

AIR

Commercial Lighting Systems



HIGH QUALITY LED LIGHTING SOLUTIONS

Established in 1942, Oxley has many years' experience in developing LED lighting systems for aerospace applications. The team is extending the expertise developed through substantial work in the military market into the commercial aerospace sector to deliver a full range of high performance LED aircraft lighting.

Oxley solutions are suitable for use on both private jets and larger commercial aircraft. The range comprises of a full suite of external lighting including navigation lights, anti-collision lights, taxi and landing lights as well as internal area lighting for cargo and service hatch areas.

The LED lights offer high reliability and substantial improvements on MTBF rates over existing lighting technology.

Oxley is a turnkey provider with a total capability in design and

manufacture and an ongoing commitment to finding new and innovative ways of applying expertise to meet customer needs.

In-house facilities at Oxley's manufacturing sites in Cumbria, UK and Connecticut, US include optical coating, precision machining, assembly and test facilities; enabling rapid turnaround of prototype developments, modifications and UOR requirements.

The team has developed a range of commercial off the shelf products, suitable for retrofit programmes, but also have the ability to design and manufacture bespoke solutions. All lights are fully qualified to the requirements of RTCA DO-160G.

Commercial customers include Boeing, Embraer, Saab and world leading executive jet manufacturers.

HIGH INTENSITY LED TAXI LIGHT

Oxley taxi light has a peak intensity of >42,000cd at a typical power consumption of 55W (2 Amps). This is equivalent to an standard PAR 36 halogen bulb. The Aviation White (6000K) output is produced over a beam angle of 7° vertical, 17.5° horizontal and the unit weighs 552g. The light has been designed to operate for 46,000 hours MTBF, providing a significant improvement in reliability over halogen technology.



Taxi Light

INTELLIGENT CONTROL AND END-OF-LIFE (EOL) MONITORING

Thermal protection is a critical aspect in high output LED lighting. The Oxley lights have integrated thermal protection circuits designed to optimise light output and maximise the life of the LEDs.

The wing-tip and tail lights incorporate both visible and discrete EOL feedback to provide usage and performance data. Any problems with the performance of the light is identified early so that the lighting can be replaced, minimising the risk of unplanned maintenance activities.

The firmware used for control and the EOL feedback has been designed and certified to RTCA DO-178B Level C.

HIGH INTENSITY LED LANDING LIGHT

LED landing lights are now replacing the traditional PAR 36, PAR 46 and PAR 64 halogen bulbs. The Oxley Aviation White (6000K) 400,000cd landing light runs at 115W (4 Amps max.) providing a significant power saving.

Weighing 1.5kg, the light output over 11°± 1° offers the equivalent light output to a standard 450W PAR 46 halogen bulb. It is rated to operate for 27,000 hours MTBF, a significant improvement in reliability over halogen technology.

The performance of a landing light is specified in SAE ARP 693 and translates to 2fc at 400feet at touchdown attitude; and 0.5fc at 300 feet during ground roll. The Oxley LED landing lights meet and exceed these requirements over the full temperature range -55° to +70°C.



Landing Light

LED PAR 64 REPLACEMENT LANDING LIGHT

Many airline operators are choosing to replace existing technology landing lights with LED replacements due to the improved reliability and the substantial through-life cost savings that can be made.

The Oxley PMA approved PAR 64 LED Replacement Landing Light offers savings over sealed beam halogen units through reduced power consumption, a 100 fold increase in operational life and reduced maintenance cycles. The provides significantly reduced operating costs along with increased operational lifetime and improved dispatch rates.

This is a form fit replacement which requires no aircraft modification and delivers the full optical power and beam pattern of the unit it replaces. The light doesn't suffer degradation over time and has an MTBF of 23,000 hours, the unit is repairable with a replaceable lens and offers a peak intensity of 600,000 cd.



PAR 64 Landing Light Replacement

QUALIFIED LED PAR REPLACEMENT LIGHTS

Oxley holds a PMA for the PAR 64 LED Landing Light granting FAA approval for the replacement of 4559, Q4559X, Q4559, Q555 units. In addition, Oxley is currently undergoing EASA Part 21G approval for the manufacturing of parts for aircraft use.

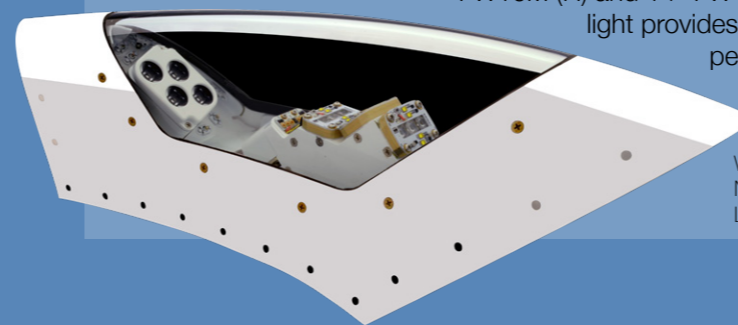
Oxley is also currently developing PAR 46 and PAR 36 form fit replacements.

