

DIGITAL RGB LED Strip

Front Side



Back Side (UL Listing)



Customer Name

Project Name


Part Number

Description

SIRS-E® SPI 12V RGB LED strip, allows you to create billions of colors by simply mixing the Red, Green, and Blue colors and by having the ability to control each individual pixel and diode. Allowing the user to achieve an endless desire of design possibilities. Compliant with all safety requirements as defined by UL standards.

Comes in a Black PCB Board | White PCB Board (**Special Order**)

Product Specifications

Input Voltage	12 V DC	Cuttable Segment	Cuttable every pixel: 16.5mm / 0.65in
Control Method	Pixel by Pixel	Reel Length	16.4 ft / 5 m
Power Consumption	12 W/m / 3.6 W/ft	Max Run Length	16.4 ft / 5 m, powered from both sides
LED Chip Type	High Quality SMD 3-Diode RGB	Board Width	0.39 in (10 mm)
LED Density	18 LEDs/ft / 60 LEDs/m	Luminous Flux Maintenance	75,000 hrs ¹
Channels/Pixels	3 Channels per Pixel (180 Channels/m)	IC	WS2815B - Pixel by Pixel
Board Type/Color	3 oz Density Copper, Black or White PCB	Environmental	IP 40 - Dry Locations / IP 68 - Damp, Wet
Operating Temperature	-10°F to 110°F	Warranty	5 Years Limited
Mounting	Non-Porous: 3M VHB Adhesive Tape	Certifications	 UL Listed, E479339

Product Photometrics - Red, Green and Blue Diodes

Color Diode	Peak Wavelength (nm)	Dominant Wavelength (nm)	CIE (x,y)	Luminous Flux (lm/ft)	Luminous Efficacy (lm/W)
Red	631	619.5	(0.6866, 0.3096)	N/A	16.91
Green	517	524.7	(0.1750, 0.6860)	N/A	54.66
Blue	467	472.2	(0.1309, 0.0805)	N/A	13.05

Product Photometrics - All Three Colors at Full Intensity

Nominal CCT (K)	Luminous Flux (lm/ft)	Luminous Efficacy (lm/W)	CIE (x,y)	Duv ³	CRI	TM-30-15	
						Fidelity (Rf)	Gamut (Rg)
18000 K	129	27.7	(0.2144, 0.2442)	0.01	70	N/A	N/A

1 - After 75,000 hrs: 30% Luminous Flux loss, 10% Chromaticity change, as per LM-80-15

2 - Photometric values estimated from our Digital Pix Series of LED strips

3 - Duv Chromaticity Consistency is throughout the run length. Typically below 1-step MacAdam Ellipse

