Digital RGB Series
PIX-12RGB-6040 Datasheet

Customer Name | Project Name | Part Number

DIGITAL RGB LED Strip

Front Side

Back Side (UL Listing)

Description

SIRS-E® PIX DIGITAL RGB LED Series allows you to create billions of colors by simply mixing the Red, Green, and Blue colors. Having the ability to control each individual pixel, and diode; achieving the desired design possibilities are endless.

Product Specifications

Input Voltage	12V DC	Cuttable Segment	Cuttable every pixel: 16.5mm / 0.64in
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[2]
Channels/Pixels	3 Channels per Pixel (510 Channels Total)	IC	WS2815B - Pixel by Pixel
Board Type/Color	2 oz Density Copper, Black PCB	Environmental	IP 40 - Dry Locations
Operating Temperature	-10°F to 110°F	Warranty	5 Years Limited
Mounting	Non-Porous: 3M VHB Adhesive Tape		c UL us UL Listed, E479339

Product Photometrics - Red, Green and Blue Diodes[1]

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[1]

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

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

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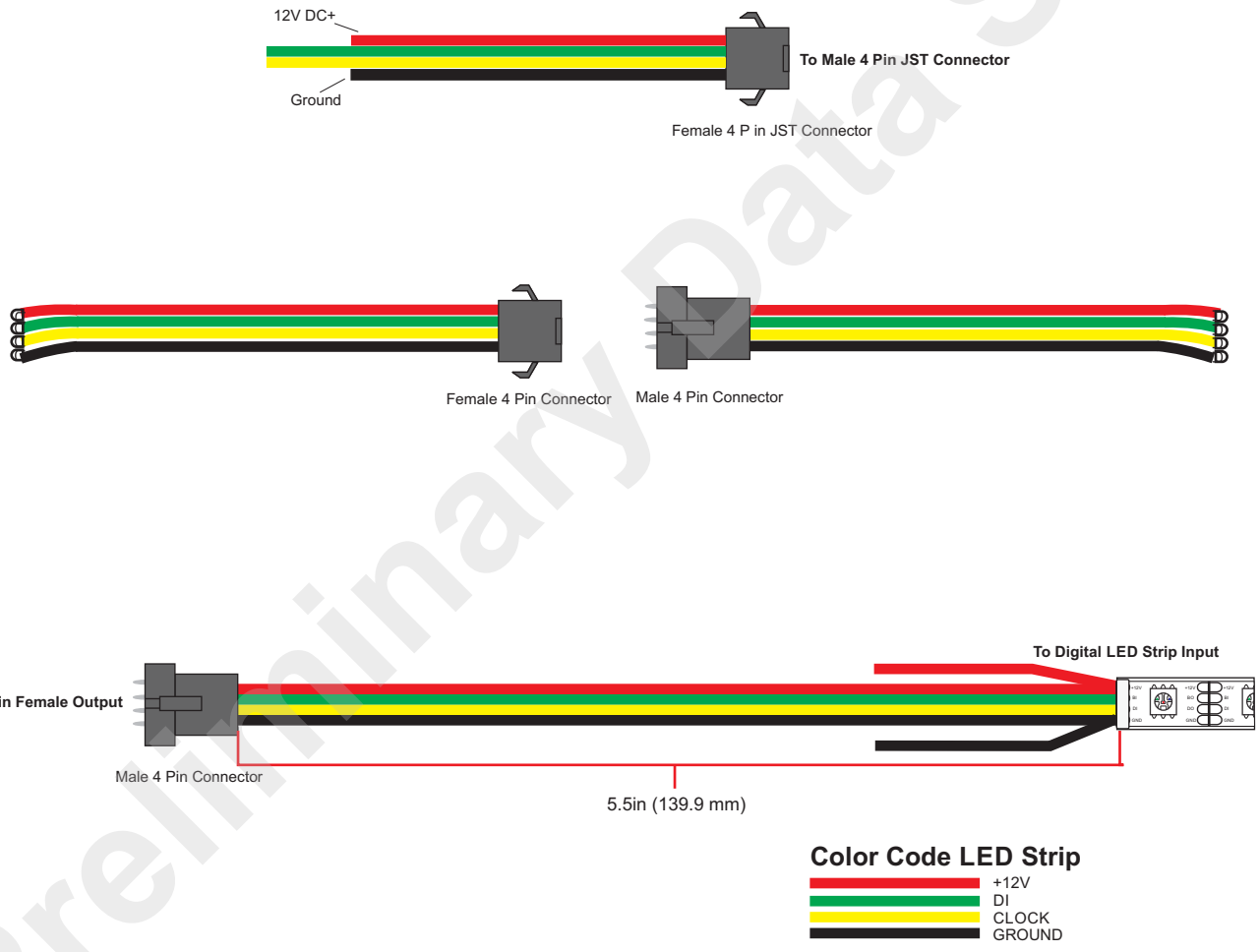
Ordering Guide

