

html

Product Carbon Footprint Dashboard

for carboncalcpcf.com

Product: xtphvfpdxr

Total Carbon Footprint:

21.69 kg CO2e

Total Footprint

21.69 kg CO2e

per 1.0 unit

Carbon Intensity

21.69 kg CO2e

per unit (Functional Unit: 1.0 unit)

Top Material Hotspot

Printed Circuit Board

45.70% of material impact (2.50 kg CO2e)

Key Highlights

- The Use Phase is the dominant emission hotspot, contributing 69.16% (15.00 kg CO₂e) of the total carbon footprint, primarily due to the product's 5-year operational lifespan.
- Raw materials, especially the Printed Circuit Board and Aluminum Alloy, are significant upstream contributors, accounting for 25.22% (5.47 kg CO₂e) of the total PCF.
- Despite 75% renewable energy usage, manufacturing still contributes 3.75% (0.81 kg CO₂e) from purchased electricity, indicating room for further decarbonization.

Recommendations for Decarbonization

- ****Optimize Use Phase Energy:**** Conduct a detailed assessment of product energy consumption and typical user behavior to identify and implement efficiency improvements during product design.
- ****Enhance Material Data & Sourcing:**** Obtain primary, material-specific emission factors from suppliers and explore lower-carbon alternative materials or increased recycled content beyond current levels.
- ****Strengthen Manufacturing Renewable Energy:**** Investigate opportunities to achieve 100% renewable energy use at the China manufacturing facility and reduce reliance on grid electricity.
- ****Improve Circularity:**** Monitor and quantify the effectiveness of the established take-back program to maximize material recovery and demonstrate avoided emissions from recycling/reuse.
- ****Refine Logistics Data:**** Track actual transport distances, modes, and payloads for both upstream and downstream logistics to improve the accuracy of transport emission calculations.