

## PFA5000x12-720SL5050RGB-SK9822-5V SPI Addressable Flexible RGB LED Strip

### Features

- Full colour Flexible LED light source
- Each pixel addressable with SPI control
- High performance 5050 LED emitters
- Easy to cut at 6.94mm intervals
- Wide 120° angle of emission
- Low power, low heat, long life

### Applications:

POS Display equipment, decorative & effect lighting



### Configuration

| Parameter              | Rating   | Unit         |
|------------------------|--|--------------|
| LED emitters PLCC 5050 | 720 pcs 5.0x5.0mm                                      | TOTAL / reel |
| LED pitch              | 6.94   | mm           |
| Dimensions             | 5000x12mm cuttable at 6.94mm intervals                 |              |
| Termination            | 4x Flying wire leads 200mm long                        |              |
| Connection             | 4 wire SPI: Red +ve, Black -ve, Green Data, Blue Clock |              |
| Onboard SPI Driver IC  | SK9822/APA102  |              |

### Absolute Maximum Ratings (T<sub>A</sub>=25°C)

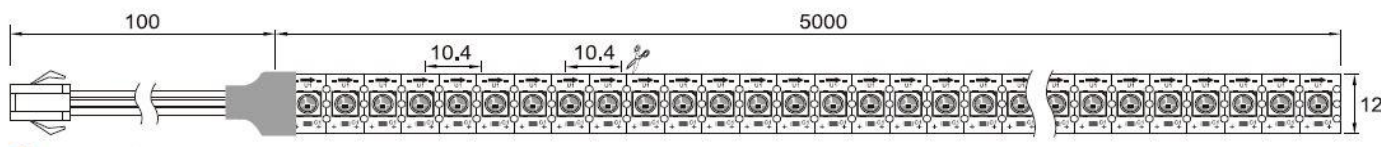
| Parameter                                    | Symbol | Absolute Maximum Rating | Unit |
|--|--------|-------------------------|------|
| Current Consumption/reel (White "all on") *  | IF     | 28.8                    | A    |
| Current Consumption/metre (White "all on") * |        | 5.76                    | A    |
| Power Dissipation/reel (White "all on") *    | PD     |                         | W    |
| Power Dissipation/metre (White "all on") *   |        | 28.8                    |      |
| Electrostatic discharge                      | ESD    | 800                     | V    |
| Operating Temperature                        | Topr   | -25~+60°C               | °C   |
| Storage Temperature                          | Tstg   | -40~+80°C               | °C   |

\* SPI Controller dependent

### Electro-optical characteristics (T<sub>J</sub>=25°C)

| Parameter           | Symbol             | Condition | Min. | Typ. | Max. | Unit |
|---------------------|--------------------|-----------|------|------|------|------|
| Supply Voltage      | V <sub>F</sub>     |           | -    | 5V   | -    | VDC  |
| Dominant Wavelength | λ <sub>D</sub> (R) | IF = 20mA | 620  | -    | 650  | nm   |
|                     | λ <sub>D</sub> (G) | IF = 20mA | 500  |      | 530  |      |
|                     | λ <sub>D</sub> (B) | IF = 20mA | 450  |      | 480  |      |
| Luminous flux       | R                  | IF = 20mA | --   | 128  | -    | lm   |
|                     | G                  |           |      | 370  |      |      |
|                     | B                  |           |      | 92   |      |      |
|                     | RGB                |           |      | 590  |      |      |

## Dimensions



### 4-Wire input

|       |       |
|-------|-------|
| Red   | +ve   |
| Black | -ve   |
| Green | Data  |
| Blue  | Clock |

### Notes:

It is recommended that where LEDs are run at >11W/metre that strips are mounted on a suitable heatsink i.e. aluminium to allow cooling and maintain LED life.

The rated life of LED products depends to a large extent on the temperature. If the permissible temperature limits are exceeded, LED lifetimes will be greatly reduced and may lead to catastrophic failure of the LEDs.

### Handling notes:

Ensure that the correct low voltage dc power supply is matched to the flexible strip specification

Avoid repeated bending of the strip as this will damage the circuit and components and please observe the maximum bend radius of 30mm

Avoid handling of the surface components, in particular the LED emitters as any pressure may result in damage and latent failures.

When cutting IP65 the ingress protection will be compromised please ensure that the assembly is re-sealed accordingly in order to maintain the IP rating

### Installation notes:

To achieve a consistent luminous effect, each 5 metre should be connected to the power source.

To ensure long life we recommend that the strip is kept as cool as possible and environments where the temperature exceeds 40°C should be avoided

### Drive & Control:

For control solutions please refer to our range of controllers and drive options which include DMX, RF Wireless, WiFi. More information may be found at <http://www.plusopto.co.uk/led-controllers.html>

Specifications may be subject to change without notice