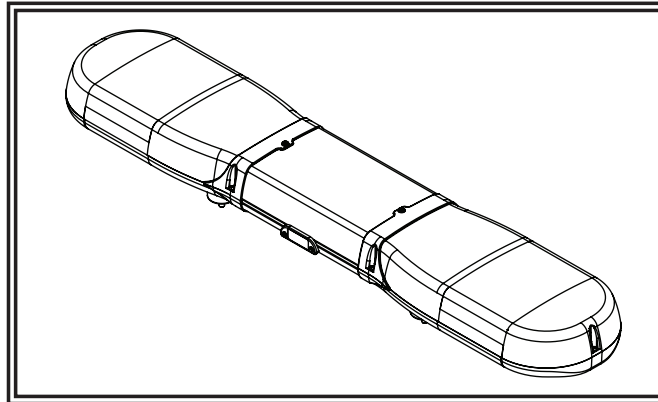




# ECCO® Installation and Operation Instructions 13 Series Lightbars



## Introduction:

The 13 Series R65 LED Lightbar has been designed with the customer in mind. It offers excellent value in terms of cost, performance and durability utilising the solid state, maintenance free, long life nature of LED technology. This range is robust and compact in the popular housing design.

It is available in four standard length options to suit all needs. All of our lightbars are designed and manufactured in the UK. The 13 Series is suitable for a variety of vehicles including large vehicles, recovery trucks, fleets and highway maintenance. Custom configurations are also available, Please contact us to discuss your specific requirements.

## Unpacking and Pre-Installation:

Carefully remove the lightbar and place it on a flat surface. Examine the unit for transit damage and locate all parts. If damage is found or parts are missing, contact the transit company or ECCO. Do not use damaged or broken parts.

Ensure the lightbar voltage is compatible with the planned installation.

**IMPORTANT!** Read all instructions before installing and using. Installer: This manual must be delivered to the end user. This manual assumes installation by a suitably qualified Automotive Technician.



**Do not install and/or operate this safety product unless you have read and understand the safety information contained in this manual.**

1. Proper installation combined with operator training in the use, care and maintenance of emergency warning devices are essential to ensure the safety of emergency personnel and the public.
2. Emergency warning devices often require high electrical voltages and/or currents. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation is vital to the performance of this warning device. Install this product so that output performance of the system is maximized and the controls are placed within convenient reach of the operator so that s/he can operate the system without losing eye contact with the roadway.
5. It is the responsibility of the vehicle operator to ensure daily that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
6. The use of this or any other warning device does not ensure all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is your responsibility to be sure you can proceed safely before entering an intersection, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
7. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.
8. This product may contain high intensity LEDs staring directly into these lights could result in temporary and/or permanent vision impairment.



## WARNING!

Failure to install or use this product according to manufacturer's recommendations may result in property damage, serious bodily/personal injury, and/or death to you and those you are seeking to protect!

## Specifications:

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Length	770mm (30")	1000mm (39")	1250mm (49")	1500mm (59")
Height	85mm (3.3")	Width:	200mm (7.9")	
Voltage	12-24VDC			
Current Draw	Single LED ( Class I ) = Single LED ( Class II ) = Double LED ( Class I ) = Double LED ( Class II ) = Control Illumination =	0.30A Avg. @ 12VDC 0.80A Avg. @ 12VDC 0.40A Avg. @ 12VDC 1.20A Avg. @ 12VDC 0.10A Avg. @ 12VDC	Per Module	
Flash Patterns	10 (See chart)			

Available Flash Pattern Chart				
Sequence	Description	FPM	Class I	Class II (Available upon request)
1	Reg 65 Single	N/A	N/A	N/A
2	Reg 65 Double	123 FPM	✓	✓
3	Reg 65 Triple	123 FPM	✓	✓
4	Reg 65 Quad	123 FPM	✓	✓
5	Reg 65 8 Burst	123 FPM	✓	✓
6	Reg 65 Single Alternate	123 FPM	✓	✓
7	Reg 65 Double Alternate	123 FPM	✓	✓
8	Reg 65 Triple Alternate	123 FPM	✓	✓
9	Reg 65 Quad Alternate	123 FPM	✓	✓
10	Reg 65 8 Burst Alternate	123 FPM	N/A	N/A
11	Cruise/Steady Burn	N/A	N/A	N/A

Notes:  
EZ0006 Controller available for bars fitted with control cable only.

