carboncalcpcf.com

Product Carbon Footprint Analysis for "kohgpxhisf"

Total PCF: 136.01 kg CO2e per unit

Total Product Footprint

136.01

kg CO2e / unit

Carbon Intensity

136.01

kg CO2e / unit

Top Material Hotspot

PCB

5.0 kg CO2e

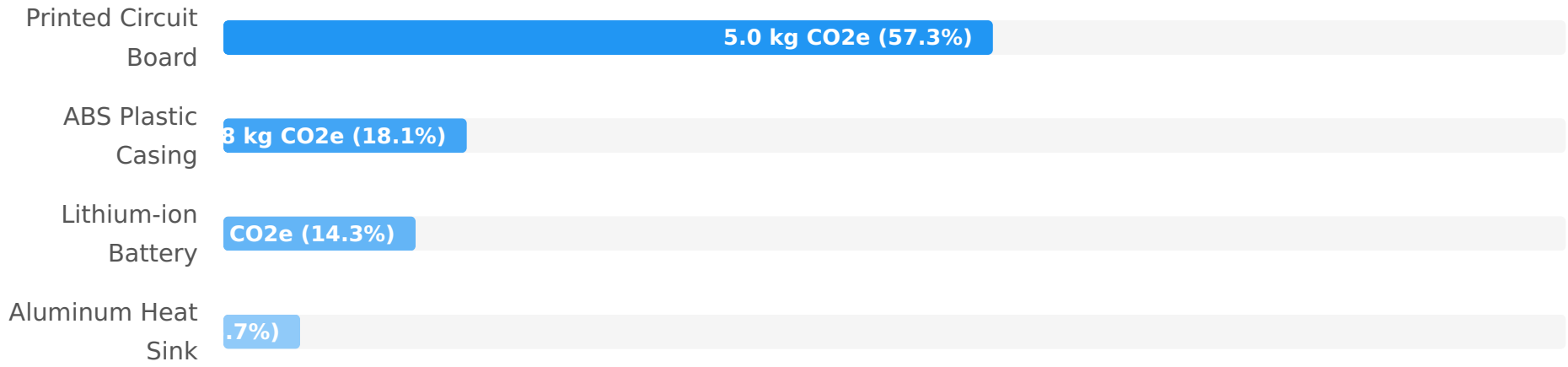
Primary Emission Scope

Scope 3

~96.1% of Total

Lifecycle Stage Breakdown

Top Raw Material Impacts



Key Highlights & Hotspots

- The **Use Phase** is the dominant contributor, accounting for approximately 91.9% of the total Product Carbon Footprint due to its energy consumption over the product's lifespan.
- **Raw Materials Acquisition**, particularly the Printed Circuit Board and Lithium-ion Battery, represents the second largest impact area at 6.41% of the total PCF.
- While smaller, emissions from **manufacturing** (3.86%) and **transportation** (0.37%) are notable factors in the product's overall carbon footprint.

Recommendations for Emission Reduction

- **Enhance Use Phase Efficiency:** Prioritize R&D to drastically reduce the product's energy consumption during its operational life, as this offers the largest reduction potential.
- **Sustainable Material Sourcing:** Explore lower-carbon alternatives for key components like PCBs, batteries, and aluminum, favoring suppliers with transparent environmental reporting and high renewable energy adoption.
- **Increase Renewable Energy in Manufacturing:** Further increase the percentage of renewable energy used in the China production facility beyond the current 50% to reduce Scope 2 emissions.
- **Optimize Logistics:** Continuously improve transport routes and modes for both inbound and outbound freight, focusing on less carbon-intensive options like rail or high-efficiency vehicles.
- **Strengthen Circular Economy Programs:** Maximize material recovery and high-quality recycling rates through existing take-back schemes, and explore opportunities for remanufacturing or direct reuse to gain further avoided emissions.