

carboncalcpcf.com

Product Carbon Footprint Dashboard

for Product: **tgnvnyeudh**

23.75 kg CO₂e

Total Product Footprint (per 1.0 unit)

Based on GHG Protocol, Cradle-to-Grave Analysis (Factory Gate production boundary)

23.75 kg

Total Footprint

Per functional unit

23.75 kg/unit

Carbon Intensity

Efficiency metric

Use Phase

Primary Carbon Hotspot

12.50 kg CO₂e (52.6% of total)

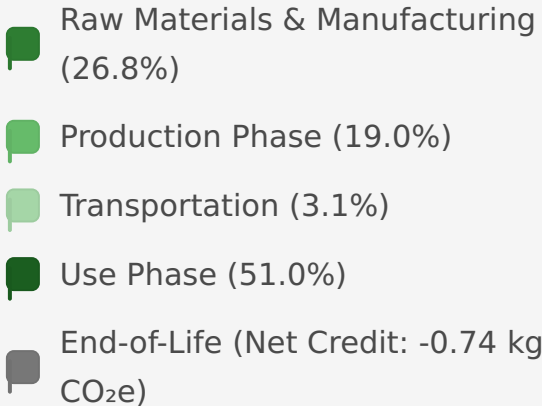
Scope 3

Dominant GHG Scope

Covers value chain emissions

Lifecycle Emissions Breakdown

Contribution by Lifecycle Stage (Positive Impacts)



Top Material Impacts (out of 6.57 kg CO₂e total material impact)

Microcontroller Unit (MCU)	2.00 kg CO ₂ e (30.4%)
Sensor Module	1.60 kg CO ₂ e (24.3%)
Lithium-ion Battery	1.50 kg CO ₂ e (22.8%)

Key Insights & Hotspots

-  **Use Phase Dominance:** The product's operational lifespan accounts for over half (52.6%) of its total carbon footprint, making it the most critical area for reduction.
-  **Material and Production Impact:** Raw material acquisition (27.7%) and the production phase's purchased electricity (19.6%) are also significant contributors, highlighting supply chain and manufacturing efficiency needs.
-  **Circular Economy Benefit:** The established end-of-life take-back and recycling programs provide a net carbon credit of -0.74 kg CO₂e, effectively reducing the overall footprint.

