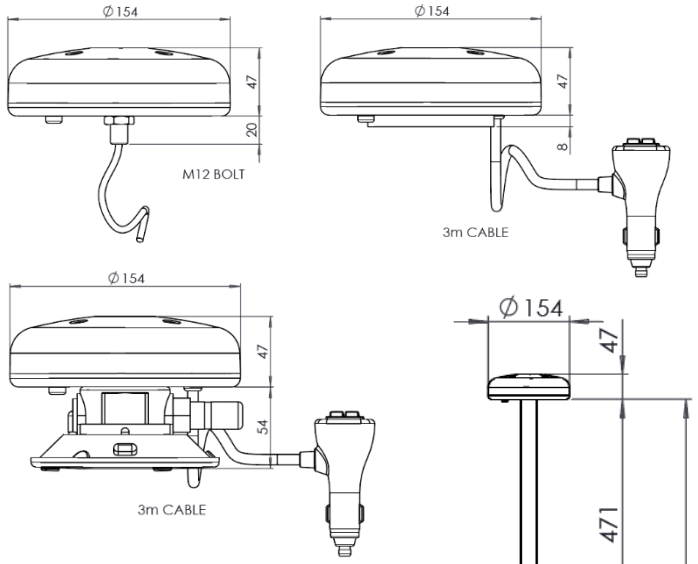
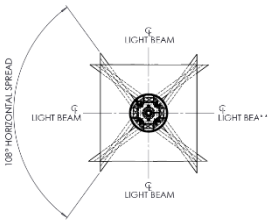
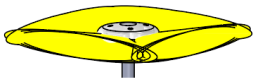
Tornado Beacon V2.0



FEATURES

- Single bolt, magnetic, suction, pole & din mounts available
- Single (12 led) & dual (24 led) colour models available
- Available in blue, amber, red, green or white LED
- Ultra-bright latest generation OSRAM LED's
- Wide angle FX optics, 360-degree visibility
- Dimensions: 154mm x 46mm (single bolt version)
- UV stabilised polycarbonate lens
- Multi-function cigarette plug
- 2 Year Warranty
- 11 – 30-volt operation
- Low current draw (1.7/3.4 amps max on 12v system)
- Flash patterns
- 2 modes for alternate or simultaneous flash
- Dim mode (night & day)
- Synchronisation with other Redtronic products
- Cruise feature (permanently illuminated on dim)
- IP66 Dust & Water resistant
- EMC/R10 compliant
- ECE R65 approved Class II (night & day mode)
- DEKRA speed approved (232.2kph / 146.76mph)
- Manufactured in the United Kingdom





Part Number	Dimensions D x H	Fixing Method	LED's	Colour	LED Colour	Lens Colour
TR12SBBC	154mm x 47mm	Single Bolt	12	Single		
TR12SBBB	154mm x 47mm	Single Bolt	12	Single		
TR12MGBC	154mm x 47mm (/55mm)	Magnetic	12	Single		
TR12MGBB	154mm x 47mm (/55mm)	Magnetic	12	Single		
TR12SCBC	154mm x 47mm (/101mm)	Suction Cup	12	Single		
TR12SCBB	154mm x 47mm (/101mm)	Suction Cup	12	Single		
TR12SBAC	154mm x 47mm	Single Bolt	12	Single		
TR12SBAA	154mm x 47mm	Single Bolt	12	Single		
TR12MGAC	154mm x 47mm (/55mm)	Magnetic	12	Single		
TR12MGAA	154mm x 47mm (/55mm)	Magnetic	12	Single		

Description

The Tornado V2 Beacon is designed and manufactured by us here at Redtronic in the UK to ensure we constantly deliver the highest premium quality beacon on the market. The Tornado is designed to incorporate the sleekest shape seen on a beacon whilst benefiting from the best light output that meets R65 Class II.

The Tornado is so well designed it meets IP66 to protect against water and dust and offers the best of features compared to those in a Lightbar such as CAP168/ICAO approval, multiple flash patterns and many choices of mounting options to meet all vehicle fitting needs. The Tornado beacon also is fitted with our Wide-angle FX Optic with Ultra-bright latest generation LED's under an Ultra-strong UV stabilised polycarbonate lens offering multiple lens colour options and LED colour's ranging from Single colour, Dual colour and Multi-colour giving a vast range of usages that this beacon can be used for.

The Tornado V2 Beacon is tough enough for any job and it is why it has been designed for a fit-and-forget purpose and is also endorsed with a 2 Year Warranty.

