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Product Carbon Footprint for egjezxpgdw

Total PCF: **32.118 kg CO2e**

TOTAL FOOTPRINT

32.118 kg CO2e

CARBON INTENSITY

32.118 kg CO2e / unit

TOP MATERIAL HOTSPOT

Aluminum Enclosure (6.00 kg CO2e)

PRIMARY EMISSION SCOPE

Scope 3 (97.1%)

Lifecycle Stage Breakdown

Materials	27.55%
Production	2.89%
Transport	31.10%
Use Phase	38.50%
End-of-Life	-1.15%

Material Carbon Impact

Aluminum Enc.	6.00 kg
Circuit Board	2.50 kg
Plastic Conn.	0.15 kg
Packaging	0.30 kg

Highlights & Emission Hotspots

- The **Use Phase** is the largest contributor to egjezxpgdw's carbon footprint, accounting for 38.50% of total emissions, primarily due to energy consumption over its 5-year lifespan.
- **Transportation & Distribution** is a significant hotspot at 31.10%, with last-mile delivery contributing disproportionately, indicating inefficiencies in current logistics.
- **Material Acquisition** comprises 27.55% of emissions, with the **Aluminum Enclosure** being the single largest material impact at 6.00 kg CO2e within the material category.

Recommendations for Reduction

1. **Enhance Use Phase Efficiency:** Invest in R&D for more energy-efficient components and educate consumers on efficient usage patterns.
2. **Optimize Logistics:** Explore opportunities for freight optimization, more efficient transport modes (e.g., rail/sea), and electric last-mile delivery.
3. **Sustainable Material Sourcing:** Investigate alternative materials with lower embodied carbon or source materials (like aluminum) with higher recycled content.
4. **Leverage Circular Programs:** Strengthen and promote existing take-back programs to maximize material recovery and reduce virgin material demand.
5. **Increase Renewable Energy in Production:** Aim for 100% renewable energy for production in China to eliminate remaining Scope 2 emissions.