## Functionality, Installation & Mounting:

### Functionality:

#### 1. Flash Patterns

To change the flash pattern:

- 1.1 Have the L/bar flashing on the pattern that is to be changed.
- 1.2 Double tap Pattern Select Violet wire to positive, to unlock the functionality.
- 1.3 Every single tap between 0 and 1 sec will increment the pattern and between 1 and 5 sec will decrement it, accordingly to the Flash Pattern Table.
- 1.4 Last selected pattern will be saved.
- 1.5 Violet wire functionality will be locked if not used for 60 seconds.

#### 2. Centre Illumination

To turn centre illumination On, connect the Blue wire to positive voltage supply e.g. tail lights.

2.1 Without providing main power via Red wire\* to the L/bar, illumination will take approx 0.1 Amp per each illumination module through the Blue wire.

2.2 With the power present, current will be taken via the Red wire, while Blue will serve as driving signal only, taking approx 0.1 Amp.

\* Negative supply/Ground needs to be permanently connected to the Black wire.

### Mounting

Before proceeding with installation, plan all wiring and cable routing. Select the mounting location for the lightbar on a flat, smooth surface and center the unit across the width of the vehicle. The mounting location for the lightbar should be chosen such that the lightbar is level and visibility to approaching traffic is optimized.

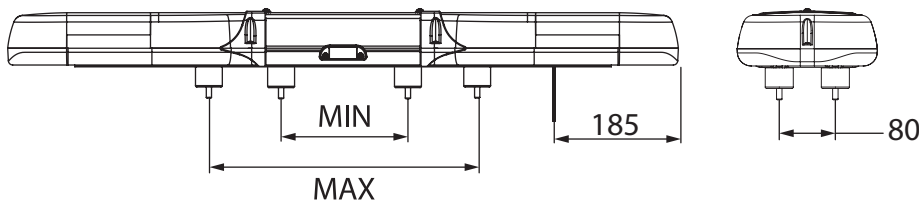


## Caution:

When drilling into any vehicle surface, make sure that the area is free from any electrical wires, fuel lines, vehicle upholstery, vehicle support members, etc. that could be damaged.

## Permanent Mounting

1. Determine the location of the lightbar and the best route for the wiring.



RANGE	MIN	MAX
770	300	500
1000	400	650
1250	600	900
1500	800	1050

2. Taking care not to scratch the vehicle paintwork, drill the vehicle panel to centres you require for your length of bar, making sure the holes miss any raised webs, internal trim or existing vehicle cables.

3. If the electrical wiring is to be installed beneath the light bar, drill an additional hole in panel and fit a suitable grommet prior to fixing the light bar.

### IMPORTANT: -

From the supplied mounting kit fit the 4 bolts into the mounting channels and slide them to the centres position you have drilled. Fit a washer, then the rubber foot onto the bolt and mount light bar to the panel, underneath the panel fit the remaining washer and nut onto the bolt and tighten to 1.5Nm.

### Wiring Instructions:

#### Important!

Electrical cables can effect other equipment! Route product supply cables away from sensitive cables (E.G. Radio aerials and Anti-lock Braking Systems etc.) If this is not possible, cross the wires at a 90°.

#### Important!

This unit is a safety device and it must be connected to its own separate, fused power point to assure its continued operation should any other electrical accessory fail. Do not wire in parallel with any other accessory.

