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# Product Carbon Footprint for vutttuwvkx

Analysis for fqiqwrikfj by mjprdrunwh

**Total PCF: 40.19 kg CO<sub>2</sub>e per unit**

Total Footprint

**40.19 kg CO<sub>2</sub>e**

Carbon Intensity

**40.19 kg CO<sub>2</sub>e/unit**

Top Material Hotspot

## **Aluminum Casing**

Primary Emission Scope

## **Scope 3 (Use Phase)**

# Lifecycle Emissions Breakdown

A horizontal bar chart titled 'Lifecycle Emissions Breakdown' showing the percentage contribution of different lifecycle phases to total emissions. The phases and their percentages are: Materials Acquisition (31.72%), Production (Scope 1 & 2) (7.72%), Logistics (Upstream) (0.54%), Use Phase (59.21%), and End-of-Life Treatment (0.81%). Each bar is a different color: Materials Acquisition is green, Production is light green, Logistics is yellow, Use Phase is blue, and End-of-Life Treatment is orange.

|                          |        |
|--------------------------|--------|
| Materials Acquisition    | 31.72% |
| Production (Scope 1 & 2) | 7.72%  |
| Logistics (Upstream)     | 0.54%  |
| Use Phase                | 59.21% |
| End-of-Life Treatment    | 0.81%  |

## Material Carbon Impact (of Total Materials)

|                     |         |
|---------------------|---------|
| Aluminum Casing     | 49.02 % |
| Circuit Board       | 39.22 % |
| Plastic Housing     | 7.06%   |
| Copper Wiring       | 3.14%   |
| Cardboard Packaging | 1.57%   |

### Highlights & Hotspots

The **Use Phase** is the most significant contributor, accounting for 59.2% of the total carbon footprint due to the product's 5-year energy consumption.

**Materials Acquisition & Pre-processing** is the second largest hotspot (31.7%), with aluminum casing and the circuit board being key drivers.

**Production emissions (Scope 2)** from purchased electricity contribute 7.7%, indicating room for further renewable energy integration.

## Decarbonization Action Plan

**Enhance Energy Efficiency:** Focus on reducing energy consumption during the product's use phase through innovative design and user guidance.

**Sustainable Material Sourcing:** Explore lower-carbon materials for the aluminum casing and circuit board, and implement circular design principles.

**Boost Renewable Energy:** Increase the procurement or generation of renewable energy at production facilities beyond the current 50%.

**Optimize Logistics:** Evaluate and optimize transport routes and modes for upstream and downstream distribution to minimize emissions.

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Standard: **GHG Protocol** | System Boundary: **Cradle-to-Gate + Use & End-of-Life**

