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Product Carbon Footprint for nfszunkkfg

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39.428 kg CO₂e

Total Life Cycle Footprint

PCF (Cradle-to-Gate)

4.870 kg CO₂e

Carbon Intensity

39.428 kg CO₂e/unit

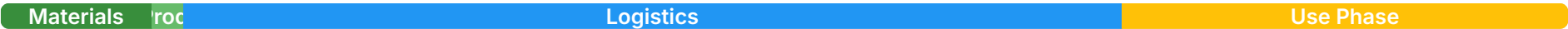
Top Material Hotspot

Aluminium Frame

Primary Emission Scope

Scope 3

Lifecycle Stage Breakdown



Materials Production Logistics Use Phase

Note: End-of-Life provides a net credit of -2.334 kg CO2e, effectively reducing the overall footprint.

Material Carbon Impact

Aluminium Frame	1.700 kg CO2e (42.12%)
Lithium-ion Battery	1.250 kg CO2e (30.97%)
Printed Circuit Board (PCB)	0.540 kg CO2e (13.38%)
ABS Plastic Casing	0.450 kg CO2e (11.15%)
Glass Display	0.096 kg CO2e (2.38%)

Key Highlights

Downstream Logistics Dominance: Last-Mile Delivery (24.934 kg CO₂e) is a major hotspot, significantly impacting the full lifecycle footprint.

Use Phase Impact: The product's energy consumption over its 5-year lifespan contributes 11.9 kg CO₂e, highlighting consumer electricity grid influence.

Material Hotspots: High-impact materials like Aluminium (1.700 kg CO₂e) and Lithium-ion batteries (1.250 kg CO₂e) are primary upstream contributors.

EoL Circularity: High recyclability (80%) and a take-back program result in a net End-of-Life credit (-2.334 kg CO₂e), reducing the overall footprint.

Action Plan: How to Reduce Impact

Material Optimization: Explore lower-carbon alternatives and increase recycled content for high-impact materials (Aluminium, Li-ion batteries).

Manufacturing Efficiency: Continue efforts to increase renewable energy usage beyond 70% in Chinese manufacturing operations.

Logistics Optimization: Focus on optimizing transport modes (e.g., sea over air), improving load factors, and exploring low-emission vehicles for last-mile delivery.

Use Phase Design: Enhance product energy efficiency and educate consumers on sustainable usage, considering regional grid mixes for consumption.

Circular Economy Enhancement: Expand existing take-back programs to maximize material recovery across all components, especially electronics and batteries.