html

carboncalcpcf.com

# Product Carbon Footprint Dashboard

**Product:** odxvjkzefq | **Company:** nnsyzizmmd

**22.250 kg CO2e**

Total PCF per Unit

### Total Footprint

## 22.250 kg CO2e

Total cradle-to-grave emissions per unit.

### Carbon Intensity

## 89 kg CO2e/kg

Emissions per kilogram of finished product (0.25 kg total mass).

### Top Material Hotspot

## PCBA (0.746 kg CO2e)

Electronic components contribute most to material emissions.

### Primary Emission Scope

## Scope 3 (98.8%)

Downstream and upstream activities are the main drivers.

## Lifecycle Stage Breakdown

| | |
|---|---|
| Use Phase | 20.000 kg CO2e (89.9%) |
| Raw Materials | 1.886 kg CO2e (8.5%) |
| Manufacturing | 0.270 kg CO2e (1.2%) |
| Transportation | 0.064 kg CO2e (0.3%) |
| End-of-Life | 0.030 kg CO2e (0.1%) |

## Material Carbon Impact

| | |
|---|---|
| PCBA (Electronics) | 0.746 kg CO2e |
| Aluminum Frame | 0.740 kg CO2e |
| Plastic Casing | 0.390 kg CO2e |
| Cardboard Packaging | 0.010 kg CO2e |

(Percentages relative to total raw material emissions of 1.886 kg CO2e)

# Key Highlights

The **Use Phase** is the dominant emission hotspot, accounting for approximately 89.9% of the total product carbon footprint, primarily due to estimated energy consumption over its 5-year lifespan.

**Raw Material Acquisition & Pre-processing** is the second largest contributor (8.5%), with PCBA and Aluminum components having the highest embodied emissions.

The production facility in China utilizes **70% renewable energy**, significantly mitigating Scope 2 emissions from manufacturing.

# Action Plan for Reduction

**Optimize Use Phase Efficiency:** Prioritize design for extreme energy efficiency and provide consumers with guidance on sustainable product use to drastically reduce the largest impact.

**Sustainable Sourcing:** Focus on suppliers offering lower-carbon materials, increased recycled content, or certified sustainable origins, particularly for electronic components and metals.

**Enhance Circularity:** Further develop and promote take-back and recycling programs to maximize material recovery and explore product-as-a-service models to extend product lifespan.