#### Notes:

1. Larger wires and tight connections will provide longer service life for components. For high current wires it is highly recommended that terminal blocks or soldered connections be used with shrink tubing to protect the connections. Do not use insulation displacement connectors (e.g., 3M Scotchlock type connectors).
2. Route wiring using grommets and sealant when passing through compartment walls. Minimize the number of splices to reduce voltage drop. High ambient temperatures (e.g., under-hood) will significantly reduce the current carrying capacity of wires, fuses, and circuit breakers. All wiring should conform to the minimum wire size and other recommendations of the manufacturer and be protected from moving parts and hot surfaces. Looms, grommets, cable ties, and similar installation hardware should be used to anchor and protect all wiring.
3. Fuses or circuit breakers should be located as close to the power takeoff points as possible and properly sized to protect the wiring and devices.
4. Particular attention should be paid to the location and method of making electrical connections and splices to protect these points from corrosion and loss of conductivity.
5. Ground termination should only be made to substantial chassis components, preferably directly to the vehicle battery.
6. Circuit breakers are very sensitive to high temperatures and will "false trip" when mounted in hot environments or operated close to their capacity.



#### CAUTION!

Disconnect the battery before wiring up the lightbar, to prevent accidental shorting, arcing and/or electrical shock.

### General Wiring Instructions

Before attempting to connect the lightbar wiring harness, refer to the wiring diagram illustrated below. The wiring diagram describes the function for each separate wire.

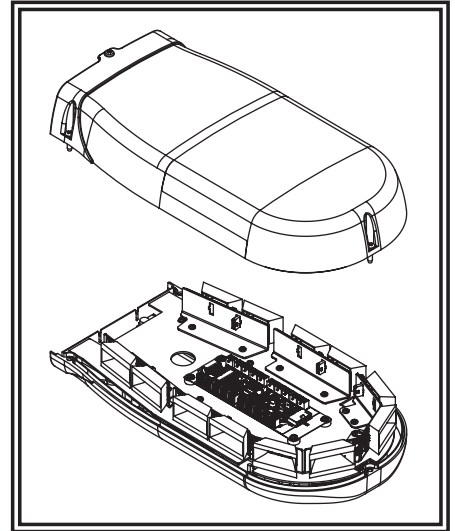
1. Route wires from the vehicle positive (battery, alternator, fuse block) to the switch panel in the cab. Use suitable high-temperature wire if it passes through the engine compartment. Install a suitable fuse as close to the point of tapped power as possible. For each circuit use a fuse according to the insert sheet.
2. Connect the wires to the positive side of the control switch panel with quick-connect terminals or by soldering.
3. After the lightbar has been mounted, route the wiring harness into the vehicle to the switch panel location.
4. Connect the wires of the lightbar wiring harness to the switched side of the switch. see the insert sheet for wire colour / function legend.
5. Connect the lightbar cable Black wire to a solid ground connection on the vehicle (ideally directly to the battery negative terminal).
6. Use cable ties and grommets to secure and protect all cables and wires.

## Options and Maintenance:

Occasional cleaning of the lenses will ensure optimum light output. Take care when cleaning lenses – although tough, polycarbonate scratches easily. Clean the lens and base with soap and water or a lens polish using a soft cloth. Do not use solvents as they may damage the polycarbonate. Do not subject the lightbar to high-pressure washers or automatic car washers.

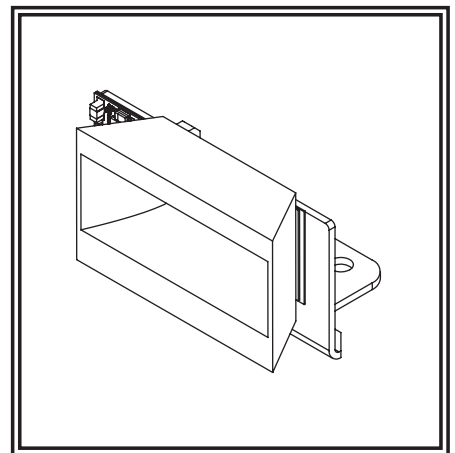
### Lens Removal and Installation

1. Remove the screws from the lenses/driver baffles, remove the driver baffle first and then pull the lens off.
2. Choose a suitable location to temporarily store the lens so as to not scratch the surface.
3. When reinstalling, gently apply pressure around the lens taking care not to damage the seal. Replace the screws.



