



METALITE
AVIATION
LIGHTING

the first name in
portable systems

COREL

Combined Omni-Directional Runway and Taxiway Edge Light



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The COREL is a battery-powered portable aviation ground light providing an omni directional light output.

GENERAL DESCRIPTION

It is designed for rapid deployment and recovery, either as part of a trailer-mounted system, CALKIT™, or as freestanding units. It is available with single or three light intensity settings, a range of lens colours to suit all requirements and radio or manually controlled options. Additionally CORELs can be equipped with a light sensor for automatic 'dusk-to-dawn' operation. Flashing CORELs are also available for enhanced visibility and system versatility. When its batteries are fully charged the COREL will operate continuously on the maximum setting for approximately 16 hours.

COMPLIANCE WITH STANDARDS

ICAO Annex 14
CAA CAP 168
FAA AC150/5345-50
NATO STANAG 3534

CONSTRUCTION AND FINISH

The upper and lower sections are injection moulded from a colour impregnated, high strength polycarbonate material. All fittings are fully corrosion protected. The lens is manufactured from borosilicate glass in clear or the full range of aviation colours and emits light through 360°. The standard light source is a 10-watt tungsten halogen bi-pin lamp with other options also available. The upper section contains a sealed electronics enclosure, ON/OFF switch, LED battery status indicators, tungsten halogen lamp and optical assembly and a carrying handle. The unit is fully weather protected and can be used in extremes of environmental conditions.

BATTERY CHARGING

The freestanding battery charger comprises a custom designed all steel enclosure, with drop down trays to enable compact storage, protection and transportation of the unit. When the trays are unlocked and lowered, charging outlets are available for recharging up to 16 CORELs simultaneously. Each 'nest' location is fitted with an individual charging outlet module, providing the facility for maintaining all the CORELs in a fully charged operational state. Battery charging is simple and easy to achieve by dropping the COREL onto a mating charging outlet connector located in each 'nest'.

BATTERY STATUS INDICATION

When running off battery the tricolour LED, mounted between the switches, gives a battery indication. This happens a few seconds after the unit is switched 'ON'. The indications are:

- GREEN More than 70%
- ORANGE 40% - 70%
- RED Less than 40%

This indication goes out after a few seconds. When the COREL is in its nest and being charged the LED will give a continuous indication of charge status as follows:

- ORANGE 40% - 70%
- GREEN 70% - 90%
- FLASHING GREEN 90% - 95%



PHOTOMETRIC PERFORMANCE

The COREL produces white light through 360° in azimuth and is in compliance with ICAO, CAA, FAA and NATO standards. Typically the vertical distribution of light ensures an average of 50cds as recommended by these standards.

POWER SUPPLY

Power is supplied from two 12V 7Ah sealed lead acid, maintenance free batteries (SLABs). These permit continuous operation of the COREL for 16 hours. The batteries are fixed in the unit and need only be removed when replacement is required. A low voltage cut-off is fitted to avoid deep discharge and hence damage to the batteries.

ENVIRONMENTAL PERFORMANCE

The COREL has successfully completed a full and comprehensive schedule of environmental and type testing designed to meet civil and military standards.

These include:

- Climatic conditions
- Corrosion and salt resistance
- Mould growth
- Fluid contamination
- Vibration and shock
- Reliability and maintainability

DIMENSIONAL DATA

Height	270mm (excluding antenna)
Width	195mm
Length	198mm
Weight	7.2kgs (including batteries)

OPTIONS

Radio Control

Radio control operates via a coded VHF receiver module mounted inside the electronics enclosure. The coding of the radio signal ensures high rejection of radio interference from other transmissions and protects the unit from unauthorised operation either by accident or intent.

Steady/Flashing

The COREL can be ordered with a flashing and/or steady light. The standard frequency setting is 60 Hz but others can be provided.

Three Intensities

The COREL is available with up to three pre-set levels of light intensity up to a maximum of 50cds. One of these settings could be flashing.

Photocell Control

An optional light sensor can be fitted to each COREL, providing automatic on-off control of the unit; 'ON' at dusk; 'OFF' at dawn.

Semi-Permanent Fixings

CORELs are usually supplied with rubber pads on the underside of each unit suiting deployment onto any ground surface. For semi-permanent installations aluminium mounting base plates, which are secured to the ground, can be supplied. CORELs with 'Velcro' type pads mate with a similar pad on the base plates, this allows deployment to pre-positioned points for semi-permanent and emergency lighting configurations where extreme jet blast conditions might exist.



Metalite Aviation Lighting

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