The SIRS-E® **Pix Digital Series** utilizes integrated IC technology per LED to communicate and reproduce millions of colors. Create captivating effects that are limited only by the imagination of the user. The addition of the White LED allows you to dive deeper into more fine tuned control of your choice
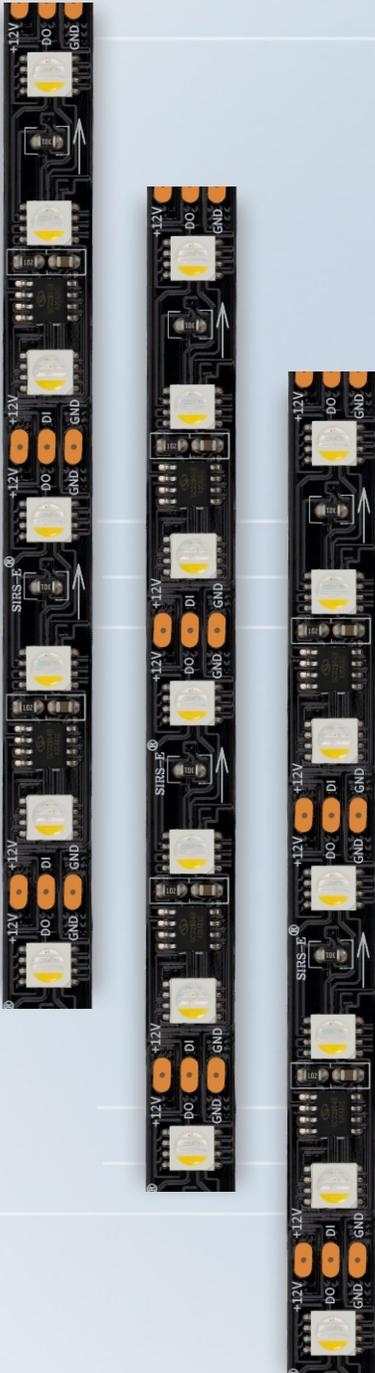
The slim 10mm profile allows it to fit into various mounting channels for multiple lighting applications. Easily mountable utilizing 3M VHB Aero-Grade tape, engineered to dissipate heat.

The **PIX** series provides amazing results for all kinds of entertainment applications such as commercial, residential, productions, shows, and many more.

- **Digital RGBW LED Strip**
- Cuttable every pixel (50mm) allowing for precise designs
- **1 Pixel 3 LED**
- Improved Digital LED density **60 LEDs/m**
- LED density **20 Pixels/m**
- Smooth transition dimming curves
- Higher refresh rate for cinematography
- Pixel Mapping Order - RGBW
- Black PCB Board
- White PCB Board (**Special Order**)
- IP 40 - Indoor, Dry / IP 68 - Damp, Wet

Delivering superior LED strip lighting with a proven record spanning more than a decade without electrical, chromatic, or color rendering issues. SIRS-E® continues to lead the market place in stability, reliability, and efficiency of LED lighting and lighting control systems.

112221

Customer Name	Project Name	Part Number

DIGITAL RGBW LED Strip

Front Side

Description

SIRS-E® DIGITAL PIX Series RGBW LED strip, allows you to create billions of colors by simply mixing the Red, Green, Blue, and White colors and by having the ability to control each individual pixel and diode. Allowing the user to achieve an endless desire of design possibilities.
Comes in a Black PCB Board | White PCB Board (**Special Order**)

Product Specifications

Input Voltage	12 V DC	**Cuttable Segment**	Cuttable every pixel: 50 mm / 1.95 in
Control Method	1 Pixel 3 LED	**Reel Length**	16.4 ft / 5 m
Power Consumption	19.7 W/m / 6 W/ft	**Max Run Length**	16.4 ft / 5 m, powered from both sides
LED Chip Type	High Quality SMD 4-Diode RGBW	**Board Width**	0.39 in (10 mm)
LED Density	18 LEDs/ft / 60 LEDs/m	**Luminous Flux Maintenance**	75,000 hrs[1]
Channels/Pixels	4 Channels per Pixel (80 Channels/m)	**IC**	UCS2904 - Tri-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 Year Limited
Mounting	Non-Porous: 3M VHB Adhesive Tape	**White**	4900 K
Pixel Mapping Order	RGBW		

Product Photometrics - Red, Green, and Blue Diodes[2]

Color Diode	Peak Wavelength (nm)	Dominant Wavelength (nm)	CIE (x,y)	Luminous Flux (lm/ft)	Luminous Efficacy (lm/W)
Red	630	620.4	(0.6888, 0.3077)	N/A	18.50
Green	525	525.2	(0.1986, 0.6383)	N/A	59.66
Blue	455	465.9	(0.1484, 0.0639)	N/A	15.01

