



## Mounting instruction

Dear customer,  
the electronic position and taillight with anticollisionlight (EPTA) is a highly innovative product which contributes to safer airspace.

The newly developed "Intelligent Synchronization" schedules the Light pulsations so that there are no overlap of the individual lighting functions. This scheduling of pulsations Reduces required battery and generator current requirements as if only one light was on at any given moment (see illustration 1).

This new LED technology allows an incredibly vivid, red and green light with only approx. 10% of the input power, when compared with conventional navigation lights. The casting in a high-optical plastic makes the EPL absolutely insensitive to water, vibrations and other environmental influence.

The efficiency of the output is much higher, than with conventional electric light bulbs. The heat production of the EPL is low and is monitored and controlled electronically. Considerations, during installation, should be given to the light's need for airflow. Any cover for a recessed installation must allow some cooling airflow.

The set contains 2 EPTA-LSA for an airplane (NON-TSO'd). 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 EPTAs:

### Required materials and tools

- Twisted cord four wires ( 2 x 0,5mm<sup>2</sup>, 2 x 1,5 mm<sup>2</sup>), 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

According to the wing span we recommend 4-wire twisted cord with a cross section of 2\*1,5mm<sup>2</sup> and 2\*0,5mm<sup>2</sup>. You can order the cord from Thiesen.

#### Adhesion

We recommend standard silicon sealant from common local suppliers. This will provide for strong adhesion and only a sharp knife is required for removal. We strongly advise against using other kinds of adhesion, such as, polyester or epoxy resin.

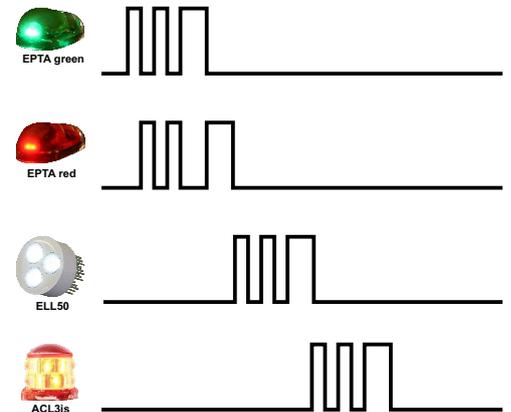
#### Mounting

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

### **Use only screws that do not corrode!**

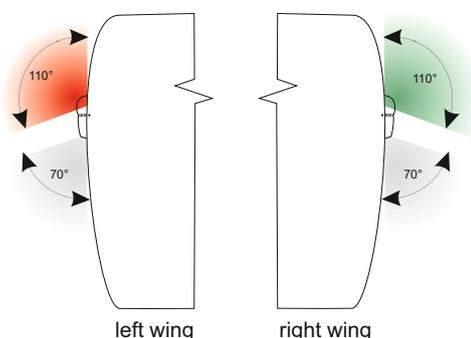
The EPTA must be mounted in flight direction parallel to the longitudinal axis and level of the aircraft (see illustrations 2 and 3).

### Illustration 1

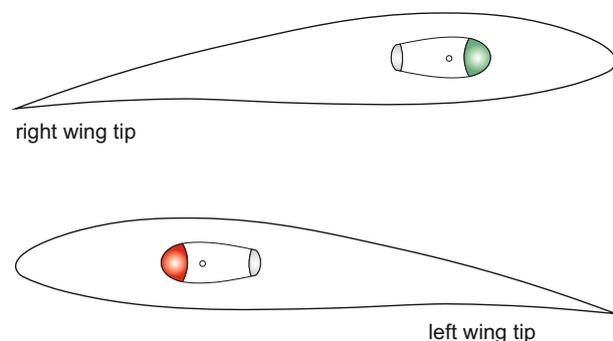


Intelligent Synchronisation = Intelligent Powermanagement

### Illustration 2



### Illustration 3

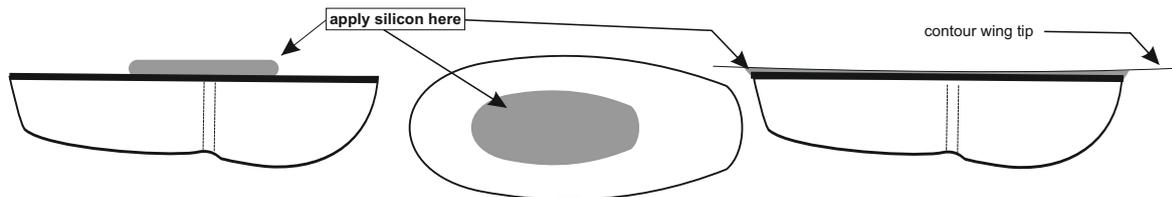


**Pasting**

Apply only as much silicone as required to secure the EPTA to the plane (see illustration 4). After fixing the EPTA to the required position, slightly tighten the screw. With a moistened finger using dish soap liquid clean off any excess silicon, a smooth transition fillet can be molded between the wing and the EPTA.

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.

**Illustration 4**



**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!

**Synchronisation**

The EPTA have an additional yellow synchronisation cable to synchronise the left and right EPTA (see wiring diagram). It is not necessary to use the synchronisation modus, the EPTA will also work without connecting the yellow cables. In case of not connecting the yellow cables (non synchronisation modus), the endings of the yellow cables have to be isolated.

Carefully mount the cables 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 colors represent: **thick red cable = plus position light**, **black = minus**, **yellow = synchronisation**. In case of unused synchronisation, connect the yellow cable with +12V (red cable).

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

**Servicing / maintenance**

Should the EPTA 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:**

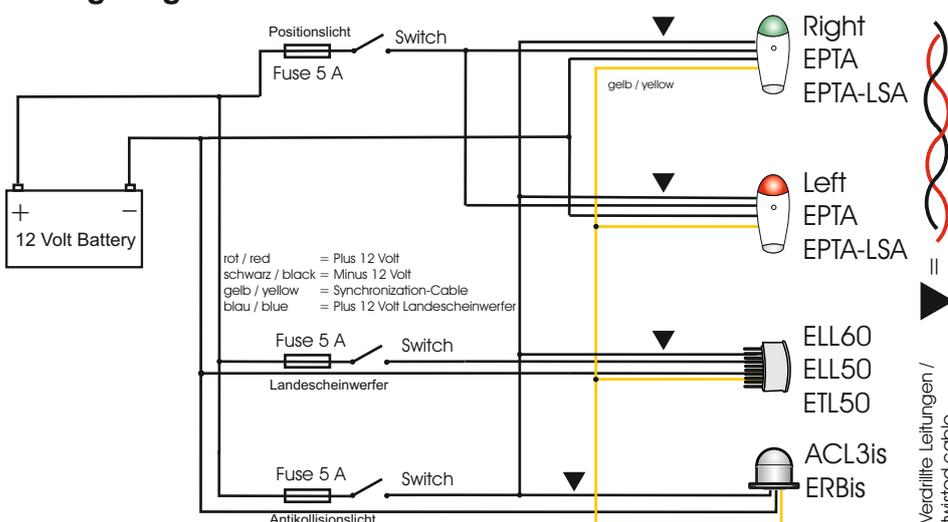
- Operating voltage : 10 - 17 volts (DC), typically 12.8 - 13.4 volts
- Input : approx 20 watts
- Dimensions : 80 x 40 x 30 mms
- Weight : approx. 76 grams with connecting cables
- Warranty : 5,000 operating hours or max. 3 years



**5.000 hours or max. 3 years assured luminous duration**

**Made in Germany**

**Wiring diagramm:**



Subject to change without notice

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