Product Carbon Footprint Dashboard

carboncalcpcf.com

31.46

kg CO2e / unit (ukjsuxftyq)

Product

ukjsuxftyq

edrzzzxglj

Carbon Intensity

38.37

kg CO2e / kg of product

Primary Emission Scope

Scope 3

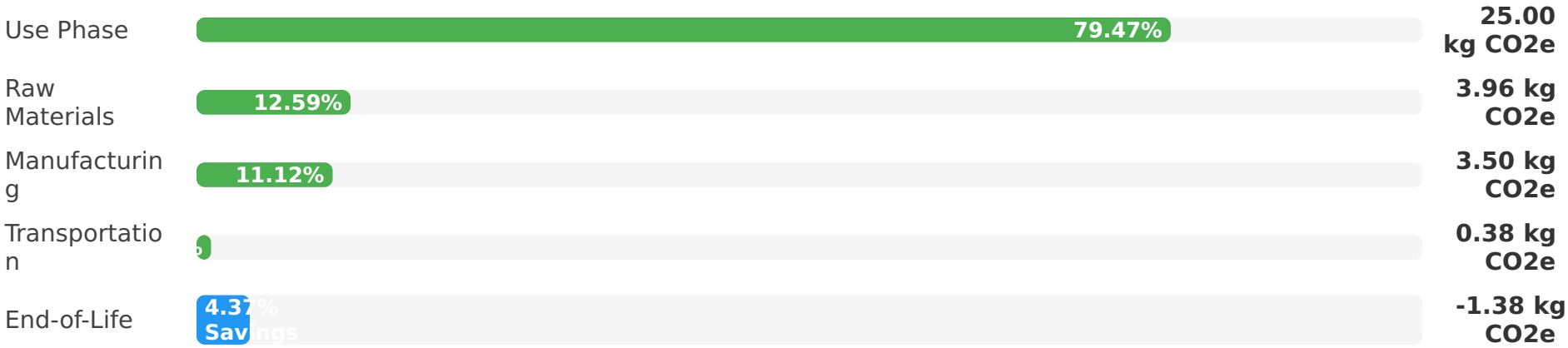
88.88% of total PCF

Production Country

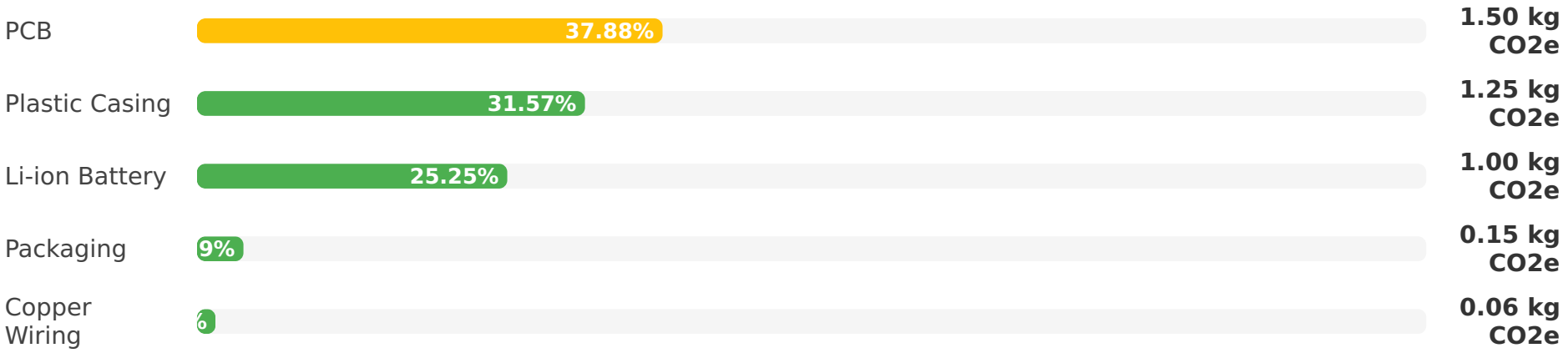
China

Standard: GHG Protocol

Lifecycle Stage Breakdown



Material Carbon Hotspots



Key Insights

Dominant Use Phase Emissions: The product's use phase is the single largest contributor, accounting for approximately 79.5% of the total PCF (25.00 kg CO2e). This is primarily driven by its energy consumption over a 5-year lifespan.

Significant Material Impact: Raw material acquisition and processing constitute about 12.6% of the total PCF (3.96 kg CO2e), with the Printed Circuit Board (PCB) identified as the top material hotspot.

Manufacturing's Role: Despite 50% renewable energy use, manufacturing's purchased electricity emissions contribute a notable 11.1% (3.50 kg CO2e) due to the remaining grid intensity in China.

Circular Economy Benefits: A high recyclability rate (70%) and established take-back programs result in a net carbon saving of -1.38 kg CO2e at end-of-life, demonstrating the positive impact of circular initiatives.

Action Plan for Reduction

Optimize Use Phase Efficiency: Prioritize design improvements and integrate more energy-efficient components to drastically reduce the product's energy consumption during its active lifespan.

Enhance Renewable Energy Sourcing: Increase the percentage of renewable energy used in manufacturing operations beyond the current 50% in China, potentially through direct procurement or robust renewable energy certificate schemes.

Material Optimization: Investigate and integrate lower-carbon intensity materials and higher recycled content for key components, particularly for the Printed Circuit Board and plastic casing, without compromising quality.

Promote Circularity & Longevity: Strengthen and expand take-back and recycling programs, actively educate customers on recycling benefits, and consider design for extended product lifespan to maximize material utility.