

Product Carbon Footprint for xidwzmqmyu

carboncalcpcf.com

Total PCF: 44.34 kgCO₂e

Total Footprint

44.34 kgCO₂e

Carbon Intensity

44.34 kgCO₂e/unit

Top Material Hotspot

Aluminum Frame

(2.25 kgCO₂e)

Primary Emission Scope

Scope 3 Downstream

(76.95% of PCF)

Lifecycle Stage Breakdown

Use Phase	25.00 kgCO ₂ e (56.38%)
Logistics	12.59 kgCO ₂ e (28.40%)
Materials	5.66 kgCO ₂ e (12.76%)
Production	1.02 kgCO ₂ e (2.30%)
End-of-Life	0.07 kgCO ₂ e (0.16%)

Material Carbon Impact Breakdown

Aluminum Frame	2.25 kgCO ₂ e (39.75% of Material Emissions)
Lithium-Ion Battery	1.20 kgCO ₂ e (21.20% of Material Emissions)
Plastic Casing (ABS)	1.05 kgCO ₂ e (18.55% of Material Emissions)
Circuit Board (PCB)	1.00 kgCO ₂ e (17.67% of Material Emissions)

Highlights & Insights

- **Use Phase Dominance:** The product's energy consumption during its 5-year lifespan accounts for over 75% of the total carbon footprint.
- **Material Hotspots:** Aluminum frame and Lithium-Ion battery are significant contributors within the material acquisition phase.
- **Logistics Impact:** Downstream (last-mile) transportation represents a substantial portion of the overall footprint, highlighting distribution efficiency needs.

Recommendations for Reduction

- 2. Product Design for Energy Efficiency:** Prioritize R&D to significantly reduce the energy consumption of xidwzmqmyu during its use phase.
- 4. Sustainable Material Sourcing:** Explore higher recycled content for aluminum and plastics, or research lower-impact alternative materials.
- 6. Logistics Optimization:** Implement more energy-efficient transportation modes and optimize last-mile delivery routes to reduce emissions.