carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: lrhrlydqmn | Quantity: 1.0 unit | Standard: GHG Protocol

Total PCF: 10.85 kgCO2e

System Boundary: factory_gate | Production Country: China

10.85

Total PCF (kgCO2e/unit)

10.85

Carbon Intensity (kgCO2e/unit)

Scope 3

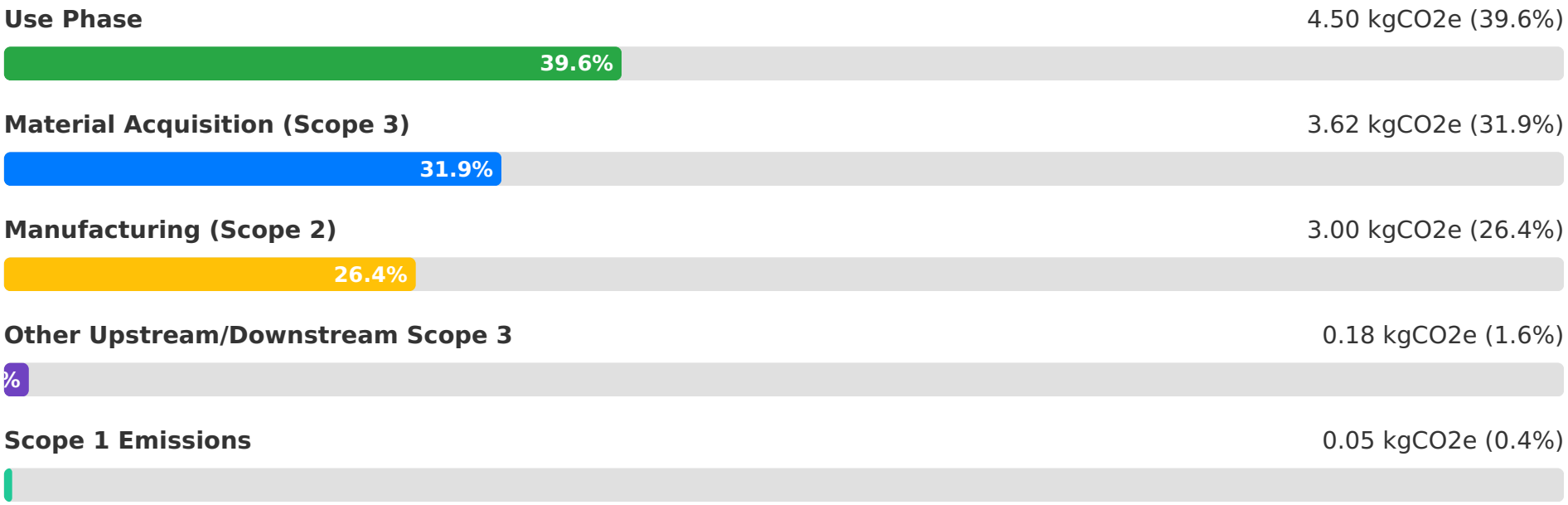
Primary Emission Scope

Use Phase

Top Lifecycle Hotspot

Lifecycle Carbon Breakdown

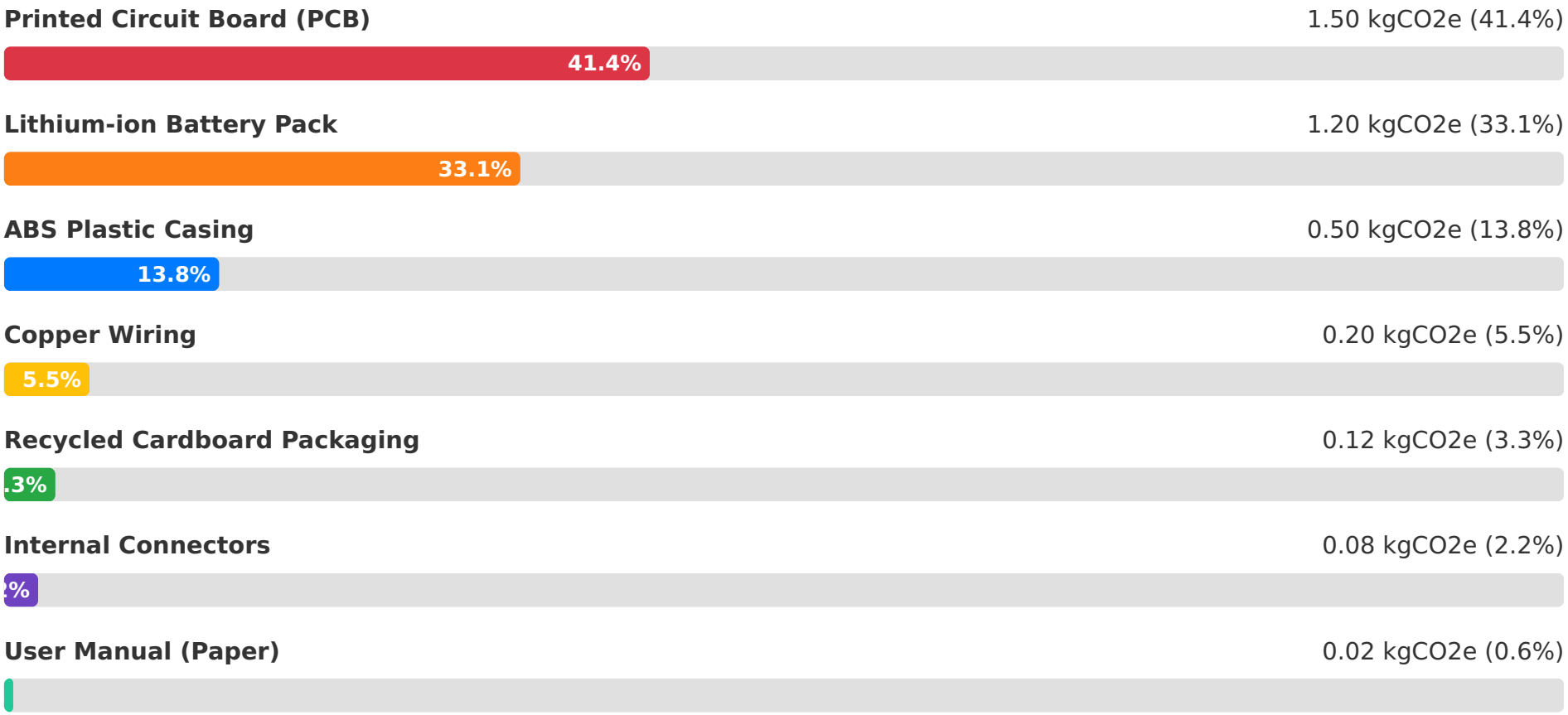
Distribution of gross emissions by lifecycle stage.



Note: End-of-Life treatment resulted in a net credit of -0.50 kgCO2e, leading to a total net PCF of 10.85 kgCO2e.

Material Carbon Impact

Breakdown of emissions from purchased goods & services (3.62 kgCO2e total).



Highlights & Key Hotspots

Use Phase Dominance: The product's operational lifespan accounts for approximately 41.5% of the total carbon footprint, making energy efficiency during use a critical improvement area.

Material Impact: Raw material acquisition, particularly for components like the Printed Circuit Board and Lithium-ion Battery Pack, contributes significantly at around 33.4% of the total PCF.

Manufacturing Energy: Purchased electricity for manufacturing represents a substantial 27.6% of emissions, indicating opportunities for increased renewable energy adoption at the production facility.

Recommendations for Emission Reduction

Improve Use Phase Efficiency: Invest in R&D to enhance the energy efficiency of lrhrlydqmn during its operational life. Consider software optimizations or low-power components.

Sustainable Material Sourcing: Explore alternative, lower-carbon materials for the casing, battery, and PCB. Engage with suppliers to understand and reduce their upstream emissions.

Increase Renewable Energy in Manufacturing: Further increase the renewable energy usage at the China production facility, potentially through direct procurement or off-site renewable energy projects.

Optimize Logistics: Evaluate transport modes and distances to identify opportunities for mode shifting to lower-carbon transport options or route optimization.

Enhance Circularity: Leverage and expand circular/take-back programs and further improve recyclability to maximize material recovery and minimize end-of-life impacts.