

html

Product Carbon Footprint Dashboard

For Product: **qijlljqnko**

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Total Carbon Footprint

13.99 kg CO2e

per 1.0 unit

Carbon Intensity

27.98 kg CO2e/kg

Based on 0.5 kg product weight

Primary Emission Scope

Scope 3

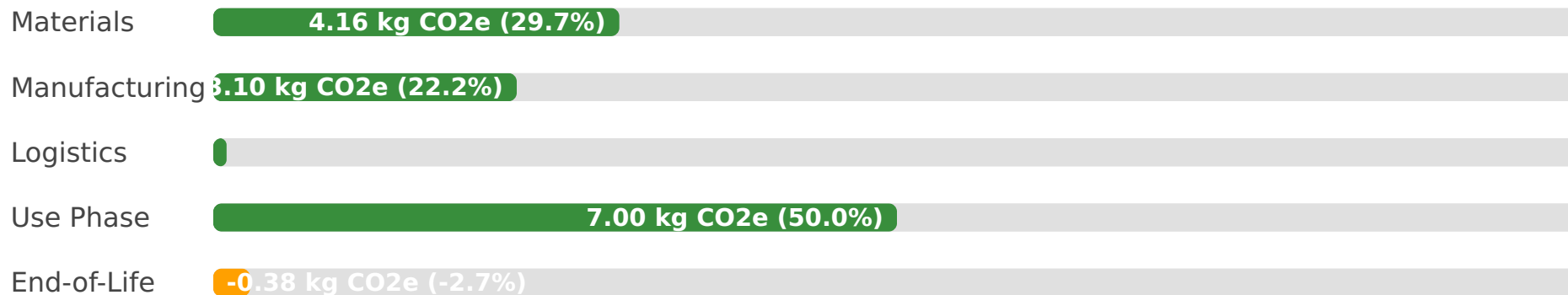
77.84% of total PCF

Top Material Hotspot

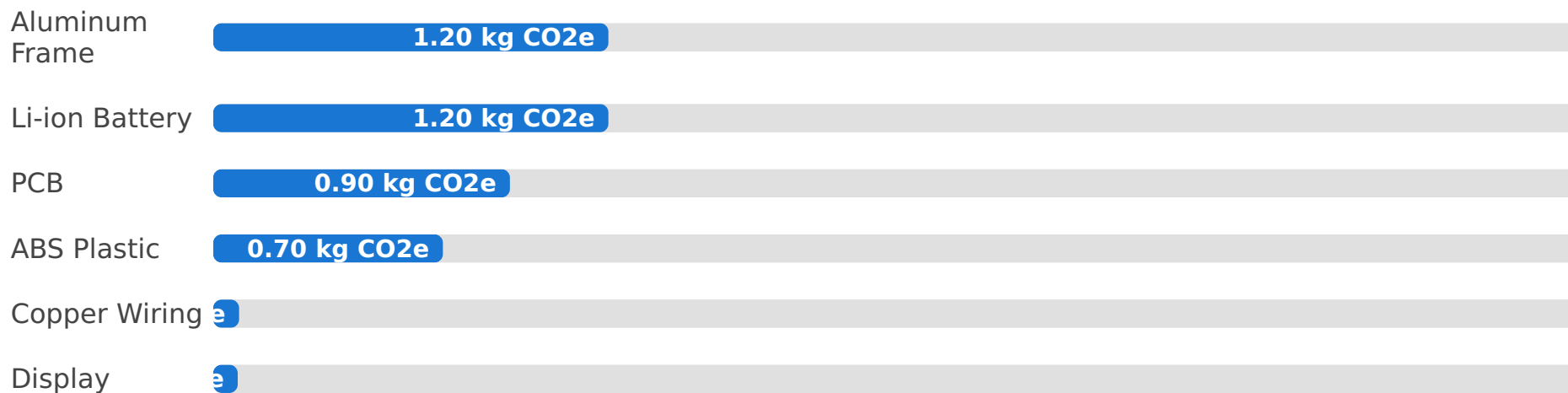
Al. Frame / Li-ion Battery

1.20 kg CO2e each

Lifecycle Stage Breakdown



Top Material Impacts (kg CO2e)



Key Emission Hotspots

Use Phase: Represents 50.0% (7.00 kg CO₂e) of the total PCF, primarily driven by the product's energy consumption over its lifespan.

Material Acquisition: Contributes 29.7% (4.16 kg CO₂e), with components like the Aluminum Frame, Lithium-ion Battery, and Printed Circuit Board being significant.

Manufacturing: Accounts for 22.2% (3.10 kg CO₂e) of emissions, influenced by the remaining grid electricity mix in China despite 50% renewable energy use.

Recommendations for Decarbonization

Enhance Energy Efficiency in Use: Prioritize design innovations for lower energy consumption during the product's operational phase and advocate for renewable electricity sourcing by end-users.

Sustainable Material Sourcing: Actively investigate and procure low-carbon, recycled, or responsibly sourced alternatives for high-impact materials and components.

Decarbonize Manufacturing Operations: Strategically increase the percentage of renewable energy used in the Chinese manufacturing facility beyond the current 50%, potentially through on-site generation or green energy procurement.

Strengthen Circular Economy Initiatives: Expand product take-back, refurbishment, and effective recycling programs, integrating design-for-disassembly principles to maximize material recovery and reduce reliance on virgin resources.