All Part Numbers

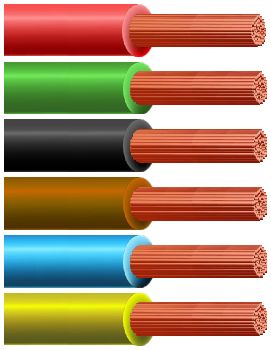
PART NUMBER	COLOUR 1	COLOUR 2	LENS COLOUR	FIXING METHOD
TR12SBBC	BLUE	N/A	CLEAR	SINGLE BOLT
TR12SBBB	BLUE	N/A	BLUE	SINGLE BOLT
TR12MGBC	BLUE	N/A	CLEAR	MAGNETIC
TR12MGBB	BLUE	N/A	BLUE	MAGNETIC
TR12SCBC	BLUE	N/A	CLEAR	SUCTION
TR12SCBB	BLUE	N/A	BLUE	SUCTION
TR12PLBC	BLUE	N/A	CLEAR	POLE
TR12PLBB	BLUE	N/A	BLUE	POLE
TR12DNBC	BLUE	N/A	CLEAR	DIN
TR12DNBB	BLUE	N/A	BLUE	DIN
TR12SBAC	AMBER	N/A	CLEAR	SINGLE BOLT
TR12SBAA	AMBER	N/A	AMBER	SINGLE BOLT
TR12MGAC	AMBER	N/A	CLEAR	MAGNETIC
TR12MGAA	AMBER	N/A	AMBER	MAGNETIC
TR12SCAC	AMBER	N/A	CLEAR	SUCTION
TR12SCAA	AMBER	N/A	AMBER	SUCTION
TR12PLAC	AMBER	N/A	CLEAR	POLE
TR12PLAA	AMBER	N/A	AMBER	POLE
TR12DNAC	AMBER	N/A	CLEAR	DIN
TR12DNAA	AMBER	N/A	AMBER	DIN
TR12SBRC	RED	N/A	CLEAR	SINGLE BOLT
TR12SBRR	RED	N/A	RED	SINGLE BOLT
TR12MGRC	RED	N/A	CLEAR	MAGNETIC
TR12MGRR	RED	N/A	RED	MAGNETIC
TR12SCRC	RED	N/A	CLEAR	SUCTION
TR12SCRR	RED	N/A	RED	SUCTION
TR12PLRC	RED	N/A	CLEAR	POLE
TR12PLRR	RED	N/A	RED	POLE
TR12DNRC	RED	N/A	CLEAR	DIN
TR12DNRR	RED	N/A	RED	DIN
TR24SBBAC	BLUE	AMBER	CLEAR	SINGLE BOLT
TR24MGBAC	BLUE	AMBER	CLEAR	MAGNETIC
TR24SCBAC	BLUE	AMBER	CLEAR	SUCTION
TR24PLBAC	BLUE	AMBER	CLEAR	POLE
TR24SBBRC	BLUE	RED	CLEAR	SINGLE BOLT
TR24MGBRC	BLUE	RED	CLEAR	MAGNETIC
TR24SCBRC	BLUE	RED	CLEAR	SUCTION
TR24PLBRC	BLUE	RED	CLEAR	POLE
TR3SB	MULTI-COLOUR		CLEAR	SINGLE BOLT
TR3PL	MULTI-COLOUR		CLEAR	POLE

Technical Information

	Single Colour	Dual Colour	Multi-Colour
Voltage Range (DC)	11 – 30v	11 – 30v	11 – 30v
Number of LEDs	12	24	36
LED Brand	OSRAM	OSRAM	LUMI LEDS
Led Power (Watts)	36	36/72	36/72
Light Output (Lumens)	Amber: 2745 Blue: 1905 Red: 2595 White: 4380 Green: 2910	Amber: 2745 Blue: 1905 Red: 2595 White: 4380 Green: 2910	Amber: 2745 Blue: 1905 Red: 2595 White: 4380 Green: 2910
Weight (Grams) Based on Mag-mount	Single bolt:510g Magnetic:800g Suction:780g Pole:1475g DIN:570g	Single bolt:510g Magnetic:800g Suction:780g Pole:1475g DIN:570g	Single bolt:510g Magnetic:800g Suction:780g Pole:1475g DIN:570g
'All on' - Current Draw (12v)	1.7 Amps	3.4 Amps	3.4 Amps
IP rating	IP 66	IP 66	IP 66
Flash Patterns	Mega-Flash Quad Triple Double Single Hyper Quad (slow) Triple (slow) Double (slow) Single (slow)	Mega-Flash Quad Triple Double Single Hyper Quad (slow) Triple (slow) Double (slow) Single (slow)	Mega-Flash Quad Triple Double Single Hyper Quad (slow) Triple (slow) Double (slow) Single (slow)
Approval	ECER65 Class II DEKRA SPEED TEST 232.2KPH/146.76MPH EMC	ECER65 Class II DEKRA SPEED TEST 232.2KPH/146.76MPH EMC	ECER65 Class II DEKRA SPEED TEST 232.2KPH/146.76MPH EMC
Warranty	2 Years	2 Years	2 Years

