



Mounting instruction for electronic landing light (ELL80)

Dear customer,

the electronic landing light (ELL) is a highly innovative product which contributes to save airspace. A special feature of the LED based Landing light is the integrated Anti Collision Light (ACL). Thus the ELL80 is a landing light and an ACL in forward direction of the flight. This increases the visibility of the a/c in flight considerably.

Now the new LED technology allows an incredibly excellent, white light with only approx. 10% of the input power compared with conventional lights. The casting in a high-optical plastic makes the ELL80 absolutely insensitive against water, vibrations and other environmental influence. The efficiency of the output is much higher, than with conventional electric light bulbs. The self-warming of the ELL80 is low and can be determined as safe. To avoid overheating, the heat balance is controlled electronically.

This electronic landing light for aircraft (NON-TSO'd) is designed to be mounted at a suitable position at the nose unit or inside the wing. Please adhere to the following instructions for a professional mounting of the ELL80.

The illumination angle complies to the regulations for general aviation.

Important: Due to high wattage (15 and 20 Watts), it is mandatory to put a cooling system in place (see illustration 1, 2). Warranty is voided if mandatory cooling system is not in place!

Required materials and tools

- 3 x 1-core cord, according to the length of fuselage (5 - 8 meters),
- clear silicone,
- 3 Allen screws, approx. M3 x 50 mm length with screw nuts (is enclosed),
- soldering iron, tin solder,
- shrink hose (is enclosed).



Recommendations

Cable

We recommend a single core, flexible cable with a cross section of at least 1.5 mm². The ELL is already wired with a 0,5 mm² flexible wire for simple connection with the landing light and the ACL.

Adhesion

We recommend standard silicon in a tube. It is available in do-it-yourself markets. This adhesion is strong and in case of a dismantling you only need a sharp knife. We strongly advise against using other kinds of adhesion, like polyester or epoxy resin.

Mounting

Use 3 metal countersunk Allen screws (M3 x 50 mm) to fix the ELL and a thin layer of silicon to paste it to the required position. By the use of silicon twisting of the ELL is prevented and sealing against dirt and water is guaranteed.

Use only screws that do not corrode!

The ELL must be mounted parallel to the longitudinal axis and vertically to the yaw axis of the aircraft. (see illustration 1)

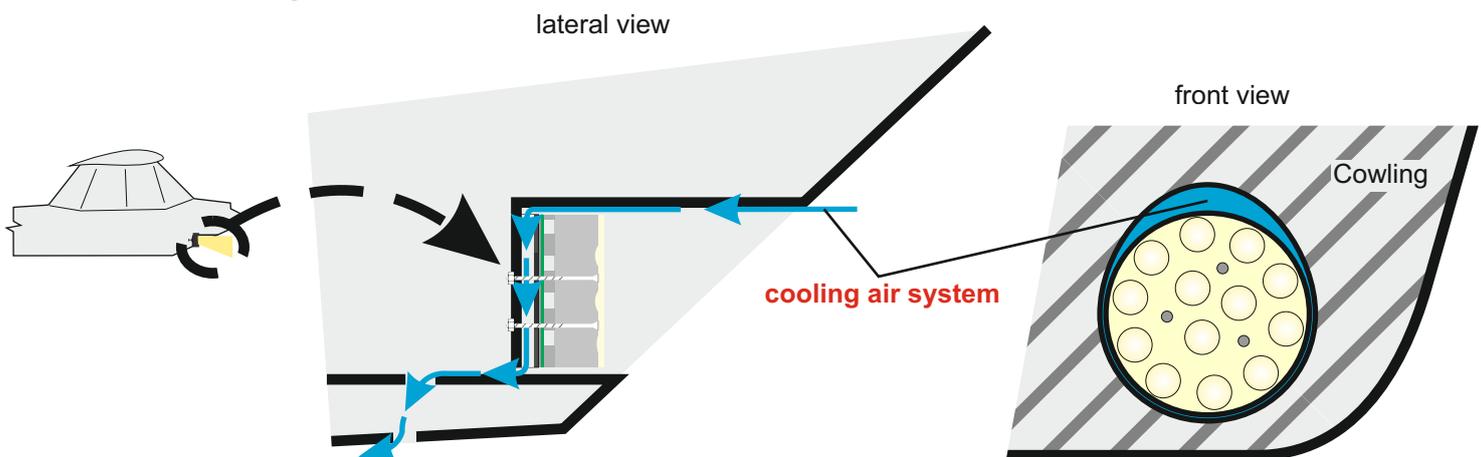
Mounting position

It is important to plan on the mandatory cooling air system!

Clean and degrease the mounting position (ethyl alcohol). Clearly mark the position for the ELL. The bonding surface must be free of grease and any polish.

Drill 3 holes for the mounting screws (3,5 mm in diameter) and holes for the cable feedthrough (5 mm in diameter).