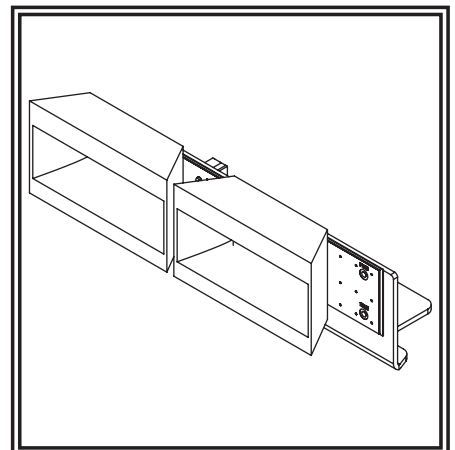
Warning single LED modules

ER5012 - Left LED  
ER5013 - Right LED



Warning Double LED modules

ER5014 - Right LED  
ER5015 - Left LED



The LED lightheads have been designed to ensure long service life using high performance LEDs. The modules are low profile units that have a high intensity output with low current draw. The LED lightheads can be mounted in the front, rear and corners of the lightbar.

<b>Replacement Kits</b>	
<b>Description</b>	<b>Part Number</b>
<b>Lenses</b>	
Replacement End Lens (Amber)	ER5016
Replacement End Lens (Clear)	ER5017
Replacement Centre Lens 1000mm/39" Lightbar (Amber)	ER5018
Replacement Centre Lens 1000mm/39" Lightbar (Clear)	ER5019
Replacement Centre Lens 1000mm/39" Lightbar (Opal)	ER5027
Replacement Centre Lens 1250mm/49" Lightbar (Amber)	ER5020
Replacement Centre Lens 1250mm/49" Lightbar (Clear)	ER5021
Replacement Centre Lens 1250mm/49" Lightbar (Opal)	ER5028
Replacement Centre Lens 1500mm/59" Lightbar (Amber)	ER5022
Replacement Centre Lens 1500mm/59" Lightbar (Clear)	ER5023
Replacement Centre Lens 1500mm/59" Lightbar (Opal)	ER5029
<b>Dividers/Baffles &amp; Lens Latch</b>	
Replacement Single Baffle	ER5024
Replacement Double-sided Baffle	ER5025
Replacement Front/Rear Central Lens Latch (Pair)	ER5026
<b>LED's</b>	
Replacement Single LED Left (Amber)	ER5012
Replacement Single LED Right (Amber)	ER5013
Replacement Double LED Right (Amber)	ER5014
Replacement Double LED Left (Amber)	ER5015
<b>Driver/PSU</b>	
Replacement PSU Kit 13 Series	ER5011

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## WARRANTY

### **Manufacturer Limited Warranty and Limitation of Liability:**

Manufacturer warrants that on the date of purchase this product will conform to Manufacturer's specifications for this product (which are available from the Manufacturer upon request). This Limited Warranty extends for twenty-four (24) months from the date of purchase.

DAMAGE TO PARTS OR PRODUCTS RESULTING FROM TAMPERING, ACCIDENT, ABUSE, MISUSE, NEGLIGENCE, UNAPPROVED MODIFICATIONS, FIRE OR OTHER HAZARD; IMPROPER INSTALLATION OR OPERATION; OR NOT BEING MAINTAINED IN ACCORDANCE WITH THE MAINTENANCE PROCEDURES SET FORTH IN MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS VOIDS THIS LIMITED WARRANTY.

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