

carboncalcpcf.com

Product Carbon Footprint Dashboard

for xstmdsdwur

Total PCF: **30.84 kg CO2e**

Total Footprint

30.84 kg CO₂e

Carbon Intensity

30.84 kg CO₂e/unit

Top Material Hotspot

Plastic Casing (1.25 kg CO₂e)

Primary Emission Scope

Scope 3 (89.17%)

Highlights (Emission Hotspots)

- **Use Phase Dominance:** The product's use phase accounts for the largest share of emissions (approx. 80.1% of positive contributions), primarily due to energy consumption over its estimated 5-year lifespan.
- **Manufacturing Impact:** Purchased electricity for production in China is the second largest contributor (approx. 10.7% of positive contributions), highlighting the need for increased renewable energy sourcing.
- **Material Sourcing:** Raw material production, particularly the Plastic Casing, is a significant upstream hotspot (approx. 9.0% of positive contributions), emphasizing the importance of sustainable material choices.
- **Circularity Benefit:** The End-of-Life stage shows a net carbon removal (-0.38 kg CO₂e), indicating that high recyclability (80%) and potential take-back programs effectively mitigate disposal emissions.

Recommendations for Reduction

- **Enhance Product Energy Efficiency:** Implement design improvements to drastically lower energy consumption during the use phase, significantly impacting the overall PCF.
- **Increase Renewable Energy Procurement:** Accelerate efforts to decarbonize the manufacturing process in China by transitioning to 100% renewable electricity sources for production.
- **Optimize Material Selection:** Explore lower-carbon alternatives, increase recycled content, and investigate bio-based materials for key components like the plastic casing.
- **Strengthen Circularity Initiatives:** Actively promote and expand "mrsrnygwtl" (circular/take-back programs) to further increase product reuse and recycling rates, maximizing avoided emissions.