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LIGHTING

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portable systems

OREL

Omnidirectional Runway Edge Light



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A battery operated, radio controlled, portable aviation ground light providing three pre-set levels of light intensity. The lower section of the two part polycarbonate body moulding houses one or two sealed lead acid batteries.

GENERAL DESCRIPTION

The upper section comprises a sealed electronics enclosure, control panel, radio antenna, tungsten halogen lamp and optical assembly and a carrying handle. The unit is fully protected and can be used in all environmental conditions.

CONSTRUCTION & FINISH

The upper and lower body sections are injection moulded from colour impregnated high strength polycarbonate, the internal surfaces of which are covered with a metal coating to provide total electromagnetic compatibility (EMC). All fittings are fully corrosion protected. The lens is manufactured from borosilicate glass and emits white light through 360 degrees. The light source is a 10 watt tungsten halogen bi-pin lamp. The base has a high grade "Velcro" covering which, when attached to a fixed baseplate provides extremely good adhesion. Battery charging is accomplished via a sealed battery charging socket without the need to remove the battery or disassemble the unit. Control and operation of the unit can be accomplished whilst the operator is wearing full NBC or Arctic clothing.

PHOTOMETRIC PERFORMANCE

The OREL produces white light at three pre-set levels of intensity through 360 degrees in azimuth:

- Level 1 NVG level 1
- Level 2 NVG level 2
- Level 3 50 cds Maximum intensity

POWER SUPPLY

Power is supplied from one or two 12v 7Ah sealed lead acid maintenance free batteries (SLAB). A single battery gives six and one-half hours continuous operation at full intensity. When fitted with two batteries the unit will provide thirteen hours continuous operation at full intensity. The batteries are fixed in the unit and need only be removed when replacement is required. Battery charging is accomplished via the sealed battery charging socket.



ENVIRONMENTAL PERFORMANCE

The OREL has successfully completed a full and comprehensive schedule of environmental and type testing designed to meet rugged and exacting UK military standards. These include:

- Climatic conditions
- Corrosion and Salt Resistance
- Mould Growth
- Fluid Contamination
- EMC
- Vibration and Shock
- Reliability and Maintainability

CONTROL

Control of the OREL is achieved either manually or by using the Master Switching Unit (MSU). A selector switch on the control panel of the OREL enables either mode to be selected by the operator during deployment. Radio control is 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.

DEPLOYMENT

The OREL has been successfully operated at distances of up to 1000 feet apart along the runway edge. Correct spacing is achieved by the solid state distance measuring equipment (DME) mounted on the trailer. The OREL is extremely stable and it is not necessary to have the unit fixed to base plates during deployment in Transition To War (TTW) and for training. When deployment times are not critical, aluminium base plates can be fixed to the ground using the cordless hammer drill and screws or metal anchor pins depending upon the type of surface encountered. The bases have a "Velcro" covering as does the bottom surface of the OREL. This allows deployment to pre-positioned bases for semi-permanent and emergency lighting configurations.

DIMENSIONAL DATA

- Height 270mm (excluding antenna)
- Width 195mm
- Length 195mm
- Weight 5kgs (with 1 battery fitted)
7.2kgs (with 2 batteries fitted)



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