Cable Connections

Function	Cable Colour	Description
Power 1 +Ve	Red	Power 1 – powers first bank of 3 LED's
Power 2 +Ve	Green	Power 2 – powers second bank of 3 LED's
Ground -Ve	Black	0v ground / earth
Pattern +Ve	Brown	Changes the flash pattern by momentarily applying to a positive. Apply to +ve for 1 second to revert to quad flash (pattern 1).
Dim +Ve	Blue	Dim input (night mode), 50% (default) or 25%
Synchronisation	Yellow	Link to other Redtronic products



Power 1 (Positive)

Power 2 (Positive)

Earth/Ground (Negative)

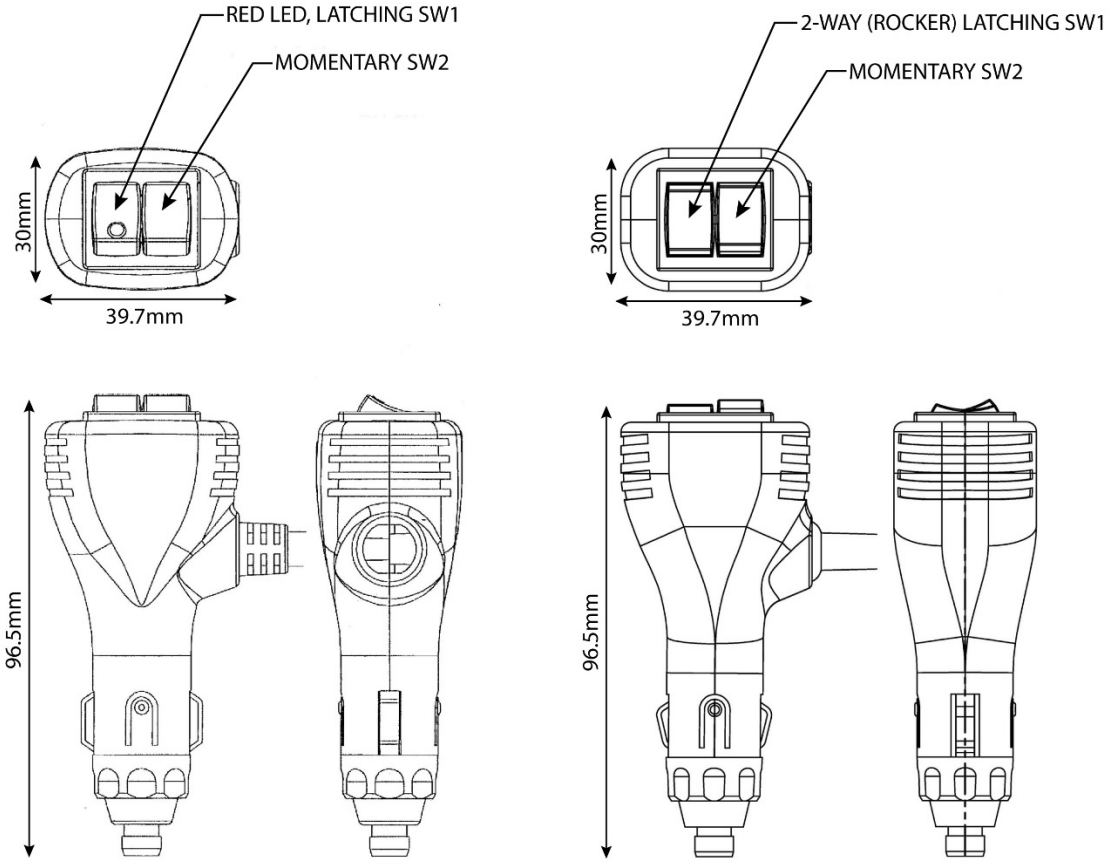
Flash Pattern (Positive)

Dim (Positive)

Synchronisation with other Redtronic products (**Do not** apply to positive)

Example standard cig plug configurations

Depending upon specification, the tornado beacon will be supplied with either of the following cigarette plugs.