Product Photometrics - White Diode Only

Nominal CCT (K)	Luminous Flux (lm/ft)	Luminous Efficacy (lm/W)	CIE (x,y)	Duv[3]	CRI	TM-30-15	
						Fidelity (Rf)	Gamut (Rg)
4839 K	209	99	(0.3502, 0.3587)	+0.0015	91	N/A	N/A

Product Photometrics - All Four Colors at Full Intensity[2]

Nominal CCT (K)	Luminous Flux (lm/ft)	Luminous Efficacy (lm/W)	CIE (x,y)	Duv[3]	CRI	TM-30-15	
						Fidelity (Rf)	Gamut (Rg)
6279 K	145	36.2	(0.3185, 0.3147)	-0.0073	94	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

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Ordering Guide

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

*W - White PCB board is made 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

12V DC+

Ground

To Male 3 Pin JST Connector

Female 3 Pin JST Connector

Female 3 Pin Connector

Male 3 Pin Connector

To JST 3 Pin Male Output

Male 3 Pin Connector

4in (139.9 mm)

+12V
DI
GND
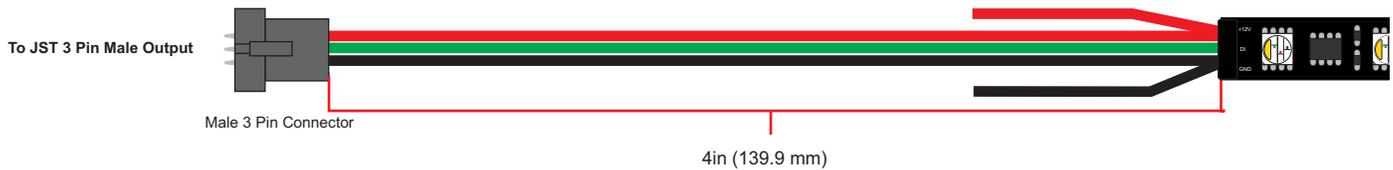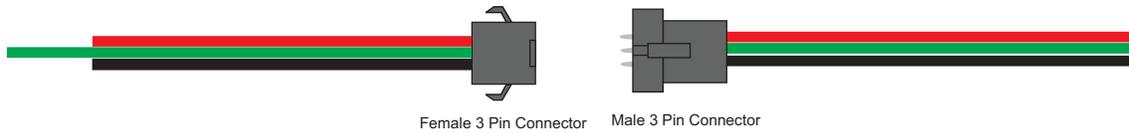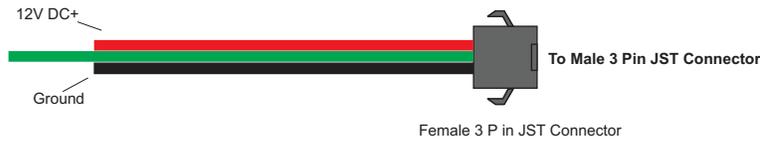
Color Code LED Strip

▬▬	+12V
▬▬	DI
▬▬	GROUND

//SIRS-E ®

Mechanical Dimensions

Top View

Item No.
PIX-12RGBWN-60XX-X

0.65in (16.50mm) 0.65in (16.50mm) 0.65in (16.50mm) 0.65in (16.50mm) 0.65in (16.50mm)

+12V

Ground

JST Input Connection

W G R B

Polarity Mark

Anode
+

-
Cathode

White V_DD Data In Data Out

Red Green Blue GND

0.393 in (9.98 mm)

0.079 in (2.00 mm)

