LLX18 Pixel SPI | Dynamic Color, RGB Pixel SPI - 24 VDC

optic arts by luminii



LLRGBX18



LLRGBWX18



Features

LLRGBX18 Pixel SPI is a small profile and energy efficient pixel color-changing light strip. It is easily installed directly on to the mounting surface with double sided tape or within discrete mounting extrusions.

LLRGBX18 is a smart pixel controlled LED with a microcontroller every six LEDs resulting in a uniquely controlled pixel every 4". This advanced design allows for mind blowing animations such as cascading and chasing effects at the granular level.

Infinite RGB lighting possibilities are now achievable with ease when using the LineLED RGB X18 with SPI protocol pixel control.

Mounting
LLED strip is equipped with 3M™ adhesive transfer tape (9472LE).

Applications
Indoor only - millwork, cove, architectural reveals, undercabinet, display case, handrail, accent lighting.

Approvals
Class 2 damp listed

Operating voltage
24 VDC

Average Life (L70)
50,000 hours

Warranty
7 years

Technical information

TYPE	LLRGBX18	LLRGBWX18
OUTPUT OPTIONS	**SO**	**SO**
Lumens Output (all channels full on)	169 lm/ft	256 lm/ft
Average Power Consumption (for a 4" section)	4.5 W/ft	5.7 W/ft
Efficacy	38 lm/W	45 lm/W
Cutting Increment	3.94"	
Pitch Length	0.66"	
Max Run Length (in series)	30 ft	20 ft
Dimensions	0.39" W x 0.09" H	
Control/Dimming Protocol	SPI Protocol UCS 2903	SPI Protocol UCS 2904

RGBW (3000K)

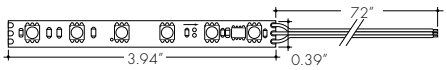
Tape	TM-30 CRI	R_f	R_g	R_9
LLRGBWX18-SO	93	91	99	64

Dominant Wavelength

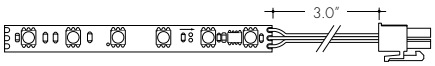
Color	RGB/RGBW
Red	621nm
Green	519nm
Blue	465nm

Section Start/End Options

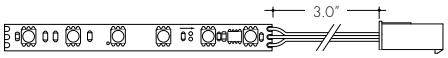
SL
Soldered lead wires (72")



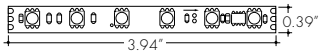
LF
Lead Female 3" cable



LM
Lead Male 3" cable



NC
No connector

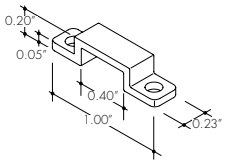


Ordering code

MODEL	OUTPUT	COLOR TEMPERATURE	SECTION START	SECTION END	LENGTH
LLRGBWX18-LineLED LLRGBWX18 LLRGBX18-LineLED LLRGBX18	SO-Standard	PXSPI-Smart Pixel Control (SPI)	SL-Soldered lead wires (72") LF-Female Quick Connect LM-Male Quick Connect NC-No Connector	SL-Soldered lead wires (72") LF-Female Quick Connect LM-Male Quick Connect NC-No Connector	Lengths specified to the inch; ordering code rounded up to one-foot increments. See chart above for max run length

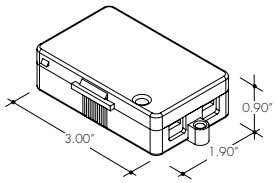
Accessories

CL1
Mounting clip

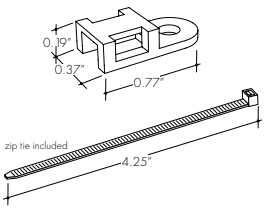


Recommended every 12" when LineLED strip is facing down

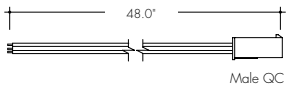
LVSP-4T-BK
Low Voltage, 4 Terminal Splice Box, Black, IP20



LL.ZIP
Strain relief clip

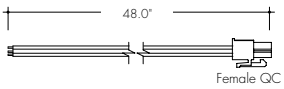


MOLEX-CON-LEAD-M-3-48
Molex Male Connector Cable, 3 pin, 48"



