

sywdoeeluw Carbon Footprint Dashboard

Product: sywdoeeluw | Company: mnnjxriny | Standard: GHG Protocol

Total PCF: 33.54 kg CO2e

Production Country: China

Consultant: dvvgljfmv

Key Carbon Metrics

Total Product Footprint

33.54 kg CO2e

Per 1.0 unit of sywdoeeluw

Carbon Intensity

33.54 kg CO2e/unit

Emissions per functional unit

Top Material Hotspot

PCB

0.75 kg CO2e within materials

Primary Emission Scope

Scope 3

96.4% of total footprint

Emissions Breakdown

Lifecycle Stage Emissions

Use Phase	30.66 kg CO2e (91.4%)
Materials Acquisition	1.99 kg CO2e (5.9%)
Manufacturing (Scope 2)	1.20 kg CO2e (3.6%)
Transport	0.04 kg CO2e (0.1%)

End-of-Life (Net Credit)

-0.35 kg CO2e

A net reduction due to high recyclability and existing take-back programs.

Material Carbon Impact (Top Contributors)

Printed Circuit Board (PCB)	0.75 kg CO2e (37.7%)
Lithium-ion Battery	0.60 kg CO2e (30.2%)
ABS Plastic Casing	0.56 kg CO2e (28.1%)
Aluminum Heatsink	0.08 kg CO2e (4.0%)

Based on the Materials Acquisition & Pre-processing total (1.99 kg CO2e).

Highlights & Hotspots

- The **Use Phase** is the overwhelming primary emission hotspot, contributing approximately 91.4% (30.66 kg CO₂e) of the total product carbon footprint.
- **Materials Acquisition & Pre-processing** represents the second most significant impact at 5.9% (1.99 kg CO₂e), with Printed Circuit Boards (PCBs) identified as the top material contributor.
- The product benefits from a **net carbon credit at End-of-Life** (-0.35 kg CO₂e) due to a high recyclability percentage and existing take-back programs.

Recommended Action Plan

- **Optimize Use Phase Efficiency:** Focus on engineering sywdoeeluw for significantly lower energy consumption during operation through hardware and software enhancements.
- **Enhance Renewable Energy Integration:** Increase the use of renewable energy beyond the current 60% in manufacturing and encourage suppliers to transition to renewable sources.
- **Sustainable Material Sourcing and Design:** Explore lower-carbon alternative materials and implement Design for Environment (DfE) principles to reduce overall material intensity.
- **Strengthen Circular Economy Initiatives:** Expand take-back programs to further increase product return rates for recycling, refurbishment, or remanufacturing.