Further develop and promote take-back and recycling programs (like 'exjeyddwpm') to minimize end-of-life emissions and maximize resource recovery, thus diverting more waste from landfill.