

xdrolfpzzx Carbon Footprint Dashboard

Product: xdrolfpzzx | Company: pwihpfmsmz | Consultant: hymryjqskm
Standard: GHG Protocol | System Boundary: factory_gate | Country: China

32.012 kgCO2e

Total Product Carbon Footprint

32.012 kgCO₂e

TOTAL FOOTPRINT

32.012 kgCO₂e/unit

CARBON INTENSITY (PER UNIT)

Aluminum Frame

TOP MATERIAL HOTSPOT

Scope 3

PRIMARY EMISSION SCOPE

Lifecycle Stage Breakdown

Materials		13.0%
Manufacturing		8.6%
Transport		0.4%
Use Phase		78.0%
End-of-Life		(-0.051 kgCO2e)

*End-of-Life represents a net carbon credit due to recycling benefits.

Material Carbon Impact

Aluminum Frame		59.9%
Plastic Casing		14.4%
Circuit Board		23.9%
Packaging		1.8%

*Percentage of total material-related emissions (4.175 kgCO2e).

Highlights & Hotspot Analysis

- **Use Phase Dominance:** The product's use phase contributes a significant 78% of the total carbon footprint (25.000 kgCO₂e), primarily from electricity consumption.
- **Material Impact:** Material acquisition and pre-processing account for 13% (4.175 kgCO₂e), with the Aluminum Frame being the largest contributor within materials.
- **Manufacturing Footprint:** Manufacturing, mainly from purchased electricity, is responsible for 9% (2.750 kgCO₂e), despite 50% renewable energy usage.
- **Net EoL Credit:** The end-of-life stage yields a net carbon credit (-0.051 kgCO₂e) due to effective recycling and circular programs.

Recommendations for Emission Reduction

- 1 **Focus on Use Phase Optimization:**
 - 2 Design more energy-efficient product versions.
 - 3 Encourage users to source renewable energy for product operation.
 - 4 Extend product lifespan to amortize embodied emissions.
- 5 **Material Optimization:** Explore lower-carbon alternative materials or recycled content for components like the aluminum frame and plastic casing.
- 6 **Manufacturing Decarbonization:** Increase renewable energy usage at the Chinese production facility beyond 50% and investigate on-site generation.
- 7 **Enhance Circularity:** Strengthen circular economy initiatives, expand take-back programs, and explore innovative recycling technologies.