Ordering Guide

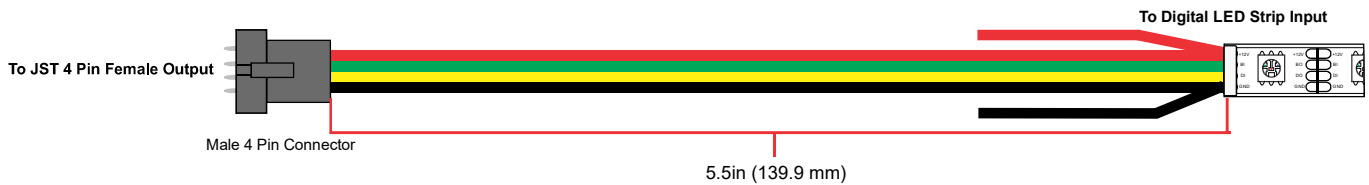
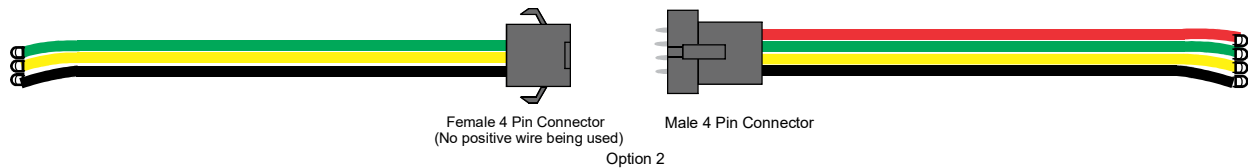
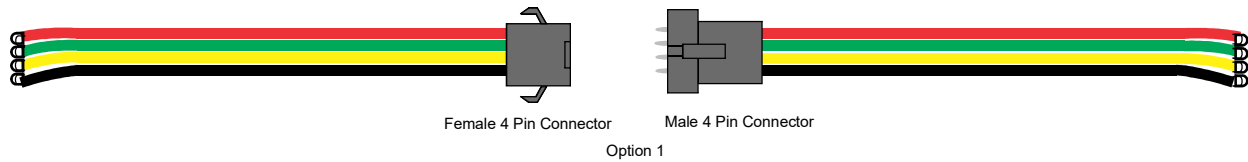
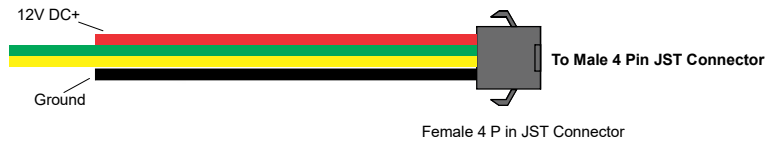
Series	Voltage	Color	Density	IP	PCB Board Color
SPI	12	RGB	XX XX		X
			60	40	B
				68	W*

W* - White PCB board is special order

Product Country of Origin

Product Engineering & Design	USA
Assembled	China Pre-assembled / USA Final Assembly
QC Quality Control	USA
Product Customization	USA
Technical Support	USA

