



AVIALP GmbH

Technical Data Sheet AVIAKKU

General Information:

AVIakku is a rechargeable block-type battery (4R25), specifically developed for warning and signal lights. It is the perfect solution for reliable, environmentally friendly, and above all, cost-efficient operation at your construction site.

With a runtime of up to 45+ days (25Ah) or 80+ days (45Ah), more than 1000 charge cycles, and very low self-discharge, AVIakku not only saves costs but also reduces waste and recycling expenses. Ideal for companies that value efficiency and sustainability.



Cost Efficiency

After just **12 months**, AVIakku reaches **break-even** compared to disposable batteries. From the 12th month onward, the only costs are for recharging the batteries.

(See AVIakku Excel sheet for individual calculation)



Runtime

A single charge lasts up to **45+ days (25Ah)** or **80+ days (45Ah)** in continuous operation.

When two batteries are used in one lamp, the runtime doubles, perfect for long-term applications.



Self-Discharge

When stored, lithium-ion cells discharge only minimally compared to disposable competitors. Any lost capacity can easily be recharged, unlike disposables, where you pay for unused energy.

Additional Relevant Information:

- **Safety:** Failure of warning and signal lights on roadways not only increases the risk of accidents (due to hazards or collisions between vehicles) but also the destruction of construction site equipment (e.g., warning lights, fences, traffic cones).
- **Runtime Determination:** The runtime of an AVIakku can be measured with the company's proprietary battery tester, allowing you to predict when a warning light will turn off. Unlike disposable products, you can respond to this in advance.

- **Energy Efficiency:** Recharging batteries allows for more flexible usage periods. Disposable batteries are often discarded after each project, even if they still have remaining capacity. Since their charge level is unknown, the risk of installing an almost-empty battery is too high, so new ones are typically used immediately.

Technical Data:

		
Property	AVIakku 25Ah	AVIakku 45Ah
Cell Chemistry	Lithium-ion	Lithium-ion
Nominal Voltage	3,6 V	3,6 V
Capacity	25 Ah	45 Ah
Energy Content	90 Wh	162 Wh
Charge Cycles	> 1000	> 1000
Operating Temperature	-20°C bis +60°C	-20°C bis +60°C
Storage Temperature	0°C bis 23°C	0°C bis 23°C
Protection Class	IP64	IP64
Dimensions (LxWxH)	66x66x110	66x66x110
Weight	430g	720g
Housing Material	ABS	ABS

Compatibility:

