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Product Carbon Footprint for **mkzlhzxgik**

Smart IoT Sensor (1.0 unit) - Factory Gate Boundary, China Production

8.769 kgCO₂e

Total Product Footprint

Total PCF

8.769 kgCO₂e

For 1.0 unit of mkzlhxzgik

Carbon Intensity

8.769 kgCO₂e/unit

GHG Protocol Standard

Top Material Hotspot

Microcontroller

0.50 kgCO₂e (5.7% of total PCF)

Primary Emission Scope

Scope 3 (Downstream)

74.24% of total footprint

Emissions Breakdown

Optimize Use Phase: Improve the energy efficiency of the mkzlhxzgik device and educate users on efficient usage to drastically cut down the largest emission source.

Green the Supply Chain: Engage with suppliers to source lower-carbon components and explore alternative materials with inherently lower embodied carbon.

Decarbonize Manufacturing: Increase the percentage of renewable energy used in the China production facility and investigate Power Purchase Agreements (PPAs).

Enhance Circularity: Further expand and promote the existing take-back program, and prioritize design for disassembly and repair to extend product lifespan.

Improve Data Accuracy: Implement robust primary data collection systems across the value chain to achieve full 95% Scope 3 coverage and refine future PCF assessments.