

Product Carbon Footprint Dashboard

Product: wkyehggivr

16.05 kgCO₂e/
unit
(Net Total PCF)

TOTAL FOOTPRINT

16.05

kgCO₂e per unit

SYSTEM BOUNDARY

Cradle-to-Grave

Factory-gate to End-of-Life

TOP HOTSPOT CATEGORY

Raw Materials

Materials & Manufacturing

PRIMARY GHG SCOPE

Scope 3

Indirect Value Chain

Lifecycle Stage Breakdown

Raw Materials & Mfg.	12.44 kgCO2e (67.9%)
Use Phase	5.00 kgCO2e (27.3%)
Production	0.46 kgCO2e (2.5%)
Transport	0.41 kgCO2e (2.3%)
End-of-Life (Credit)	-2.26 kgCO2e

*Percentages for positive contributors. End-of-Life represents a net carbon credit due to high recyclability.

Material Carbon Impact

Aluminum Casing	8.00 kgCO2e (64.3%)
ABS Plastic Enclosure	1.50 kgCO2e (12.1%)
Printed Circuit Board	1.50 kgCO2e (12.1%)
Electronic Components	1.00 kgCO2e (8.0%)

*Based on illustrative Bill of Materials.

Key Highlights

- **Material Impact Dominance:** Raw material acquisition and manufacturing (Scope 3, Category 1) are the most significant contributors to the product's carbon footprint, accounting for a substantial portion of total emissions.
- **Use Phase Energy Consumption:** The product's energy consumption during its 5-year lifespan is the second major hotspot, highlighting the importance of energy-efficient design.
- **Circular Economy Benefits:** A high recyclability rate (70%) and company take-back programs result in a net carbon credit at the end-of-life stage, demonstrating the positive impact of circular initiatives.

Recommendations for Reduction

- **Prioritize Material Optimization:** Focus on sourcing lower-carbon alternatives or recycled content for high-impact materials like Aluminum and Electronics. Engage with suppliers for primary data.
- **Enhance Energy Efficiency:** Invest in R&D to significantly reduce energy consumption during the product's use phase, or explore longer-lasting components to extend product life.
- **Strengthen Supply Chain Engagement:** Collaborate closely with suppliers to gather detailed primary data on their manufacturing processes and renewable energy adoption to improve Scope 3 accuracy.