Illustration 1: Mounting at nose unit



Pasting

Apply only as much silicone as required to paste the ELL plane. After fixing the ELL to the required position, slightly tighten the screw. With your moistened finger, using dish liquid, clean off any laterally dispensable silicon, a smooth transition can be modeled between the wing and the ELL.

Please make sure that mandatory cooling is not obstructed by excess silicon.

Silicone needs time to cure (vaporization of acetic acid). The best results are achieved at a temperature of 20° Celsius (68° Fahrenheit). Just follow the handling instructions of the silicone. The final firmness (stability) will be reached after a few days.

Illustration 2: Mounting inside wing

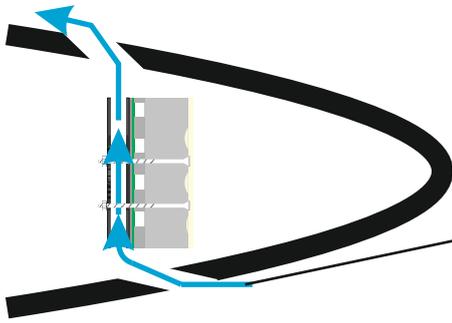
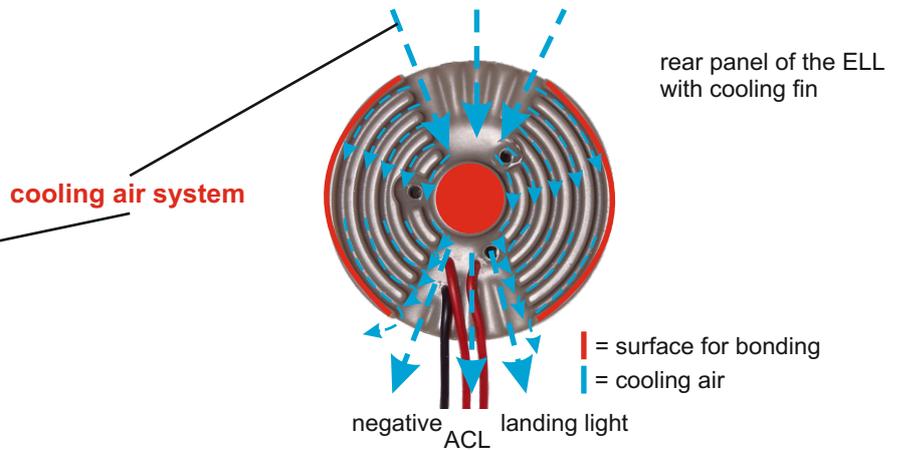


Illustration 3: bonding surface and cooling air circulation



Electric power supply / cable connection to the aircraft system (12 Volts)

The best connection is solder with additional shrinking of the soldering joint with a shrink hose (enclosed). Only use solder for electronic soldering - never use cored solder. It contains acids which cause corrosion!

Important notes

Carefully mount the cables inside the wing and/or the fuselage. Connect the cables professionally to the aircraft system (RED = positive, BLACK = negative) and to a 5 Amps fuse protection. Luster terminals are not suitable to connect cables. There is a good selection of suitable crimp connections in various shops.

The ELL80 is provided with overload protection. In case of over voltage the protector switches off the ELL80. After reset or voltage drop the ELL80 is again fully functional. The automatic overload protector shall be activated at a voltage above 18 Volts (if the voltage reduces to a value below 18 Volts, the ELL will again be functioning).

Servicing / maintenance

Should the ELL80 be scratched, use a good polish to refurbish the damages. With slightly deeper scratches use wet sandpaper with very fine granulation (800-1000) carefully polish again. Do not use aggressive chemicals like gasoline or solvent.

For day to day cleaning use soap water!

Some insect removers and detergents forces embrittlement of epoxy based plastics and laminates. Use only aircraft certified products.

If the aircraft can not hangarized, please cover the lamps to prevent surface aging!

Technical data

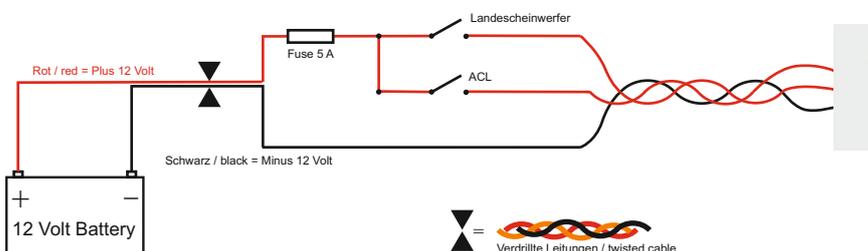
Operating voltage	: 10-17 volts (DC), typically 12.8 - 13.4 volts
Input	: landing light approx. 15 watts ACL approx. 20 watts
Fuse	: 5 ampere (fusible cut-out or automatic fuse)
Diameter	: approx. 80 mm
installation depth	: approx. 35 mm
Weight	: approx. 230 grams with connecting cables
Warranty	: 5,000 operating hours or max. 3 years



5.000 hours or max. 3 years assured luminous duration

Made in Germany

Illustration 4: wiring diagram



Subject to changes without notice

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