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Product Carbon Footprint for nqmvtdrqlp

carboncalcpcf.com | GHG Protocol Standard | Factory Gate Boundary

28.56 kg

CO2e

Total Product Carbon Footprint

Key Metrics Overview

Functional Unit

1.0

unit

Production Country

China

Primary Emission Scope

Scope 3

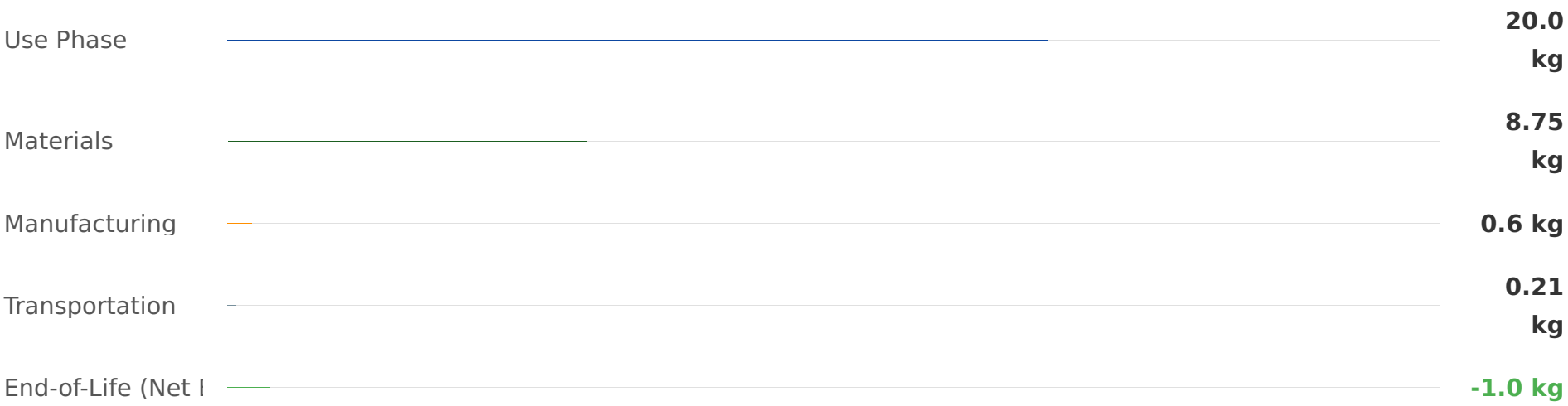
(97.9% of total)

Top Material Hotspot

Aluminium Casing

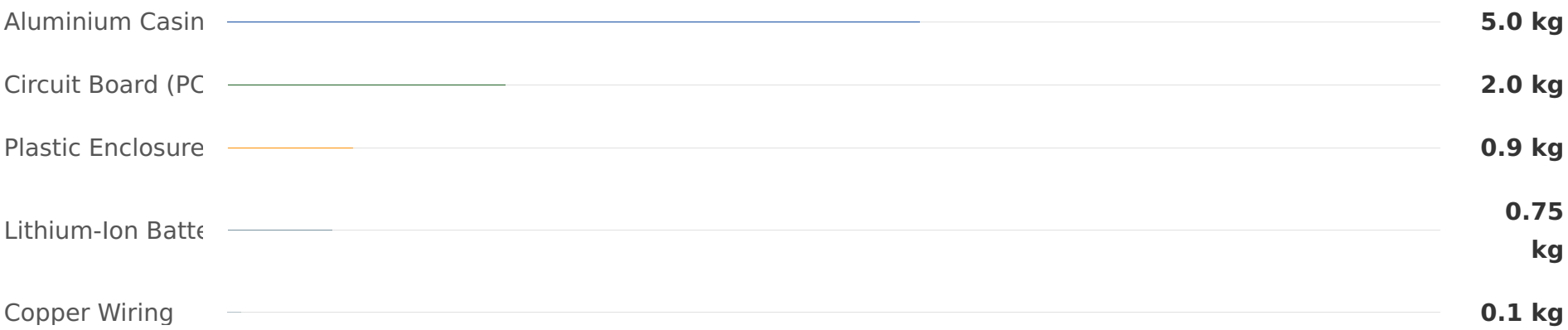
(5.0 kg CO2e)

Lifecycle Stage Breakdown (Excluding Net Benefits)



*Percentages are based on the sum of positive emissions (29.56 kg CO2e). End-of-Life represents a net reduction from total.

Material Impact Breakdown



Key Highlights

- **Use Phase Dominance:** The product's energy consumption during its 5-year lifespan accounts for ~70% of the total footprint.
- **Material Hotspots:** Material production, particularly Aluminium Casing and Circuit Board, contributes significantly (~31%) to upstream emissions.
- **Circular Economy Benefit:** A high 75% recyclability leads to a net reduction of 1.0 kg CO2e in the End-of-Life phase.

Recommendations for Emission Reduction

- ✓ Optimize Use Phase Energy Efficiency with smarter components or power management.
- ✓ Prioritize Sustainable Material Sourcing, exploring recycled content and low-carbon materials.
- ✓ Target 100% Renewable Energy in Production to further reduce Scope 2 emissions.
- ✓ Expand Circular Economy Initiatives, including take-back programs and design for repairability.
- ✓ Enhance Logistics Efficiency through route optimization and lower-emission transport modes.

Report Generated: May 18, 2026