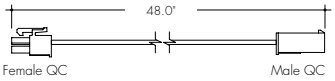
For power supply connection, not intended to be soldered to LED strip

MOLEX-CON-LEAD-F-3-48
Molex Female Connector Cable, 3 pin, 48"



For power supply connection, not intended to be soldered to LED strip

MOLEX-JC-F-M-3-48
Female/Male Jumper Cable, 3 pin, 48"



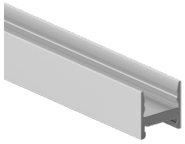
For connecting LED strips in series

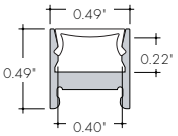
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Lens Options / Light Transmission

MK CHANNEL
-MKC
(Link to Web)

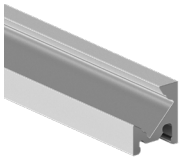


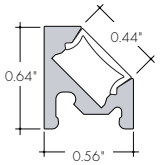


Lens	Clear	Half Frosted	Frosted	Black Louver	White Louver	Matte Frosted
Transmission %	80%	67%	48%	25%	42%	58%
Dotting*	CD	CD	CD	CD	CD	CD

*At 100% brightness

MK45V CHANNEL
-MK45VC
(Link to Web)



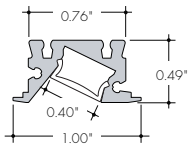


Lens	Clear	Half Frosted	Frosted	Black Louver	White Louver	Matte Frosted
Transmission %	80%	67%	46%	25%	42%	58%
Dotting*	CD	CD	CD	CD	CD	CD

*At 100% brightness

MKRA CHANNEL
-MKRAC
(Link to Web)



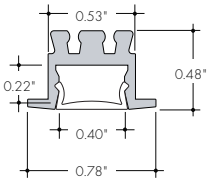


Lens	Clear	Half Frosted	Frosted	Black Louver	White Louver	Matte Frosted
Transmission %	80%	67%	47%	24%	40%	60%
Dotting*	CD	CD	CD	CD	CD	CD

*At 100% brightness

MKR CHANNEL
-MKRC
(Link to Web)



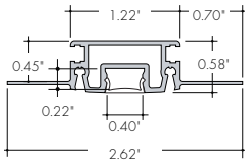


Lens	Clear	Half Frosted	Frosted	Black Louver	White Louver	Matte Frosted
Transmission %	80%	67%	48%	25%	42%	58%
Dotting*	CD	CD	CD	CD	CD	CD

*At 100% brightness

MKL CHANNEL
-MKLC
(Link to Web)



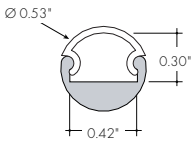


Lens	Clear	Half Frosted	Frosted	Black Louver	White Louver	Matte Frosted
Transmission %	80%	67%	48%	25%	42%	58%
Dotting*	CD	CD	CD	CD	CD	CD

*At 100% brightness

MKRO CHANNEL
-MKROC
(Link to Web)

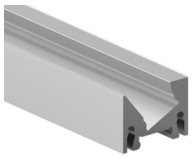


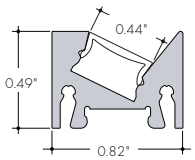


Lens	Round Frosted
Transmission %	64%
Dotting*	CD

*At 100% brightness

MKA CHANNEL
-MKAC
(Link to Web)

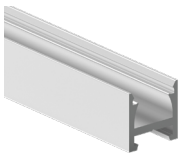


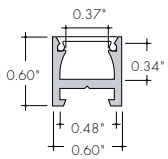


Lens	Clear	Half Frosted	Frosted	Black Louver	White Louver	Matte Frosted
Transmission %	80%	67%	46%	24%	40%	60%
Dotting*	CD	CD	CD	CD	CD	CD

*At 100% brightness

BOS CHANNEL
-BOSC
(Link to Web)



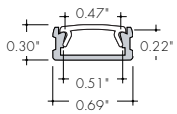


Lens	Frosted	Raised	Graze	Satin Ice
Transmission %	52%	57%	76%	71%
Dotting*	CD	ND	CD	CD

*At 100% brightness

KS CHANNEL
-KSC
(Link to Web)



