carboncalcpcf.com

Product Carbon Footprint Dashboard

Product: **kjmumyzplr** | Quantity: 1.0 unit | System Boundary: factory_gate | Production Country: China

42.68 kg CO2e

Total Product Carbon Footprint (Net)

Key Metrics

Total Footprint

42.68

kg CO2e

Carbon Intensity

60.12

kg CO2e / kg Product

Top Material Hotspot

Circuit Board

(1.50 kg CO2e)

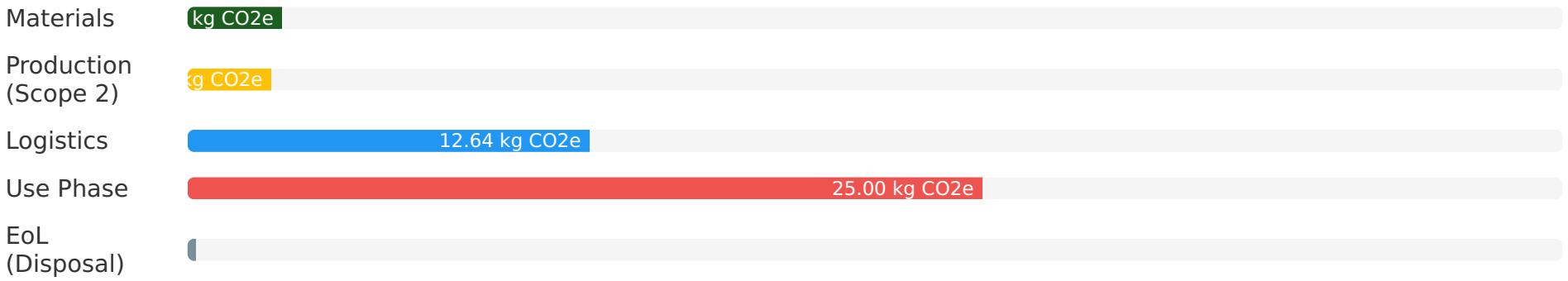
Primary Emission Scope

Scope 3

Dominant lifecycle impact

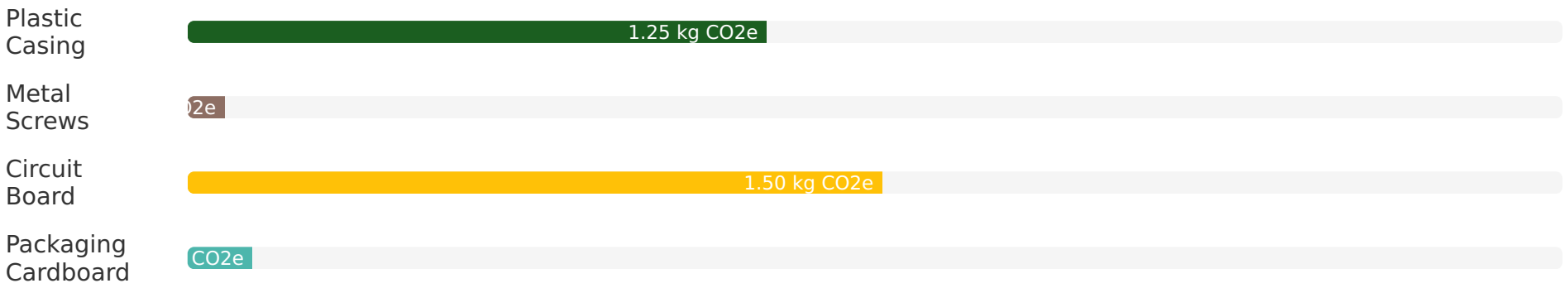
Emission Breakdown

Lifecycle Stage Breakdown (Gross Contributions)



Note: Net End-of-Life includes a credit of -0.57 kg CO2e, resulting in the overall net PCF.

Material Carbon Impact



Highlights: Emission Hotspots

- **Material Acquisition & Pre-processing:** This phase accounts for a significant portion of the footprint due to the inherent energy and resource intensity of producing raw materials.
- **Use Phase Energy Consumption:** The electricity consumed during the product's operational life is a major contributor, emphasizing efficiency in design.
- **Manufacturing Energy (Scope 2):** Despite renewable energy usage, grid electricity consumed in production still contributes substantially.

Action Plan: How to Reduce Carbon Footprint

1. **Material Optimization:**
   - Explore lighter-weight materials or those with lower inherent carbon footprints (e.g., recycled content, bio-based alternatives).
   - Optimize product design to reduce material usage without compromising functionality.
4. **Renewable Energy Transition:**
   - Increase the percentage of renewable energy used in manufacturing operations to 100%.
   - Invest in or procure renewable energy credits (RECs) or Power Purchase Agreements (PPAs).
7. **Supply Chain Engagement:**
   - Collaborate with suppliers to collect primary emissions data and encourage lower-carbon manufacturing processes.
   - Optimize logistics routes and modes (e.g., shifting from air to sea/rail, consolidating shipments).
10. **Use Phase Efficiency:**
    - Design kjmumyzplr for maximum energy efficiency during its operational lifespan.
    - Provide clear user guidance on efficient product use and maintenance.
13. **Enhance Circularity:**
    - Further develop and promote take-back programs to ensure maximum recovery and high-quality recycling.
    - Increase the recyclability percentage through design for disassembly and material selection.