

ytieyroolz Carbon Footprint Dashboard

Smart Home Device Sustainability Overview

36.83 kgCO₂e

Total Product Footprint

carboncalcpcf.com

Key Metrics

Total Footprint

36.83 kgCO₂e

for 1.0 unit of ytieyroolz

Carbon Intensity

36.83 kgCO₂e/unit

Aligned with GHG Protocol

Lifecycle Stage Breakdown

Total Emissions

■ Use	kgCO ₂ e (67.88%)
■ Material Acquisition	8.15 kgCO ₂ e (22.12%)
■ Manufacturing	3.36 kgCO ₂ e (9.12%)
■ Transport	0.29 kgCO ₂ e (0.78%)
■ End-of-Life	0.04 kgCO ₂ e (0.10%)

Material Carbon Impact

Lithium-ion Battery	4.00 kgCO ₂ e (49.1% of Material)
PCB Assembly	3.00 kgCO ₂ e (36.8% of Material)
ABS Casing	0.64 kgCO ₂ e (7.8% of Material)
Aluminum Heat Sink	0.27 kgCO ₂ e (3.3% of Material)

Highlights & Key Insights

- The **Use Phase** is the dominant emissions hotspot, contributing nearly 68% of the total carbon footprint, primarily due to electricity consumption over the product's lifespan.
- **Material Acquisition & Pre-processing** is the second largest contributor, accounting for over 22% of emissions, with Lithium-ion Batteries and PCB Assembly being significant material hotspots.
- The analysis adheres to the GHG Protocol Product Standard and the 2026 Land Sector and Removals (LSR) Standard update, ensuring comprehensive Scope 3 coverage.

How to Reduce Your Footprint

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1. **Prioritize Use Phase Efficiency:** Focus on designing for greater energy efficiency, exploring lower-power modes, and implementing smart energy management features.
2. **Material Optimization:** Investigate using lower-carbon materials or increasing recycled content, especially for high-impact components like batteries and PCBs.
3. **Increase Renewable Energy Sourcing:** Strive to transition to 100% renewable energy for manufacturing to further reduce Scope 2 emissions beyond the current commendable 70%.
4. **Strengthen Circularity Initiatives:** Expand the existing take-back program, promote repairability, and explore product-as-a-service models to enhance circularity and minimize end-of-life impacts.