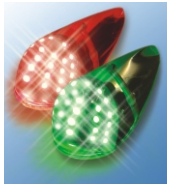




THIESEN
E L E C
T R O N I C S
G M B H



Electronic
position light
for
ultra light aircraft



Mounting instruction for position light

Dear customer,

now the new LED technology allows an incredibly excellent, red and green light with only approx. 10% of the input power, compared with conventional navigation lights. The casting in a high-optical plastic makes the EPL 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 EPL is low and can be determined as safe. To avoid overheating, the heat balance is controlled electronically. As a precaution you must pay attention to ventilation with a cover installed, so that no heat accumulation within the casing can appear. This may be assumed by suitable constructive measures.

The set contains 2 EPLs for an ultra light airplane. One each for the right and left wing to be mounted at the wing tips. The illumination angle is equivalent to the required angle of 110 deg. as prescribed for general aviation. Please follow the instructions for mounting the EPLs:

Required materials and tools

2-core twisted cord, according to the wing span between 5 - 8 meters,
clear silicone,
2 screws, approx. 4 mm x 30 - 35-mms length,
soldering iron, tin solder,
shrink hose (is enclosed).

Recommendations

Cable

We recommend a double core, flexible and twisted cable with a cross section of 0.5 mm²

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 a metal countersunk screw (approx. 4 mm x 30 - 35 mm) to fix the EPL and a thin layer of silicon to paste it to the wing tip. By the use of silicon twisting of the EPL is prevented and sealing against dirt and water is guaranteed.

Use only screws that do not corrode!

The EPL must be mounted in flight direction parallel to the longitudinal axis and level of the aircraft.
(see illustrations 1 and 2)

Illustration 1

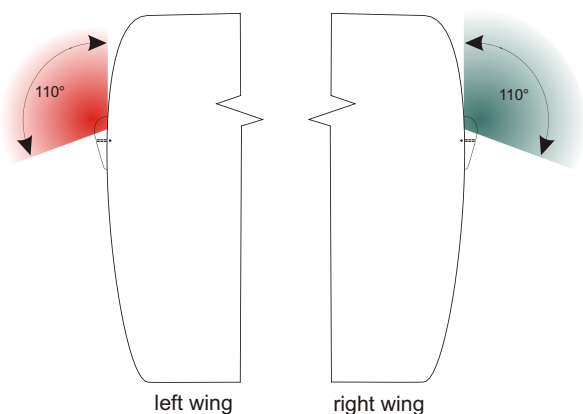
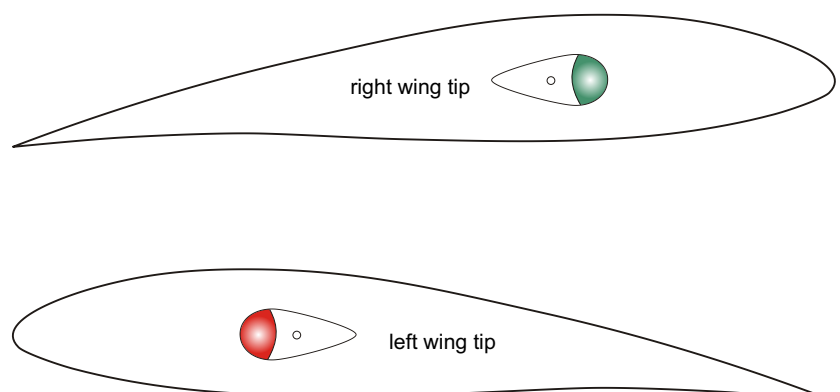


Illustration 2

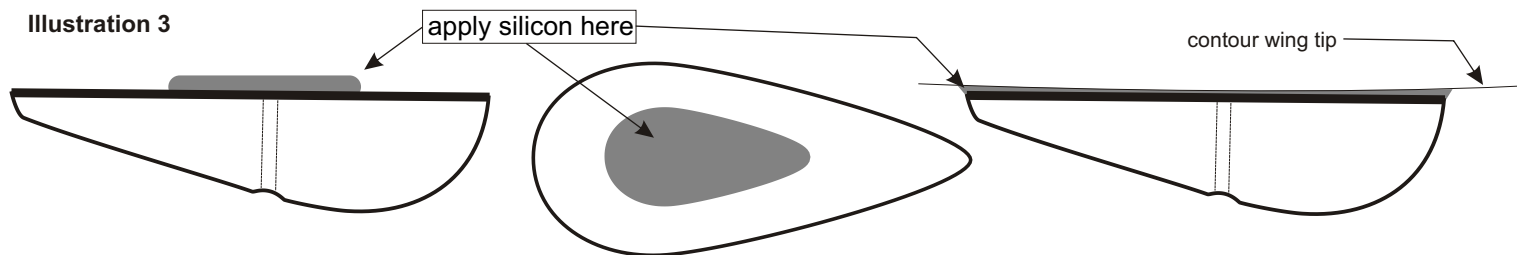


Pasting

Apply only as much silicone as required to paste the EPL plane. (see illustration 3).

After fixing the EPL 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 EPL.

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



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 (**RED = positive, BLACK = negative**) inside the wing. The twisted cable must be fixed to the wing to avoid scrubbing. Luster terminals are not suitable to connect cables. There is a good selection of suitable crimp connections in various shops.

The EPL is provided with overload protection. In case of over voltage the protector switches off the EPL. After reset or voltage drop the EPL 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 EPL will again be functioning)

Servicing / maintenance

Should the EPL 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.

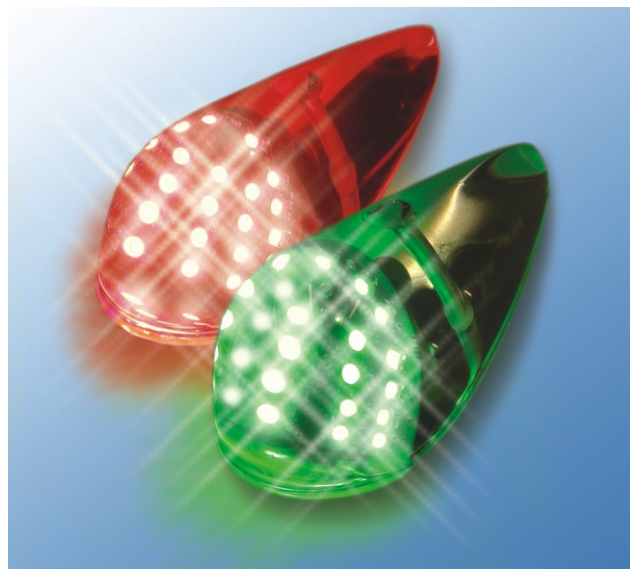
If the aircraft can not hangarized, please cover the lamps to prevent surface aging!

Technical data:

Operating voltage: 10 - 17 volts (DC), typically 12.8 - 13.4 volts
Input : each EPL approx. 4.5 watts
Dimensions : 93 x 40 x 28 mms
Weight : each approx. 78 grams with connecting cables
Warranty : 5,000 operating hours or max. 3 years



Im Tiegel 9
36367 Wartenberg
Deutschland
Tel.: +49 (0) 66 41 - 979 - 0
eMail: info@thiesen-electronics.com
www.thiesen-electronics.com
www.flugzeuglichter.de



5.000 hours or max. 3 years assured luminous duration

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