

html

carboncalcpcf.com

# Product Carbon Footprint Dashboard

Product: yrmffsoqkw | Production Country: China | Standard: GHG Protocol

**5.41** kgCO<sub>2</sub>e/unit

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Total Footprint

**5.41 kgCO<sub>2</sub>e**

for 1.0 unit

Carbon Intensity

**5.41 kgCO<sub>2</sub>e/unit**

System Boundary: Factory Gate

Top Material Hotspot

**Silicon Chip**

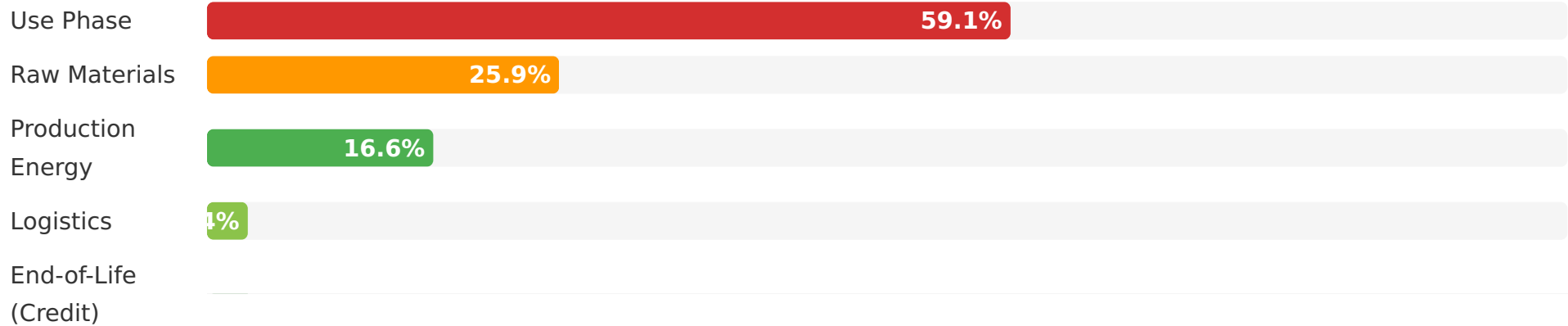
0.50 kgCO<sub>2</sub>e (35.7% of materials)

Primary Emission Scope

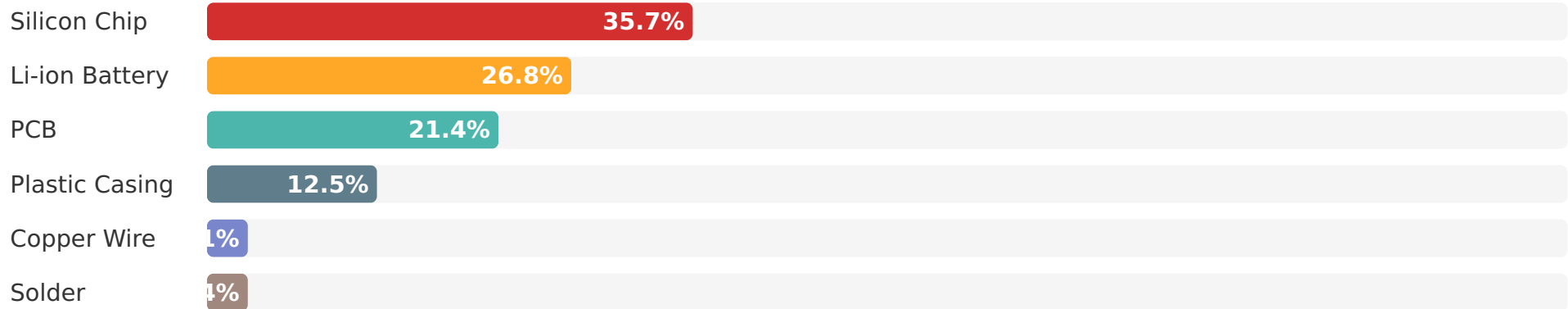
## Scope 3

4.51 kgCO<sub>2</sub>e (83.4% of total)

## Lifecycle Stage Breakdown



## Material Carbon Impact



## Key Emission Highlights

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- **Use Phase Dominates:** The product's 5-year lifespan contributes 59.1% of total emissions, primarily from electricity consumption.
- **Material Hotspots:** Raw materials account for 25.9%, with Silicon Chips and Lithium-ion Batteries being significant contributors.
- **Manufacturing Efficiency:** Despite 70% renewable energy use in manufacturing, the remaining grid electricity accounts for 16.6% of the footprint.

## Recommendations for Reduction

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- **Enhance Use Phase Efficiency:** Focus R&D on minimizing energy consumption during the product's operational lifespan.
- **Decarbonize Manufacturing Operations:** Increase renewable energy procurement beyond 70% in China, or engage suppliers for lower-carbon electricity.
- **Engage Supply Chain for Materials:** Collaborate with silicon chip and battery suppliers to identify lower-carbon alternatives and processes.
- **Strengthen Circularity:** Expand and promote take-back programs and high-value recycling to maximize material recovery and minimize waste.