carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: **klgzglqinz** by vkiqusldsh

Standard: GHG Protocol | System Boundary: factory_gate | Production Country: China

45.855 kgCO2e / unit

Total Footprint

45.855

kgCO2e / unit

Primary Emission Scope

Scope 3

(93.79%)

Top Lifecycle Hotspot

Use Phase

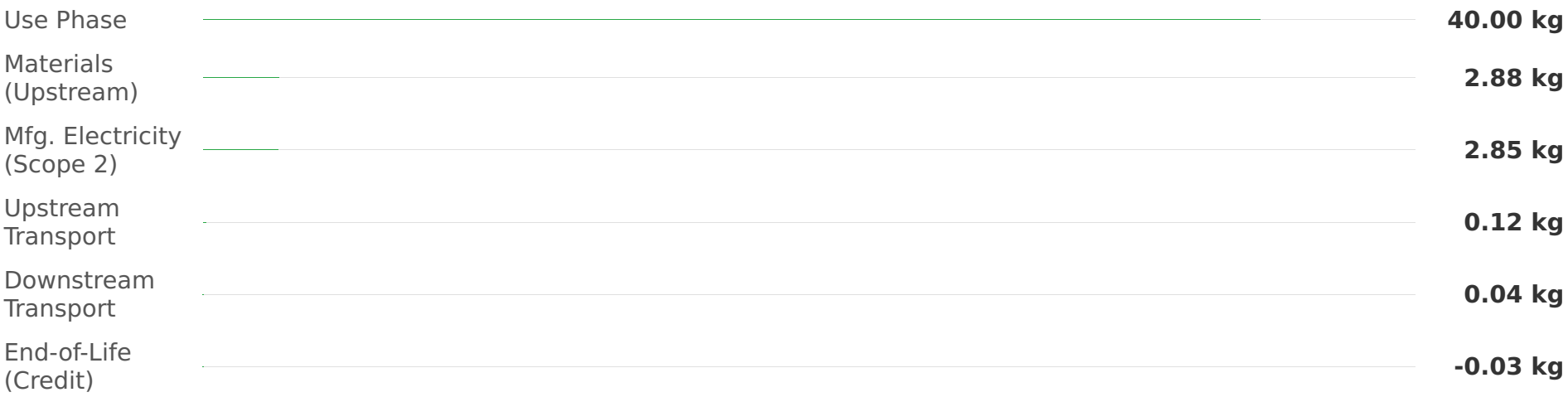
(87.24%)

Top Material Hotspot

Circuit Board

(1.00 kgCO2e)

Lifecycle Emission Breakdown



Highlights

- ✓ **Dominant Use Phase Impact:** The product's Use Phase accounts for a staggering 87.24% of its total carbon footprint, primarily due to energy consumption over its 5-year lifespan.
- ✓ **Significant Scope 3 Emissions:** Scope 3 (indirect emissions from value chain) constitutes 93.79% of the total footprint, highlighting the importance of supply chain and downstream impact management.
- ✓ **Material Hotspot:** The Circuit Board is the single largest material contributor to emissions, responsible for 1.00 kgCO2e out of the 2.88 kgCO2e from materials.

✓ **Recycling Credit:** An effective End-of-Life (EoL) strategy, with 70% recyclability, results in a net carbon credit (-0.0325 kgCO2e/unit), reducing the overall footprint.

Action Plan: How to Reduce Carbon Footprint

- **Enhance Use Phase Efficiency:** Focus on improving the energy efficiency of klgzglqinz during its operational life. This includes optimizing power consumption, promoting standby modes, and exploring low-power components.
- **Promote Renewable Energy for Users:** Encourage users to power the product with renewable electricity sources. This could involve providing information or incentives for green energy subscriptions.
- **Extend Product Lifespan:** Design for durability, repairability, and upgradability to prolong the product's useful life, thereby amortizing its embodied emissions over a longer period.
- **Increase Manufacturing Renewable Energy:** Further increase the share of renewable energy procurement in the Chinese manufacturing facility beyond the current 50% to significantly reduce Scope 2 emissions.
- **Optimize Material Sourcing:** Investigate and procure lower-carbon alternative materials, especially for components like the Circuit Board and Plastic Casing. Increase the use of recycled content.
- **Improve Manufacturing Processes:** Implement efficiency improvements in manufacturing processes (e.g., injection molding, stamping) to reduce overall energy intensity per unit.