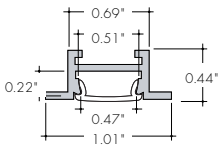


Lens	Clear	Half Frosted	Frosted	Flat Frosted	Raised	Medium
Transmission %	90%	71%	56%	56%	64%	85%
Dotting*	CD	CD	CD	CD	ND	CD

*At 100% brightness

KRS CHANNEL
-KRSC
(Link to Web)





Lens	Clear	Half Frosted	Frosted	Flat Frosted
Transmission %	90%	71%	56%	56%
Dotting*	CD	CD	CD	CD

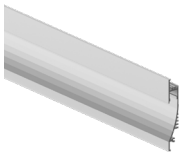
*At 100% brightness

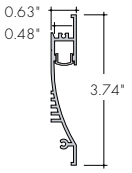
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Lens Options / Light Transmission

WALL+ CHANNEL -WPC
(Link to Web)



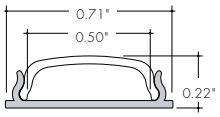


Lens	Round Frosted
Transmission %	65%
Dotting*	CD

*At 100% brightness

KLB CHANNEL -KLBC
(Link to Web)



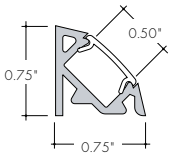


Lens	Round Frosted
Transmission %	57%
Dotting*	CD

*At 100% brightness

K45V CHANNEL -K45VC
(Link to Web)



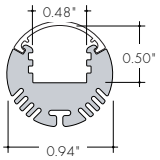


Lens	Clear	Half Frosted	Frosted	Flat Frosted	13° Semi-Frosted
Transmission %	82%	65%	51%	47%	76%
Dotting*	CD	CD	CD	CD	N/A

*At 100% brightness

RO CHANNEL -ROC
(Link to Web)



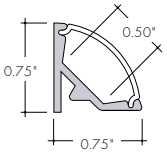


Lens	Clear	Frosted
Transmission %	86%	67%
Dotting*	CD	SD

*At 100% brightness

K45R CHANNEL -K45RC
(Link to Web)



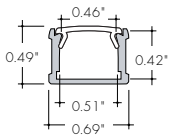


Lens	Round Frosted
Transmission %	65%
Dotting*	CD

*At 100% brightness

KM CHANNEL -KMC
(Link to Web)

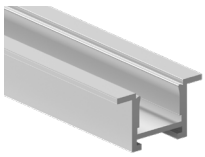


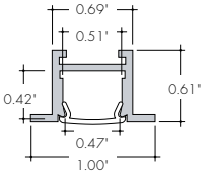


Lens	Clear	Half Frosted	Frosted	Flat Frosted	Raised	Narrow Beam Grazer
Transmission %	82%	65%	51%	47%	58%	56%
Dotting*	CD	CD	CD	ND	CD	CD

*At 100% brightness

KRM CHANNEL -KRMC
(Link to Web)



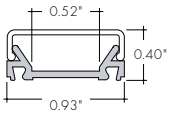


Lens	Clear	Half Frosted	Frosted	Flat Frosted	Narrow Beam Grazer
Transmission %	82%	65%	51%	47%	56%
Dotting*	CD	CD	CD	CD	CD

*At 100% brightness

BAR CHANNEL -BARC
(Link to Web)

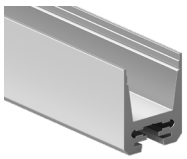


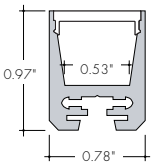


Lens	Frosted	Narrow Beam	Medium	Batwing	Asymmetric
Transmission %	65%	63%	56%	74%	56%
Dotting*	CD	CD	CD	CD	CD

*At 100% brightness

ALS20 CHANNEL -ALS20C
(Link to Web)



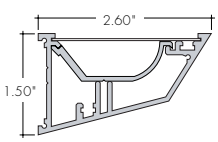


Lens	Clear	Frosted
Transmission %	54%	49%
Dotting*	CD	ND

*At 100% brightness

MCAL CHANNEL -MCALC
(Link to Web)

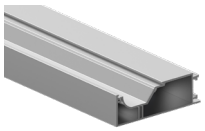


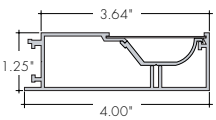


Lens	Long Throw	Tall Throw
Transmission %	91%	91%
Dotting*	CD	CD

*At 100% brightness

MREC CHANNEL -MRECC
(Link to Web)





