

fefvjifxwh Carbon Footprint

Total Product Carbon Footprint

7.68 kgCO2e

Product Name

fefvjifxwh

Carbon Intensity

7.68 kgCO2e/unit

Top Material Hotspot

Aluminum Alloy

Primary Emission Scope

Use Phase

Emissions Breakdown by Lifecycle Stage

Use Phase	3.75 kgCO ₂ e (48.83%)
Production	2.80 kgCO ₂ e (36.46%)
Materials	1.76 kgCO ₂ e (22.92%)
Distribution	0.1852 kgCO ₂ e (2.41%)
End-of-Life	0.142 kgCO ₂ e (1.85%)

Material Carbon Impact

Aluminum Alloy	1.25 kgCO ₂ e (71.02%)
Polypropylene	0.36 kgCO ₂ e (20.45%)
Silicon Wafer	0.15 kgCO ₂ e (8.52%)

Key Highlights

- The Use Phase contributes the most significant portion of the product's carbon footprint, accounting for 48.83% of total emissions.
- Production energy, specifically purchased electricity, is the second largest hotspot at 36.46%, indicating opportunities for renewable energy adoption.
- Raw materials, primarily Aluminum Alloy, represent a substantial 22.92% of emissions, highlighting the importance of sustainable sourcing.

Action Plan for Reduction

1. **Optimize Use Phase Efficiency:** Enhance energy efficiency in product design and encourage renewable energy use by consumers.
2. **Decarbonize Production:** Increase renewable energy adoption at the China production facility and explore more energy-efficient manufacturing processes.
3. **Sustainable Material Sourcing:** Investigate lower-impact material alternatives, increase recycled content, and optimize material usage for lightweighting.
4. **Enhance Circularity:** Leverage existing take-back programs to maximize material recovery and explore closing material loops for future carbon credits.