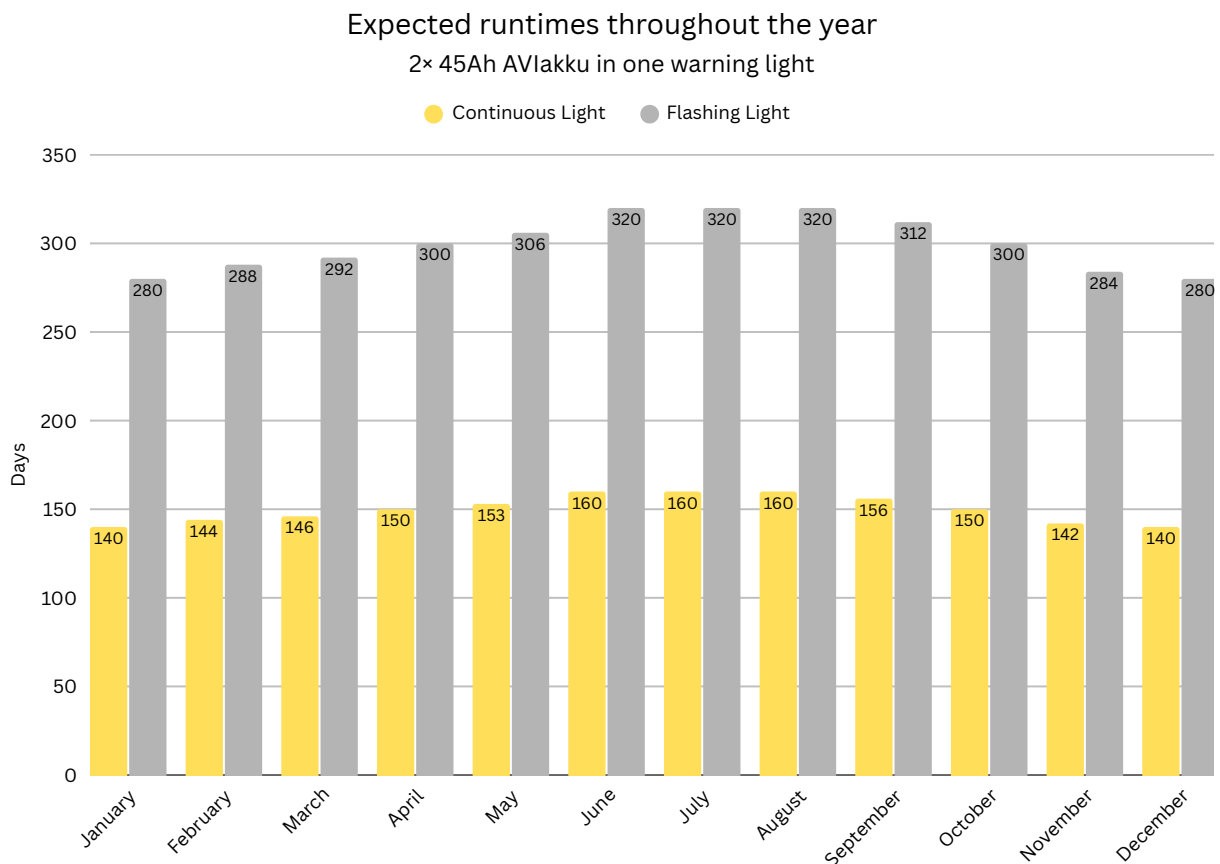
- Suitable for standard warning lights with 6V block battery compartment (4R25).
- Usable in single or double-battery configurations (depending on device type).
- Compatible with leading warning light manufacturers (e.g., Horizont, Nissen, PSS).

Certifications & Compliance:

AVIakku complies with the following regulations and standards:

- **UN38.3:** Transport regulations for lithium batteries.
- **IEC 62133-2:** Safety requirements for industrial lithium-ion batteries.
- **Richtlinie 2011/65/EU (RoHS):** Restriction on hazardous substances in electrical and electronic equipment.
- **REACH-Verordnung (EG) Nr. 1907/2006:** All materials and components meet chemical registration and evaluation requirements.
- **Richtlinie 2006/66/EG:** Battery Directive (environmental and labeling requirements).

Runtime (Annual Averages):



The evaluation is based on weather data from the Province of Bolzano (South Tyrol), temperature-dependent capacity data from Samsung cell specifications, and internal tests by AVIALP GmbH. Data as of 2025.

Weniger CO₂. Weniger Abfall. Weniger Aufwand

AVIAkku ersetzt 6V-Einwegbatterien in Baustellen-Warnleuchten durch zuverlässige, wiederaufladbare Li-Ion-Akkus. Dies reduziert im Vergleich zur Einwegbatterie Emissionen und Betriebskosten deutlich - und das alles ohne Umbau der Leuchten!

