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Product Carbon Footprint for Inrryoozky

Total PCF (1 unit)

38.19 kgCO2e

System Boundary

Cradle-to-Grave

Carbon Intensity

38.19 kgCO2e/unit

Top Material Hotspot

Electronic Circuit Board

Primary Emission Scope

Scope 3 (94.5%)

Lifecycle Stage Breakdown

Materials (Scope 3)	16.80 kgCO2e (44.0%)
Use Phase (Scope 3)	20.00 kgCO2e (52.4%)
Production (Scope 1 & 2)	2.10 kgCO2e (5.5%)
Transport (Scope 3)	0.14 kgCO2e (0.4%)
End-of-Life (Scope 3)	-0.85 kgCO2e (Net Credit)

Credit

Material Carbon Impact Breakdown

Electronic Circuit Board	15.0 kgCO2e (89.3%)
Steel Frame	1.0 kgCO2e (6.0%)
Plastic Casing (ABS)	0.7 kgCO2e (4.2%)
Packaging (Cardboard)	0.1 kgCO2e (0.5%)

Highlights: Key Emission Hotspots

- The **Use Phase** is the largest contributor, accounting for approximately **52%** of the total PCF due to prolonged energy consumption.
- **Purchased Goods and Services (Materials)** represent the second largest impact at around **44%**, with the **Electronic Circuit Board** being the most significant material hotspot.
- Emissions from **Purchased Electricity for Production in China (Scope 2)** contribute about **5%**, indicating opportunities for renewable energy adoption.

Recommendations for Carbon Reduction

- **Use Phase Optimization:** Design for energy efficiency by using lower-power components or implementing smart energy-saving modes for lnrryoozky.
- **Material Decarbonization:** Investigate alternative, lower-carbon materials, especially for high-impact components like the Electronic Circuit Board. Engage suppliers to reduce upstream emissions.
- **Renewable Energy Adoption:** Increase the share of renewable energy sources at the manufacturing facility in China beyond the current 30% to significantly reduce Scope 2 emissions.
- **Circular Economy Strategies:** Strengthen take-back programs and explore design for disassembly to enhance recyclability and material recovery, improving End-of-Life impacts.