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## Product Carbon Footprint: vdirivwnfj

Total  
PCF: **18.962**  
**kgCO2e**

Total Footprint (Net)

**18.962** kgCO2e

Carbon Intensity

**18.962** kgCO2e/unit

Top Emission Hotspot

**Use Phase** (65.92%)

Primary Emission Scope

**Scope 3** (99.35%)

## Lifecycle Stage Breakdown

Use Phase

Materials

Production

Purchased Energy  
(Scope 2)

Primary Transport

Last-Mile Delivery

End-of-Life (Net  
Avoided)

## Top Material Carbon Impact

Aluminum Casing

3.75 kgCO<sub>2</sub>e

Printed Circuit Board  
(PCB)

1.50 kgCO<sub>2</sub>e

Lithium-Ion Battery  
Cell

1.20 kgCO<sub>2</sub>e

Plastic Housing (ABS)

4 kgCO<sub>2</sub>e

Copper Wire

2e

Packaging  
(Cardboard)

e

## Highlights: Key Emission Hotspots

- The **Use Phase** is the most significant contributor to the PCF, accounting for 65.92% of total emissions. This highlights the importance of optimizing product energy efficiency and promoting renewable energy for consumers.
- **Material Production** is the second major hotspot, constituting 38.97% of the total footprint. Focus areas include sourcing lower-carbon materials, increasing recycled content, and supplier decarbonization.
- Strong recyclability (60%) and company-wide take-back programs at **End-of-Life** lead to net avoided emissions (-5.81%), demonstrating the positive impact of circular economy strategies.

## Action Plan: How to Reduce Your Footprint

- **Enhance Data Granularity:** Collect more specific primary data for all upstream supply chain activities, including detailed energy consumption at each manufacturing step.
- **Supplier Engagement:** Actively engage with suppliers to foster decarbonization efforts and reduce embedded emissions in purchased goods and services.
- **Optimize Use Phase:** Explore strategies to reduce energy consumption during the product's operational lifespan, such as developing more energy-efficient models or integrating renewable energy charging solutions.
- **Expand Circularity:** Further quantify and expand the impacts of product take-back and refurbishment programs, focusing on material recovery rates and avoided emissions.
- **Regional Energy Focus:** Seek out regional-specific electricity grid emission factors for actual locations of product use to improve the accuracy of the use-phase footprint.