CO₂ - Einsparung

≈ 4,5 t

pro km Baustelle · Jahr

CO₂ - in 5 Jahren

≈ 25 t

pro km Baustelle

Einweg vermieden

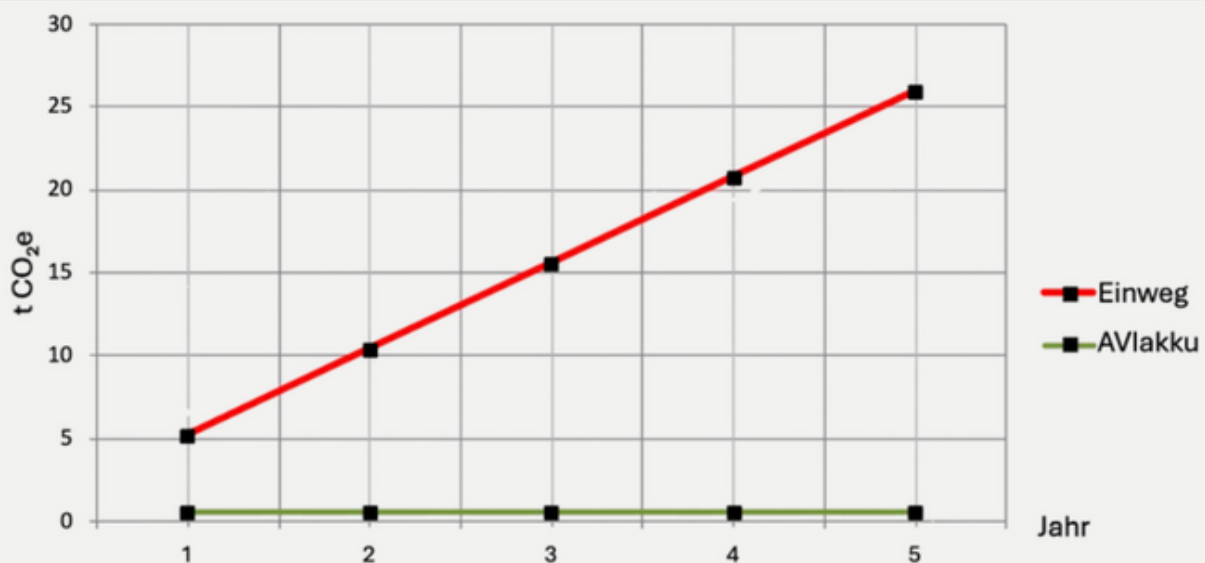
≈ 1.100

pro km Baustelle · Jahr

Wartungszeit

≈ 15 h

vermieden pro Jahr



Stückzahl

65 AVIakku ersetzen ~ 1.100 Einwegbatterien pro km und Jahr! In 5 Jahren sind es bereits ~ 5.500 Stück!

CO₂ - Emissionen

Der Umstieg auf AVIakku spart ~ 4,5t CO₂ im ersten Jahr, nach 5 Jahren sind es bereits über 25t pro km und Jahr!

Langlebig und robust

AVIakku ist ausgelegt auf eine Einsatzdauer von über 10 Jahren, so schonst du die Umwelt und sparst Kosten!

Annahmen

- 65 Warnleuchten je km Baustelle; Mischung aus Leuchten mit ein und zwei Slots
- Betrieb nur bei Dunkelheit
- Laufzeit Einweg 21 Tage; Laufzeit AVIakku 45-80 Tage je nach Variante
- Emissionen Herstellung: 4,6 kgCO₂/kg für Einweg; 83 kgCO₂/kWh für AVIakku
- Ladestrom: italienischer Netzmix; Ladeverluste berücksichtigt
- Lebensdauer AVIakku: 10 Jahre, Ausfallquote 20% pro Jahr durch Diebstahl und andere Faktoren

Prices:

Quantity	AVIakku 25Ah	AVIakku 45Ah
1 - 9 pcs	50,00€	80,00€
10 - 49 pcs	49,50€	79,20€
50 - 99 pcs	49,00€	78,40€
100 - 249 pcs	48,25€	77,20€
250 - 499 pcs	47,25€	75,60€
500 - 999 pcs	46,00€	73,60€
> 1000 pcs	44,50€	71,20€

Quantity	AVItester
1 - 9 pcs	10,00€
10 - 49 pcs	9,90€
50 - 99 pcs	9,80€
100 - 249 pcs	9,65€
250 - 499 pcs	9,45€
500 - 999 pcs	9,20€
> 1000 pcs	8,90€

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