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Product Carbon Footprint Analysis

Product: mqtemlwtpn - Company: uhrtgotlls

9.75 kg CO₂e

(Per 1.0 unit, factory_gate boundary + Scope 3)

9.75

Total Footprint (kg CO2e)

14.55

Carbon Intensity (kg CO2e / kg product)

Circuit Board

Top Material Hotspot

Scope 3

Primary Emission Scope

Lifecycle Stage Breakdown

Materials Acquisition & Processing	3.29 kg CO2e (33.7%)
Production Energy (Scope 2)	3.30 kg CO2e (33.8%)
Logistics (Transport)	0.19 kg CO2e (1.9%)
Use of Sold Products	3.90 kg CO2e (40.0%)
End-of-Life Treatment (Credit)	-0.93 kg CO2e (-9.5%)

- 1 Renewable Energy Adoption:** Increase renewable energy usage at manufacturing facilities in China beyond the current 40% to drastically lower Scope 2 emissions.
- 2 Product Energy Efficiency:** Implement design improvements to reduce the product's energy consumption during its use phase and encourage energy-efficient user behavior.
- 3 Material Optimization:** Explore alternative, lower-carbon materials and increase the recycled content in components, focusing on high-impact items like the Circuit Board.
- 4 Circular Economy Integration:** Strengthen the existing take-back program and investigate advanced recycling or refurbishment models to maximize material recovery and minimize waste.