LED Size	Voltage Color	Density IP
5050	12 RGB	XXXX
		60 40

Product Country of Origin

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

Wiring Diagram



Color Code LED Strip

- +12V
- DI
- CLOCK
- GROUND

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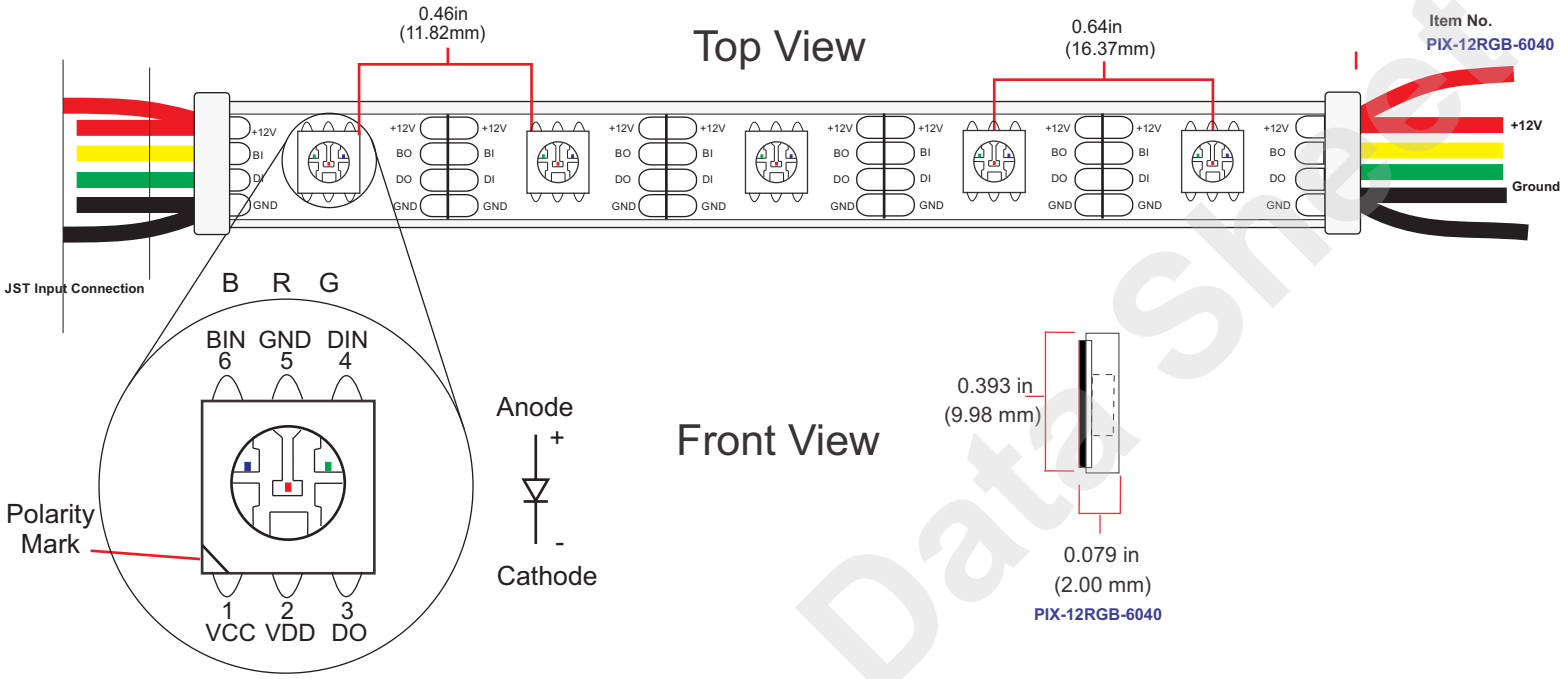
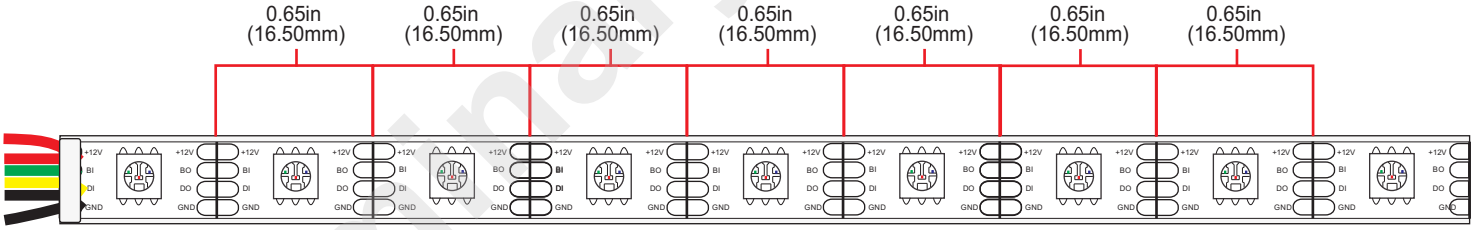
Mechanical Dimensions



Cuttable Segments



Notes:

- Any pixel's failure won't affect signal transfer and total emitting effect.
-

Weight

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

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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

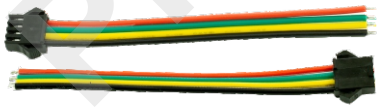
MADRIX Compatible Software

DMX to SPI decoder

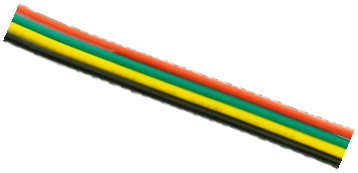
Meanwell 12V PSU (LED-PS12V-120W65-ULA)

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

SE Aluminum Extrusion



SIRS-E JST Connectors



SIRS-E JST Wire Leads

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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

LED LIGHTING AND DMX CONTROL

SIRS-E /**s**emiconductor • **i**llumination • **r**esearch • **s**olutions /

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.