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Product Carbon Footprint Report for hpedkyzdfp

A detailed analysis by etpyjwuhv for qxgpjzieoh, adhering to GHG Protocol standards.

Total Carbon Footprint

18.84

kg CO2e / functional unit

Functional Unit

1.0

unit of hpedkyzdfp

Primary Emission Hotspot

Use Phase

79.62% of total emissions

Top Material Carbon Impact

Plastic Enclosure

0.875 kg CO2e

Emissions Breakdown by Lifecycle Stage

Use Phase	15.00 kg CO2e (79.62%)
Production (Purchased Energy - Scope 2)	3.00 kg CO2e (15.92%)
Material Acquisition & Pre-processing (Scope 3)	0.875 kg CO2e (4.64%)
Upstream Transportation (Scope 3)	0.0125 kg CO2e (0.07%)
Downstream Transportation (Scope 3)	0.0025 kg CO2e (0.01%)
Production (Direct Emissions - Scope 1)	0.00 kg CO2e (0.00%)
End-of-Life Treatment (Benefit)	-0.05 kg CO2e (-0.27%)

Key Insights & Highlights

Dominant Use Phase Impact: The product's operational energy consumption (Use Phase) accounts for nearly 80% of its total carbon footprint.

Production Energy Matters: Purchased energy for manufacturing contributes significantly (15.92%), emphasizing the need for renewable energy adoption.

Material Choice Impact: The Plastic Enclosure is the primary material contributor, highlighting opportunities for lower-carbon alternatives and circularity.

Recommended Action Plan

Optimize Use Phase Efficiency: Implement design improvements and explore alternative power sources to significantly reduce product energy consumption during operation.

Increase Renewable Energy Sourcing: Accelerate investment in and procurement of renewable energy for manufacturing operations in China to cut Scope 2 emissions.

Material Innovation: Research and integrate lower-carbon or higher recycled-content materials for components like the plastic enclosure.

Enhanced Data Collection: Continuously gather more precise primary data for all lifecycle stages to improve accuracy and reliability of future PCF assessments.

Leverage Circular Economy Programs: Expand and promote take-back and recycling initiatives to maximize material recovery and realize avoided emissions benefits.

Generated Date: May 21, 2026 | Accounting Standard: GHG Protocol | System Boundary: Cradle-to-Grave for PCF, Factory Gate for Production

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