PIX-12RGBWN-60XX-X

Cuttable Segments

1.95in (50mm) 1.95in (50mm) 1.95in (50mm)
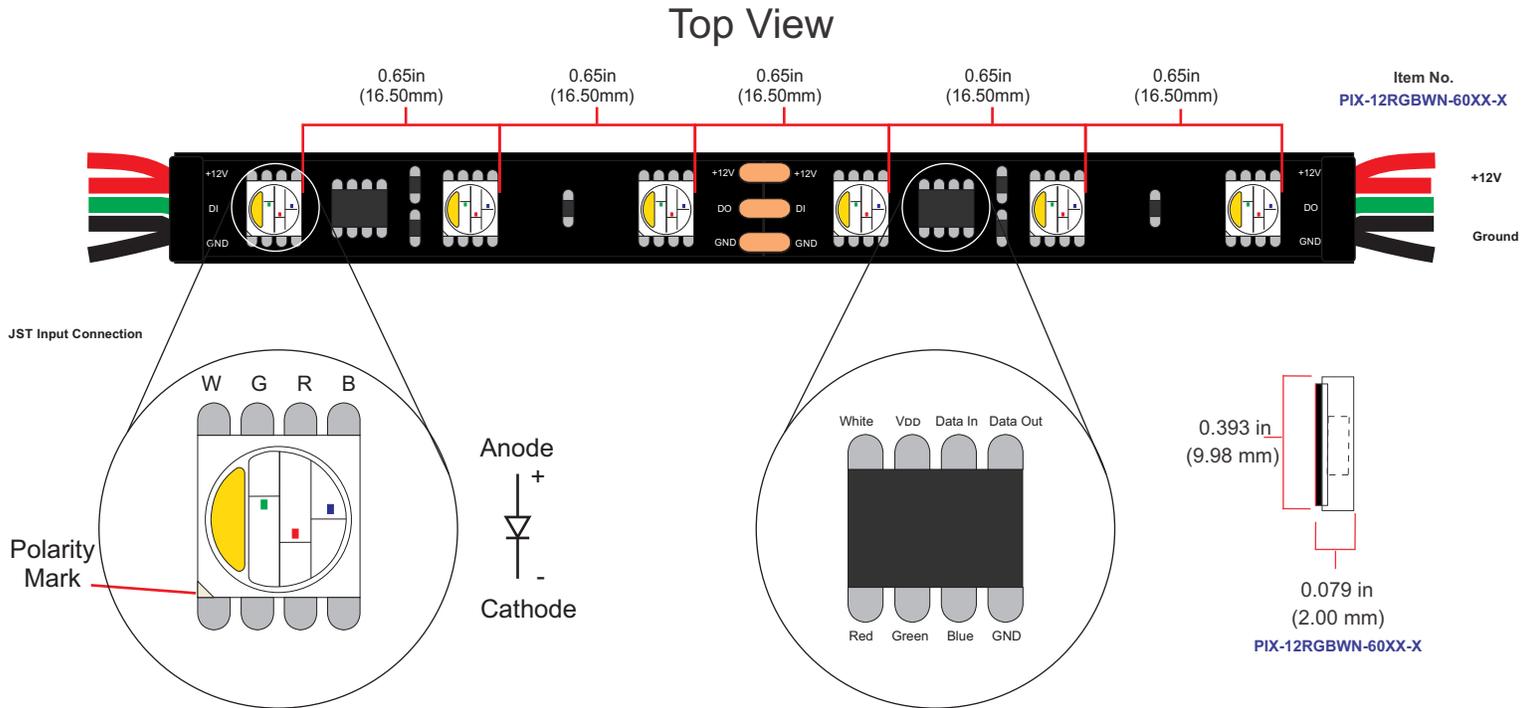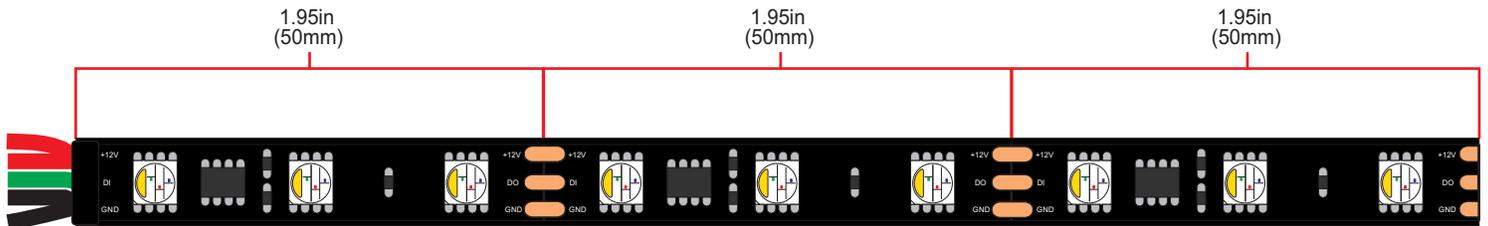
Note:

- Cuttable at every pixel segment

Weight

Product Weight: 4.2 oz,16.4 ft Reel (IP 40), Without Packaging.

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3-5

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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
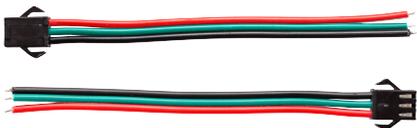
SIRS-E JST Wire Connectors

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 • **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.

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USB | **ETHERNET 1** | **ETHERNET 2** | **POWER**

MADRIX LIGHTING CONTROL
NEBULA

GROUND DATA CLOCK V+   GROUND DATA CLOCK V+

PC

5

MADRIX USB REQUIRED TO RUN SOFTWARE

Female 3 Pin Connector

NEBULA TO LED STRIP

Male 3 Pin Connector

PIX-12RGBWN-60XX-X

Note: Highly recommended to use only one power supply source

OPTION 1

USB TO NEBULA

USB TO MADRIX 5 SOFTWARE

| USB | ETHERNET 1 | ETHERNET 2 | POWER |

MADRIX LIGHTING CONTROL

NEBULA

MADRIX USB REQUIRED TO RUN SOFTWARE

PC 5

GROUND DATA CLOCK V+   GROUND DATA CLOCK V+

INPUT **12V POWER SUPPLY** P65 **OUTPUT**

Female 3 Pin Connector
(No positive wire being used)

POWER SUPPLY TO LED STRIPS

NEBULA TO LED STRIP

Male 3 Pin Connector

Note: Highly recommended to use only one power supply source

OPTION 2

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