

## LED EPOXY TAPE RGB COLOUR USER GUIDE

### Introduction:

Super-bright RGB LED tape which when connected to a controller can produce any colour of the rainbow. Supplied on 5m reel with an adhesive back this tape is easy to setup and quick to install. Its low voltage supply and low power consumption makes it suitable for a wide variety of applications from homes to vehicles and from shops to bars and nightclubs. The LEDs will last up to 50,000 hours and are covered with an epoxy coating to protect the tape from general wear and tear as well as being water resistant, making cleaning an easy task.

### Features:

- Marked graduations to aid cutting to size
- Can be cut to desired length (5cm intervals)
- Compatible with RGB controllers: 153.741UK & 153.742UK (not supplied)
- 60 ultra bright LEDs per metre
- Available in 5 different colours
- Self-adhesive backing for easy installation
- Low voltage (12Vdc) and power consumption
- Flexible and lightweight
- Supplied with easy to use connection accessories
- Can extend beyond 5m easily with RGB Data repeater amplifier (153.750UK)
- IP67 rated

Before starting please ensure you read this instruction leaflet fully. We recommend this tape is installed by a fully qualified installer.

### Section 1:

The LED tape comes supplied on a 5m reel and has 60 LEDS per metre. Different lengths can be cut at 5cm intervals marked on the upper side of the tape. These can be easily re-connected to suit various applications.

#### Supplied in the foil bag:

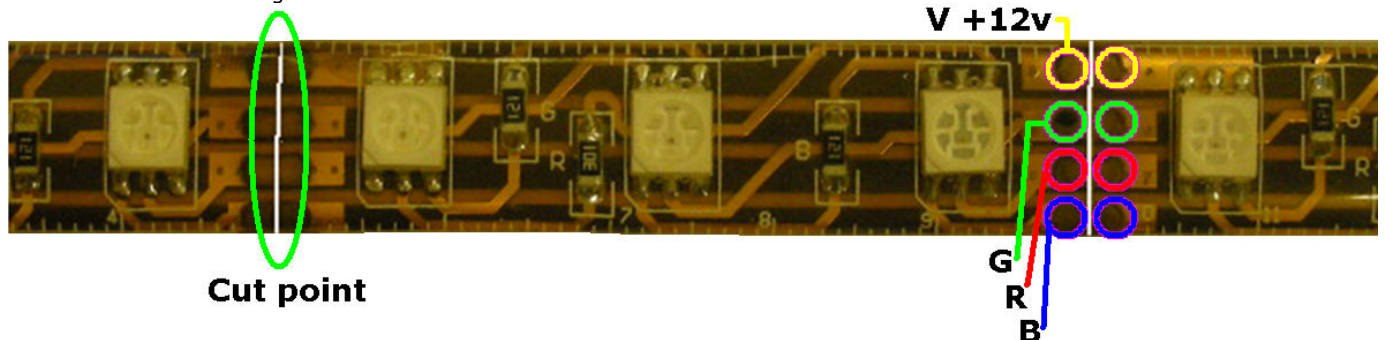
- 1 x 5m Reel of RGB LED tape
- 2 x 20cm Extension lead with 4 pin plug on either end
- 3 x 4 Pin couplers
- 6 x End connectors
- 1 x 20cm black heat shrink

#### Requires:

- The correct power supply for the Length
- Suitable RGB controller
- Signal Data Repeater for long length installations

The LED tape has a four wire DC track, three to carry the signal and power to each individual LED diode and the other to complete the circuit and return the signal back.

Yellow wire	+12V Return
Green wire	Green signal
Red wire	Red signal
Blue wire	Blue signal



Each individual LED on the tape has three colour diodes mounted inside. They are the primary colours of Red, Green and Blue. When set at different intensities the light mixes and can produce many different colours

The end of the LED tape is terminated by a 4 pin socket. When connecting the supplied wire between the controller and the tape ensure the yellow wire is at the top.

Points to remember when using this tape

- 1) Only cut the tape at the highlighted 5cm intervals
- 3) The top track of the tape is the return pole
- 5) Ensure you connect the correct wires otherwise the tape will not work
- 6) Ensure that when soldering there are no short circuits
- 7) It is really important after soldering that you use the heat shrink provided to protect the connection
- 8) Check that everything operates correctly before installing

## Section 2

### What power supply do I need?

The RGB LED tape draws 15mA per each diode colour so each LED draws potentially 45mA when the colour is white. Over one metre the current needed will be 1350mA. See below for suggested power supplies over the required lengths:

Current Per Meter*	DC Power Supplies				Installer Power Supplies**		
	Up to 1m	Up to 2.25m	Up to 4.5m	Up to 5m	Up to 3.7m	Up to 6.3m	Up to 9.3m
1350mA*	12Vdc 1500mA (20W)	12Vdc 3000mA (30W)	12Vdc 6000mA (70W)	12Vdc 7000mA (84W)	12Vdc 5000mA (60W)	12Vdc 8400mA (100W)	12Vdc 12500mA (150W)
Recommended Mercury Power Supply Reference	660.445UK or 661.403UK	660.684UK or 661.406UK	661.126UK	661.081UK	153.744UK	153.745UK**	153.747UK**

\*Max, total current required to make the colour white (450mA per colour)

\*\*Installer power supplies are supplied with no UK plug. Do not attempt to use these power supplies unless you are suitably qualified.

\*\*\* You can double the length of this tape by looping the two outputs together.

#### RGB Controller.

In order to make the RGB LED tape to function at its best, you will need to purchase the correct controller for the situation.

There are 2 QTX Light controllers available:

153.741UK Infar Red Remote control which is ideal for home or other small installations

153.742UK 17 Mode RGB controller which is better for medium to large installations

#### RGB Data signal Amplifier (152.750UK)

The maximum length that the LED tape can be before it draws too much current and potentially melts the protective Epoxy coating is around 11m.

The solution to this problem is to use the RGB Data Signal amplifier.

The device allows the signal to continue from the original RGB controller but has another power connection so the power can be boosted and another 6m of tape to be connected. This can be repeated many times and is a perfect tool for large installations.

#### FAQ:

Q) Can you cut a 5m tape in many of different sections then solder connect them all together?

A) Yes as long as you cut the tape at 5cm intervals highlighted

Q) I don't have a powerful enough power supply will it still work?

A) Yes but the LEDs will be brighter at the beginning and dimmer towards the end. Also it is important to remember not to use the power supply to more than 80% of its maximum rated power to avoid burning out.

Q) Can I connect the tape together to form a loop?

A) Yes you can as long as both sides have a sufficient power supply it is possible

Q) Can I use a dimmer on the LED tape?

A) There is a dimmer option available on all the QTX Light RGB controllers.

Q) Can I use the tape outdoors?

A) Yes the tape is IP 67 rated. Ensure though that the terminated ends are heat shrink protected.

Q) Can I replace / patch damaged tape with a new piece?

A) Yes just highlight the effected area by the 5cm intervals. Cut out the faulty section then fit in a new piece soldering the connections securely and using heat shrink provided to protect the repaired connection.

Q) Can I use the LED tape without a controller?

A) Yes you can but you can only have a choice of 7 permanent colours. It will be a better solution to buy the single colour tape.