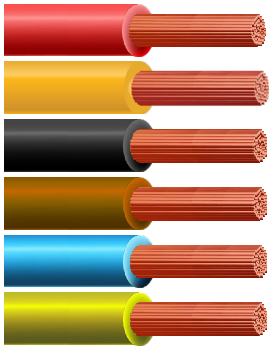
Colour Option	Standard Cig Plug	Switch 1 (Latching)	Switch 2 (Momentary)
Single colour	EM173CGD	Function 1: Colour on/off	Pattern select
Dual Colour blue/red	EM173CGD	Function 1: Colours 1&2 on/off	Pattern select
Dual Colour (all colours excluding blue/red)	EM173CGD3	Function 1: Colour 1 on/off Function 2: Colour 2 on/off	Pattern select

All beacons are provided with a pattern select switch as standard. It is possible to substitute the pattern select function (momentary switch) with another other feature such as dim mode. In this case we would supply a double latching cig plug switch but the beacon loses the option of altering its flash pattern. Example below.

Colour Option	Standard Cig Plug	Switch 1 (Latching)	Switch 2 (Latching)
Dual Colour	EM173CGD2	Function 1: Colour 1 on/off Function 2: Colour 2 on/off	Dim mode

Installation diagram - Single Bolt

Function	Cable Colour	Description
Power 1 +Ve	Red	Power 1 – powers primary colour
Power 2 +Ve	Orange	Power 2 – powers secondary colour
Ground -Ve	Black	0v ground / earth
Pattern +Ve	Brown	Changes the flash pattern by momentarily applying to a positive. Apply to +ve for 1 second to revert to double flash (pattern 1).
Dim +Ve	Blue	Dim input (night mode), 50% (default) or 25%
Synchronisation	Yellow	Link to other Redtronic products



Power 1 (Positive)

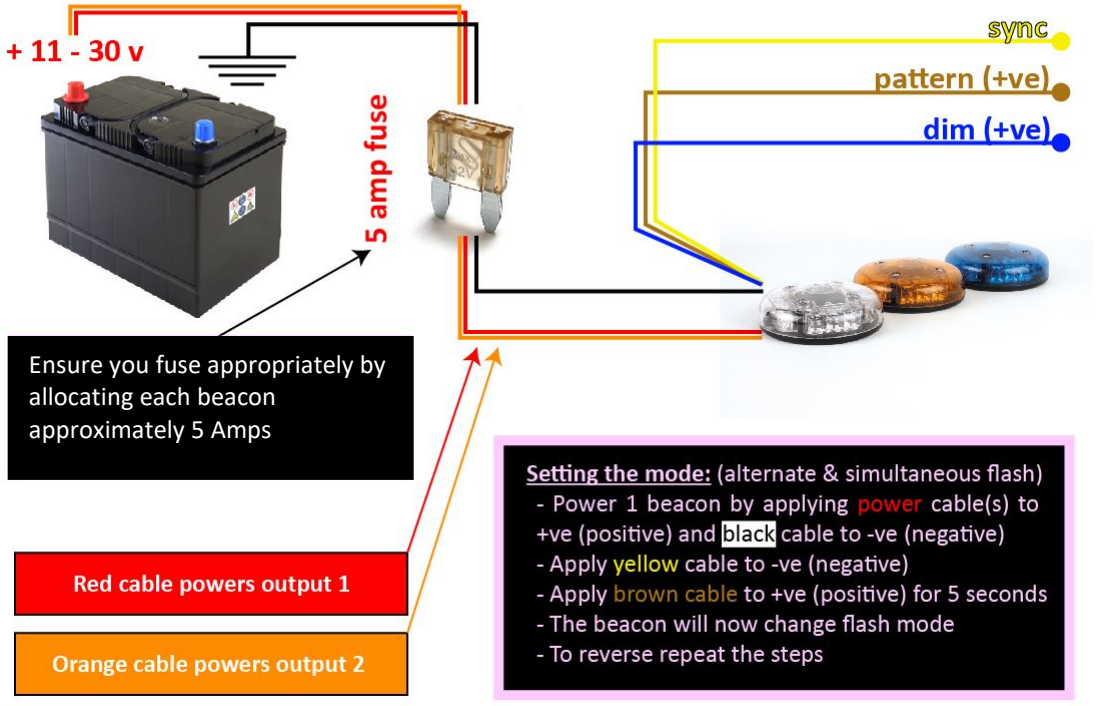
Power 2 (Positive)

