

Product Carbon Footprint Dashboard for qplrkvgyds

Total Product Carbon Footprint: 11.54 kg CO2e

Key Carbon Metrics

Total Footprint

11.54 kg CO2e

Carbon Intensity

11.54 kg CO2e / unit

Top Material Hotspot

Metal Frame (1.60 kg CO2e)

Primary Emission Scope

Scope 3 (84.40%)

Detailed Carbon Breakdown

Lifecycle Stage Breakdown

Materials Acquisition & Pre-processing	3.70 kg CO2e (32.06%)
Manufacturing & Production	1.80 kg CO2e (15.60%)
Transportation & Distribution	0.30 kg CO2e (2.60%)
Use Phase	6.00 kg CO2e (51.99%)
End-of-Life (Credit/Reduction)	-0.26 kg CO2e (-2.25%)

Material Carbon Impact

Plastic Casing	1.00 kg CO2e
Metal Frame	1.60 kg CO2e
Circuit Board	1.00 kg CO2e
Packaging	0.10 kg CO2e

Key Insights

Use Phase Dominance: The product's energy consumption during its lifespan contributes the most, accounting for 51.99% of the total carbon footprint.

Material Hotspots: Materials Acquisition & Pre-processing represents a significant 32.06% of emissions, with the Metal Frame being the single largest material contributor.

Scope 3 Importance: A substantial 84.40% of the PCF falls under Scope 3 (value chain emissions), highlighting the importance of upstream and downstream engagement.

Recommendations for Reduction

Enhance Energy Efficiency: Prioritize design changes to reduce energy consumption during the use phase and explore renewable energy options for users.

Optimize Materials: Investigate and implement lower-carbon alternative materials or increase recycled content, especially for high-impact components like the Metal Frame.

Decarbonize Supply Chain: Collaborate with suppliers to reduce their operational emissions and optimize logistics for both raw materials and finished products.

Expand Circularity: Further develop and quantify the benefits of product take-back schemes for refurbishment to extend product lifespan and reduce virgin material demand.