

tgserledew Carbon Footprint Dashboard

powered by carboncalcpcf.com

Product Carbon Footprint:
20.175 kg CO2e/unit

Total Footprint

20.175 kg CO2e/unit

Carbon Intensity

20.175 kg CO2e / unit

Top Material Hotspot

Plastic Casing (1.75 kg CO2e)

Primary Emission Scope

Scope 3 (13.62 kg CO2e)

Lifecycle Stage Emissions

Materials Acquisition & Pre-processing	3.55 kg CO2e (17.32%)
Manufacturing (Energy)	6.555 kg CO2e (31.98%)
Transportation & Distribution	7.39 kg CO2e (36.06%)
Use Phase	3.00 kg CO2e (14.64%)
End-of-Life (Credit)	-0.32 kg CO2e

Material Carbon Impact

Plastic Casing	1.75 kg CO2e (49.30%)
Electronic Board	1.50 kg CO2e (42.25%)
Packaging (Cardboard)	0.20 kg CO2e (5.63%)
Metal Fasteners	0.10 kg CO2e (2.82%)

Key Emission Hotspots

- **Manufacturing (Scope 2):** 6.555 kg CO2e, primarily due to electricity consumption in China's grid mix despite 30% renewable usage.
- **Transportation & Distribution (Scope 3, Cat 4 & 9):** 7.39 kg CO2e, with a significant portion from air freight.
- **Materials Acquisition & Pre-processing (Scope 3, Cat 1):** 3.55 kg CO2e, highlighting embedded emissions in components like the electronic board and plastic casing.

Recommendations for Reduction

- **Decarbonizing Manufacturing:** Increase renewable energy procurement and explore energy efficiency improvements at the China production facility.
- **Optimizing Logistics:** Prioritize ocean freight over air freight and optimize truck routing; consider electric or alternative fuel vehicles.
- **Sustainable Material Sourcing:** Engage with suppliers for lower-carbon alternatives, explore recycled content, and implement design changes to reduce material intensity.
- **Enhancing Circularity:** Expand and promote regional take-back programs and explore innovative design-for-recyclability strategies.