Earth/Ground (Negative)

Flash Pattern (Positive)

Dim (Positive)

Synchronisation with other Redtronic products (**Do not** apply to positive)



Installation instructions - Single Bolt

Connecting Tornado lamps to a vehicle battery / power source requires the black wire to be connected to the **negative** (-) terminal, and the red wire to be connected to **positive** (+) terminal. **Note:** Secondary colour options require the orange wire to be connected to the positive (+) connection on the power source.

Pattern and mode functions need to be set in the same manner as the primary (red wire) colour. Disconnect the red wire to set the secondary functions as desired.

All lamps are set to double flash pattern as default before leaving the factory.

Description of lamp wire functions

Blue:	Sets the DIM (night mode) function (latching switch / +ve).
Brown:	Sets the pattern function (momentary switch / +ve).
Grey:	Computer output ('fade control') & colour selection (momentary switch / +ve).
Orange:	Powers the secondary colour LEDs (latching switch / +ve).
Yellow:	Primarily used to synchronise lamps together, also sets the alternate flash mode and sets the 'steady burn' lamp function (latching / momentary / manual touch / -ve).

To set the alternate flash mode

Wire up the red (+) and black (-) wires to positive (+) and negative (-) terminals on the power source.
Hold the yellow wire (sync wire) to the **negative** terminal on the power source. **Note: Do not hold the yellow wire to the positive terminal, as this will damage the lamp permanently.** The lamp will turn from flashing to 'steady burn'.

While holding the yellow wire on the negative terminal, hold the brown wire to the positive terminal. After 2 seconds, the lamp will extinguish for 3 seconds, after which the lamp will start a quick succession of flashes. Remove the brown wire, the lamp should now be flashing alternately to any lamps it synchronises with.

To set the flash pattern

With the lamp powered on, the brown wire should be connected to positive (+) terminal from the power source momentarily, to change to the next pattern. Either touch the wire to positive briefly, or connect via a momentary switch and press to change pattern. There are 10 flash patterns (9 flash patterns on Single colour blue or amber Tornado lamps). Holding to +ve for 2 seconds will revert to flash pattern 1.

To set the DIM function:

Connect the blue wire to positive (+) at the power source to enable DIM (night) mode. The blue wire needs a constant connection to (+ve) to operate in this mode. The lamp will return to full brightness when the blue wire is disconnected.

To permanently illuminate a lamp:

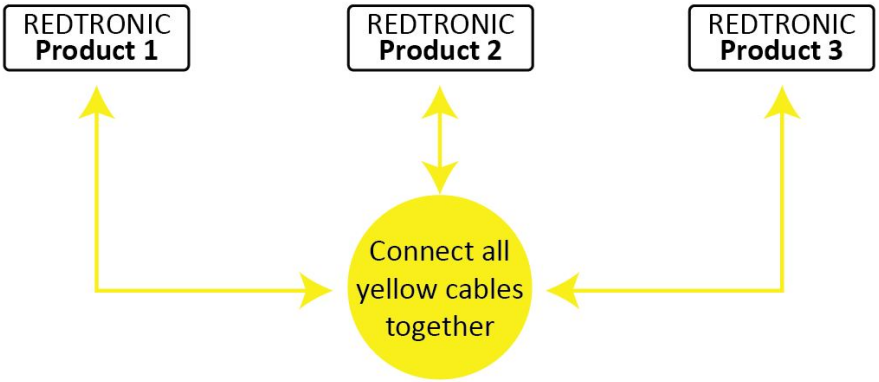
Connect the yellow wire to negative (-) at the power source to enable 'steady burn' mode. The yellow wire needs a constant connection to (-) to operate in this mode. The lamp will return to the set flash pattern when the yellow wire is disconnected.

To select the colour on TR3** multi-colour Tornado v2.0 beacon:

Wire up the red (+) and black (-) wires to positive (+) and negative (-) terminals on the power source.
Connect the yellow wire (sync wire) to the **negative** terminal on the power source. **Note: Do not hold the yellow wire to the positive terminal, as this will damage the lamp permanently.** Connect the white wire to (+ve) terminal on the power source. Tap the **brown** wire to (+ve) on the power source to change the beacon colour. Replace the red (+) wire connected to positive on the power source with the **green (+)** wire to change the secondary beacon colour.

