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Product Carbon Footprint for jflmlggrrs

A detailed Cradle-to-Grave analysis for 1.0 unit by vvyjhznrw

30.86 kgCO₂e

Total Carbon Footprint (Cradle-to-Grave)

Total Footprint

30.86 kgCO₂e

Carbon Intensity

28.05 kgCO₂e/kg

Top Hotspot

Use Phase

Primary GHG Scope

Scope 3

Lifecycle Stage Breakdown

Emissions by stage (excluding EoL credit)

Materials Acquisition	13.63% (4.40 kgCO ₂ e)
Production (Scope 2)	18.58% (6.00 kgCO ₂ e)
Transport (Inbound & Outbound)	29.07% (9.39 kgCO ₂ e)
Use Phase	38.72% (12.50 kgCO ₂ e)
End-of-Life (Reduction)	-1.43 kgCO ₂ e

Credit from recycling programs

Material Carbon Contribution

Based on Bill of Materials (Total Mass: 1.1 kg)

Aluminum Casing (0.5 kg)	2.5 kgCO ₂ e
Plastic Enclosure (0.3 kg)	0.6 kgCO ₂ e
Circuit Board (0.1 unit)	1.0 kgCO ₂ e
Packaging (Cardboard 0.2 kg)	0.3 kgCO ₂ e

Key Highlights

- The Use Phase contributes the most to the product's carbon footprint, emphasizing energy efficiency during operation.
- Outbound transport, particularly last-mile delivery, is a significant hotspot within logistics emissions.
- Strong Scope 3 coverage (95%) and active circularity programs at End-of-Life provide an emissions reduction credit.

Action Plan: Reduce Footprint

- ****Improve Energy Efficiency:**** Focus on reducing energy consumption of jflmlggrrs during its 5-year lifespan.
- ****Optimize Logistics:**** Explore greener outbound transport modes and consolidate last-mile deliveries.
- ****Sustainable Materials:**** Prioritize lower-carbon alternatives for key components like Aluminum.
- ****Enhance Circularity:**** Further develop take-back and recycling initiatives to maximize End-of-Life benefits.