LED WING-TIP LIGHTING

The Oxley wing-tip incorporates a navigation and anti-collision light with a separate forward facing floodlight. These lights can be assembled into a module for wing tip mounting and integrated with the aircraft power without the need for an additional power supply.

The LED anti-collision light has an effective 400cd Aviation White with the navigation light producing 40cd (min) intensity in compliance with FAR requirements. These lights have been designed to operate for 30,000 MTBF.

The forward facing floodlight has been designed to replace traditional halogen bulbs. With a peak intensity of 20,000cd and a distribution angle of 14° FW10M (H) and 14° FW10M (V) the floodlight provides rugged and reliable performance for 30,000 hours MTBF.



Wing-Tip Assembly incorporating Navigation Light, Anti-Collision Light & Forward Floodlight

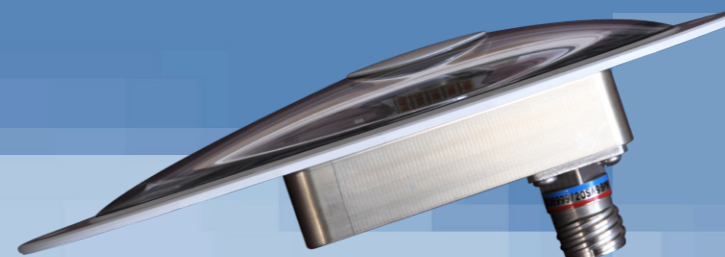
LED TAIL LIGHT

The Oxley tail light incorporates both an anti-collision light and a white navigation light assembly. Operating at 28VDC, the light draws 0.26 Amps during normal operation and has a 30,000 MTBF, no additional power supply is required for this light.

The tail light can be housed within a polycarbonate lens assembly and the cluster incorporates an end-of-life feedback feature.



Tail Navigation Light & Anti-Collision Light



Ground Recognition Light

LED GROUND RECOGNITION LIGHT

The ultra low profile ground recognition light is mounted so that the height is only 13.5mm outside the fuselage body. The weight of the light is 224g and it has an effective intensity of 150cd (Aviation Red) with 360° Horizontal and 90° vertical light distribution.

The 28VDC light operates at 28VDC, 1.2 Amps (max.) at a flash rate of 60 ± 1- per minute and has a MTBF of 30,000 hours.

Oxley has a range of lighting available that can be integrated with the aircraft structure or the fuselage to provide aerodynamic, rugged and reliable lighting systems.



Wheel Well Lights

With integrated protection from debris the rugged wheel well light weighs 150g and has peak intensity of 200cd, a wide circular distribution over 120° and a MTBF of 30,000 hours.



Logo Lights

Rugged and reliable the 30,000 hours MTBF logo light can be mounted flush with the horizontal stabiliser and produces an even distribution of light to illuminate the vertical stabiliser and aircraft logo. Producing over 800cd, the light operates at 28VDC, 4.6W.



Service Panel Lighting

Designed to provide an even level of illumination to the gauges and equipment in the aircraft service panels and cargo areas, the Oxley service panel lights have a range of mounting configurations to suit different orientations. The service panel light offers 30,000 hours MTBF.

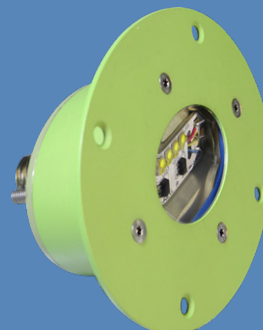
Entry Door Emergency Egress Light

With a bezel that can be configured to be flush mounted to the aircraft the main entry door light offers a sealed housing designed to meet the main cabin pressurisation requirements. This light offers 30,000 hours MTBF.



Ice Inspection Lighting

Designed to be a compact light for illumination of the leading edge of the wing, the ice inspection lights provide over 7000cd and can be integrated flush with the aircraft fuselage. This light offers 30,000 hours MTBF.



Over/Under Wing Egress Lights

To provide over and under wing illumination, the egress lighting is mounted flush with the aircraft fuselage and provides an even distribution of light to aid in aircraft evacuation. This light offers 30,000 hours MTBF.

Oxley Developments Company Ltd

Priory Park Ulverston Cumbria LA12 9QG United Kingdom
t: +44 (0) 1229 483226 f: +44 (0) 1229 581851
e: sales@oxleygroup.com www.oxleygroup.com

Oxley Inc

31 Business Park Drive Branford CT 06405 USA
t: +1 (203) 488 1033 f: +1 (203) 481 6971
e: sales@oxleyinc.com www.oxleygroup.com

Company Approvals:

BS EN ISO 9001:2015

BS EN 9100: Rev D

BS EN ISO 14001:2015

TSO Authorised by the FAA

ODC:SM:40424/6

Registered in England & Wales No. 376071