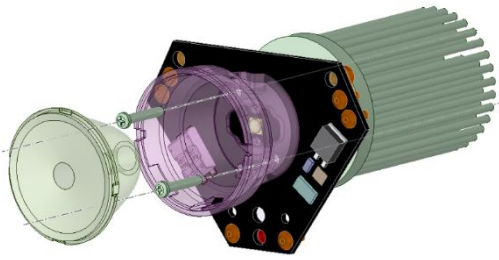


Single Spotlight



Landing Light components:

Parts per pair of single spotlights

Single LED PCB, hexagonal, 1x XHP35 LED	2	<input type="text"/>
Spotlight lens, 8° beam	2	<input type="text"/>
Spotlight lens holder 38mm	2	<input type="text"/>
Heatsink, 40mm diameter 70mm pins	2	<input type="text"/>

Thank you for purchasing our products!

The Single Spotlight draws **1 amp**, producing **1200 lumens** of light at 5000K (white) temperature. The Cree LED is fitted with a collimating lens to focus the light into a tight 8° beam.

The LED is driven with a linear power supply for simplicity and to *eliminate* the possibility of any intercom noise.

These lights may only be used in a **12 volt** electrical system.

Assembly parts bag:

K1000-L06 / MS21047-L06	Double lug nutplate	2	<input type="text"/>
MK1000-L06 / MS21071-L06	Single lug nutplate	4	<input type="text"/>
MS20470 / AN470AD3-3.5	Universal head rivet	12	<input type="text"/>
	14mm M2.5 Pan head stainless steel screw	4	<input type="text"/>
	Lens locating rings	2	<input type="text"/>
	Heatsink plaster (glue) tube	1	<input type="text"/>

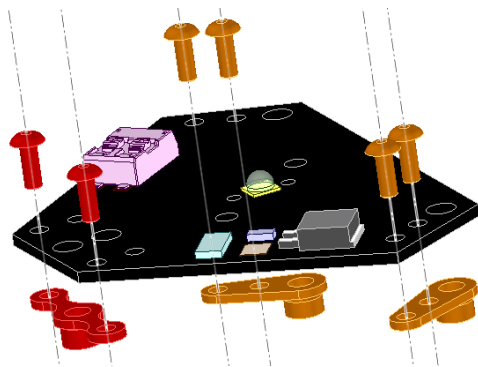
(Optional) Light attachment parts bag:

Parts required to attach the spotlight to a mounting plate

MS51957-36	1.5" 6-32 Pan head stainless steel screw	4	<input type="text"/>
MS51957-32	3/4" 6-32 Pan head stainless steel screw	2	<input type="text"/>
C0300-031-1500	1.5" 0.031" Compression spring	4	<input type="text"/>
	3D printed ABS angled spacer tube	6	<input type="text"/>

Landing light board assembly

Attach the nutplates to the landing light boards as shown, preferably using a pneumatic squeezer for fine control.



Be very careful not to damage the LED and other components!

One rivet is adequate for the single lug nutplates in this application. The light boards are made from 1.6mm thick aluminium and you may substitute countersunk or pull-rivets if you feel the need.

Note that the light board has two possible locations for each nutplate. To replicate the mounting points for a Van's halogen light fitting, use the *outer* locations shown, marked **A** and **D**.

Next fit the lens holders onto the light boards.

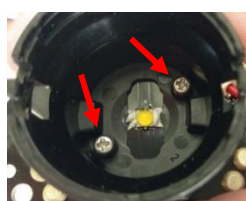
Note that the holders have two tabs in their base.

These fit into the small holes beside the LED, and will locate the holder and collimating lens in the optimum focal point for the LED.



The small tube of heatsink plaster contains enough glue for eight or more heatsinks!

Squeeze a **small** amount on the base of the heatsink and spread it out into a **thin** layer. The glue takes an hour or so to set, so you have plenty of time to work with the assembly. Less glue applied here really is more!

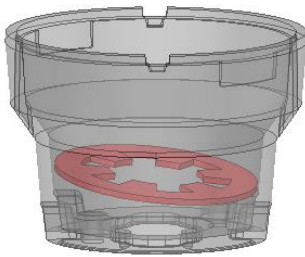


Fit two M2.5 machine screws into the holes in the lens holder and attach the heatsink to the board.

The screws should be done up 'tight enough' (that's a technical term!) by hand.