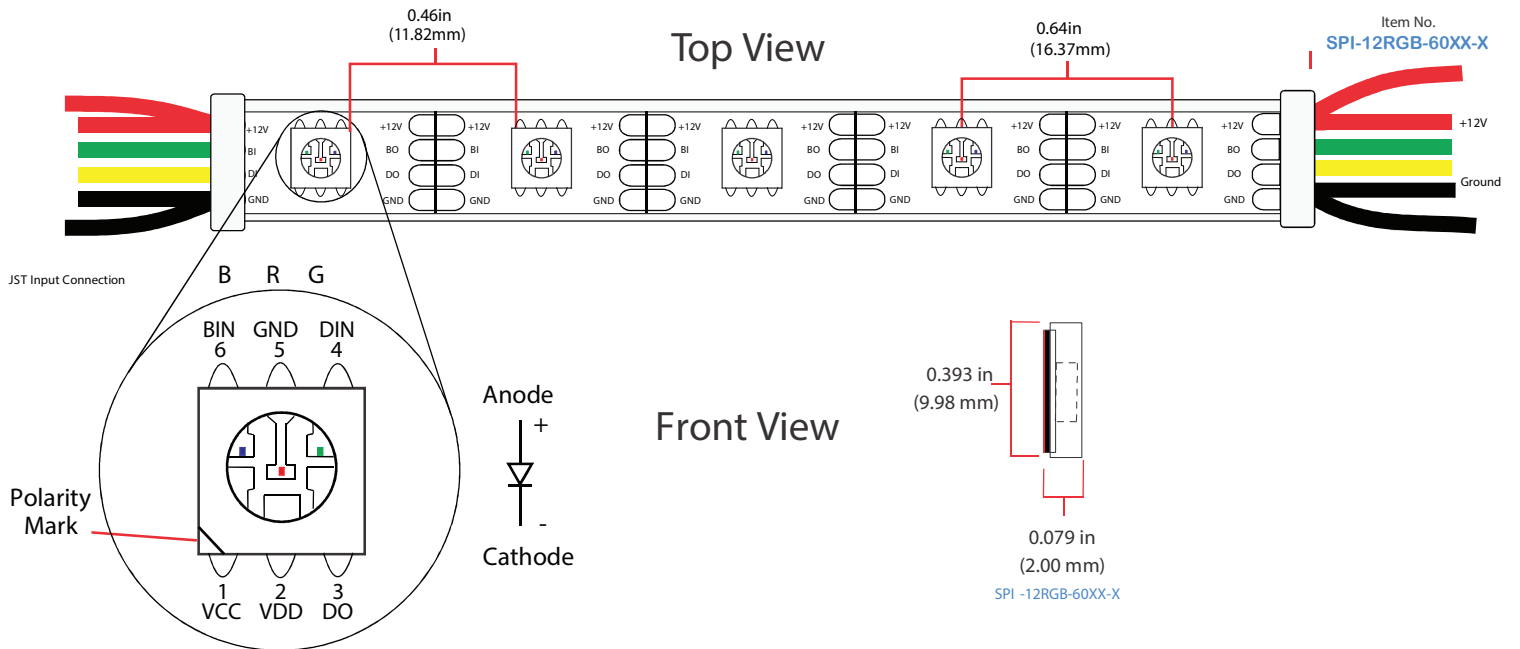
Wiring Diagram



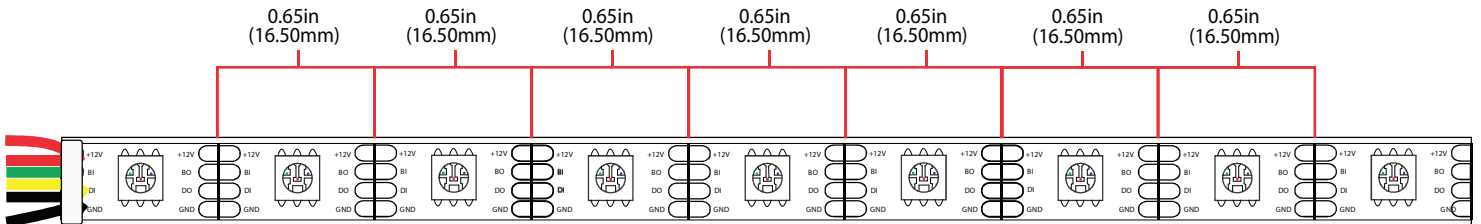
Color Code LED Strip

█	+12V
█	CLOCK (BI)
█	DI
█	GROUND

Mechanical Dimensions



Cutable Segments



Note:

- Any pixel failure won't affect signal transfer and total emitting effect.
- The RGB SPI LED Strips are cuttable at every pixel segment. Unlike DMX strips, they are auto-addressable, meaning each pixel automatically restarts addressing from 001 after cutting. No external addressing device is required.

Weight

Product Weight: 2.7 oz, 16.4 ft Reel (IP 40), Without Packaging.

Accessories Compatible

This list depicts some of our trusted accessories that are compatible for this product. For a complete list, please visit our website.



MADRIX Nebula Controller



MADRIX Compatible Software



DMX to SPI decoder



Meanwell 12V PSU
(LED-PS12V-120W65-ULA)



Meanwell 12V PSU
(LED-PS12V-260W-UL)



SE Aluminum Extrusion



SIRS-E JST Connectors



SIRS-E JST Wire Leads



Notes

A good technique to minimize brightness loss and increase lumen output on LED Strips is to power the strip on both sides. LED electrical and photometric characteristics change with the manufacturing batch/bin date. Approximately 3-Step MacAdam Ellipses between batches.

We reserve the right to change any data without prior notice.

About Us



SIRS-E[®] /semiconductor • illumination • research • solutions /

In 2004, SIRS-E[®] began research into the use of high powered LED components to be applied in direct lighting fixtures and LED strips.

In 2005, SIRS-E[®] developed the RGB HPL01 – 12 watt (60 lumens per watt efficiency) RGB lighting fixture controlled via DMX using LumiLEDs, one of the first high powered LEDs eventually acquired by Phillips. Included in early research solutions, was the development and testing of many different LED strips intended to be used for direct RGB lighting and effects applications. This was the beginning of what we now know as SIRS – Electronics[®].