To synchronise lamps:

When the desired flash pattern and mode has been set, connect the yellow wires from each lamp together, this will ensure all lamps flash in synchronised format.

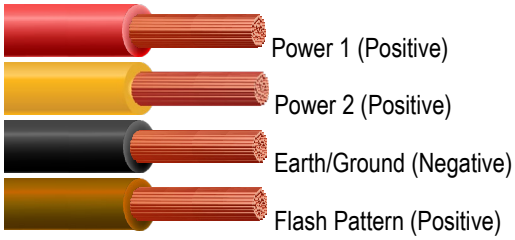


DO NOT APPLY YELLOW CABLES TO +VE (POSITIVE)
DO NOT ATTEMPT TO SYNC REDTRONIC LIGHTS WITH ANY OTHER MANUFACTURERS PRODUCTS

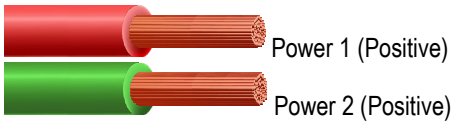
Ensure IP67 rated connectors are used to terminate all wiring. Failure to do so may invalidate the product warranty.

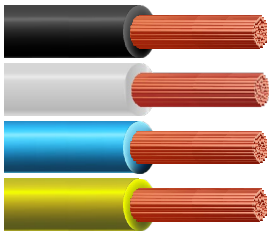
Installation – Pole mount (model dependant)

Function	Cable Colour	Description
Power 1 +Ve	Red	Power 1 – powers primary colour
Power 2 +Ve	Orange	Power 2 – powers secondary colour
Ground -Ve	Black	0v ground / earth
Pattern +Ve	Brown	Changes the flash pattern by momentarily applying to a positive. Apply to +ve for 1 second to revert to quad flash (pattern 1).



Function	Cable Colour	Description
Power 1 +Ve	Red	Power 1 – powers primary colour
Power 2 +Ve	Green	Power 2 – powers secondary colour
Ground -Ve	Black	0v ground / earth
Colour Select +Ve	White	Apply power/earth to power source. Apply yellow cable to negative. Apply white cable to positive. Momentarily tap pattern select switch to cycle through various colours.
Dim +Ve	Blue	Dim input (night mode), 50% (default) or 25%
Synchronisation	Yellow	Link to other Redtronic products





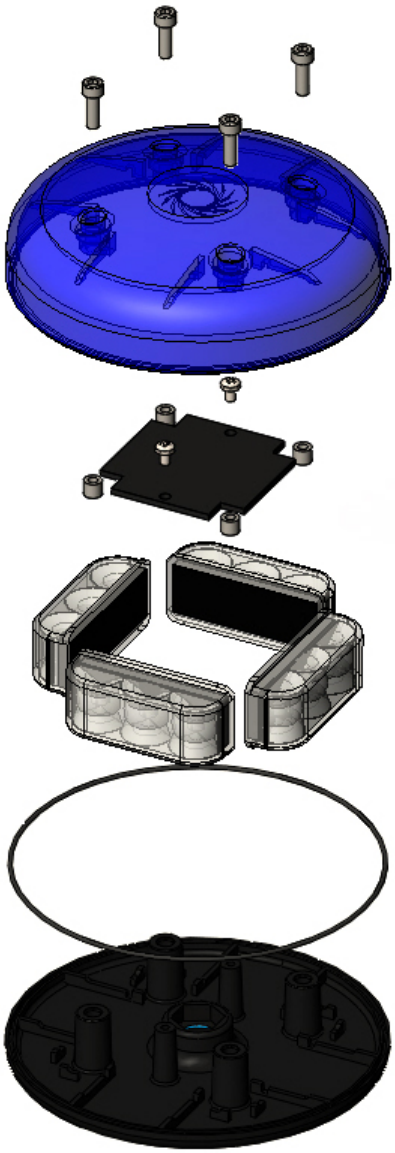
Earth/Ground (Negative)

Colour select (Positive)

Dim (Positive)

Synchronisation with other Redtronic products (**Do not** apply to positive)

Exploded view



Associated datasheets

- Suction cup maintenance
- ECE R65 Class II approval
- DEKRA speed approval