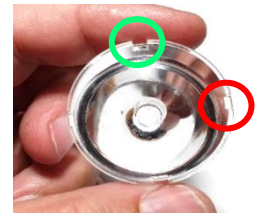
Wait ten minutes or so. If any excess glue has oozed through the holes close to the LED, carefully scrape it away with a small screwdriver. Use less glue next time!



Place a lens locator ring inside the lens holder, shown at left in red.

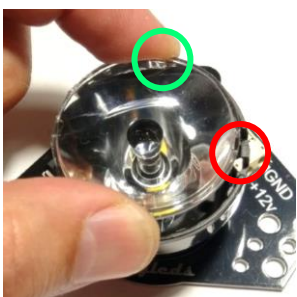
The ring is designed to flex and it will guide the lens into the correct position in the following steps.

The collimating lenses have four notches around their edges, but if you look and feel closely two of the notches are cut all the way through (green circle), while two of them have a tab that will lock the lens in place (red circle).



* Give the body of the lens a quick wipe to remove dust and fingerprints.

Dust marks or fingerprints will make no difference to the light output but now is your chance!

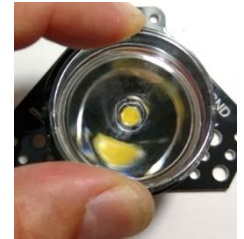


* Rotate the PCB assembly/lens holder so that the locking hooks on the black lens holders are at **east** and **west** positions.

* Hold the lens with the 'cut through' slots under your finger and thumb.

* Orient the lens directly above the holder, with your finger and thumb at the **north** and **south** positions.

As you lower the lens straight down into the holder you will observe the centre of the lens begin to change colour to yellow from the LED



below. This indicates that the LED and lens are in alignment.

Using even pressure from two fingers from your other hand on the east and west sides of the lens, push the lens in gently until it clicks into place under the tabs at the left and right sides of the holder. Simple!

If the lens refuses to click into place, stop! This is likely due to the locating pins on the lens holder, as circled on the previous page, being displaced and pushing upwards from the holes in the circuit board, usually from an excess of glue. Unscrew the holder and clip the pins off. The mounting screws will still locate the holder and the lens in the correct location.

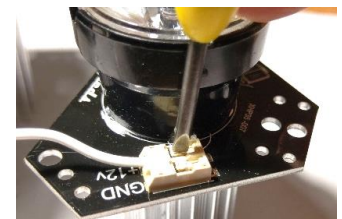
Wiring the landing lights

The light boards have easy to use push-fit power connectors on them. Strip ¼" of insulation from the wire and simply push the wire home into the socket.

It's not coming out!

* Provide additional mechanical strain relief to the wires nearby.

* Should you need to release the wire, push down on the tab above the wire using a small screwdriver and the wire can be pulled from the socket.



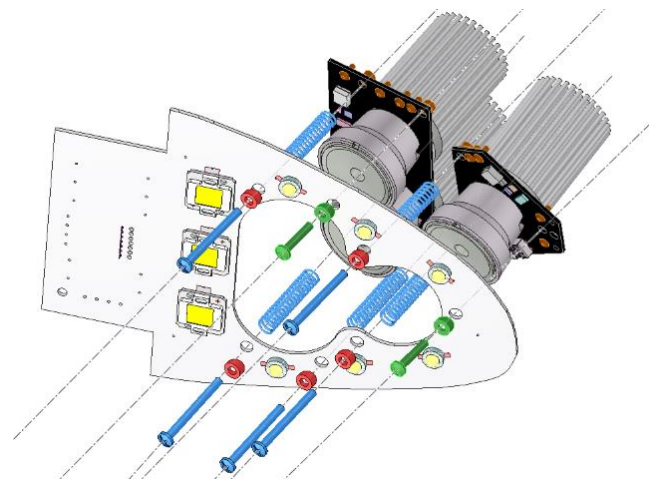
Note: The power connectors are suited for a **maximum of 18 AWG wire**. If you have 16 or 14AWG wire already in your plane, either splice a short length of 18 or 20 AWG to the end of your wire run, or simply peel out and trim off a few strands of wire to reduce its diameter. The connectors are not designed for repeated use, so an additional inline plug/socket of your choice may be used here as well.

Mounting the lights

To give you some ideas, the picture at right shows how the lights are fitted to a Flyleds "The Works" lighting kit.

The shorter ¾" screws (shown in green) screw into one top corner of the dual LED board, and the outer corner of the single LED board. These do not have a spring fitted behind them. They form the pivot point for each board.

The longer 1.5" screws are fitted with a compression spring behind the front plate to maintain pressure on the light boards, and to provide a means to adjust the aim of the lights.



We love hearing your feedback!