Lens	Long Throw	Tall Throw
Transmission %	91%	91%
Dotting*	CD	CD

*At 100% brightness

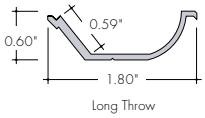
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Lens Options / Light Transmission

CLT CHANNEL -CLTC
(Link to Web)



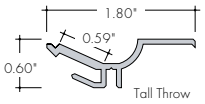


Lens	No Lens
Transmission %	100%
Dotting*	CD

*At 100% brightness

CTT CHANNEL -CTTC
(Link to Web)



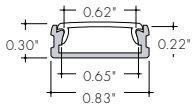


Lens	No Lens
Transmission %	100%
Dotting*	CD

*At 100% brightness

KL CHANNEL -KLC
(Link to Web)

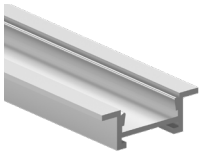


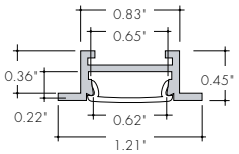


Lens	Clear	Half Frosted	Frosted
Transmission %	90%	75%	60%
Dotting*	CD	CD	CD

*At 100% brightness

KRL CHANNEL -KRLC
(Link to Web)



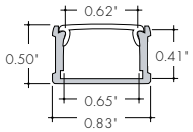


Lens	Clear	Half Frosted	Frosted
Transmission %	90%	75%	60%
Dotting*	CD	CD	CD

*At 100% brightness

KXL CHANNEL -KXLC
(Link to Web)

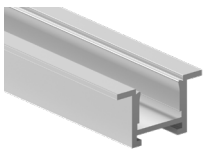


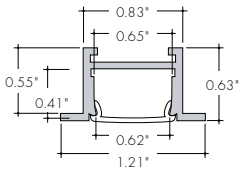


Lens	Clear	Half Frosted	Frosted
Transmission %	86%	69%	54%
Dotting*	CD	CD	CD

*At 100% brightness

KRXL CHANNEL -KRXLC
(Link to Web)



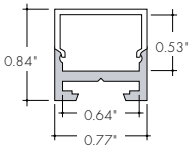


Lens	Clear	Half Frosted	Frosted
Transmission %	86%	69%	54%
Dotting*	CD	CD	CD

*At 100% brightness

CLA CHANNEL -CLAC
(Link to Web)



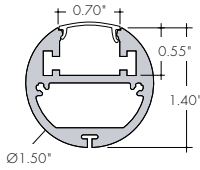


Lens	Rounded Square Frosted	Square Frosted
Transmission %	62%	65%
Dotting*	SD	SD

*At 100% brightness

RO15 CHANNEL -RO15C
(Link to Web)



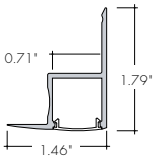


Lens	Clear	Frosted
Transmission %	76%	50%
Dotting*	CD	SD

*At 100% brightness

ALE CHANNEL -ALEC
(Link to Web)



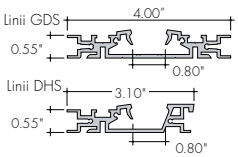


Lens	Clear	Frosted
Transmission %	58%	37%
Dotting*	CD	ND

*At 100% brightness

LIN CHANNEL -LINC
(Link to Web)





Lens	Frosted	Frosted Silicone	No Lens
Transmission %	48%	54%	82%
Dotting*	SD	SD	CD

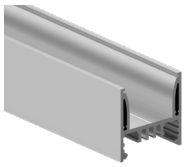
*At 100% brightness

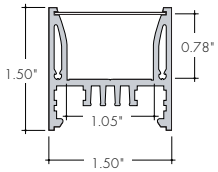
LLX18 Pixel SPI | Dynamic Color, RGB Pixel SPI - 24 VDC

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Lens Options / Light Transmission

KILO CHANNEL
-KILOC
(Link to Web)

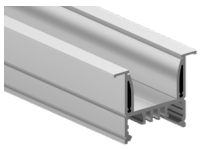


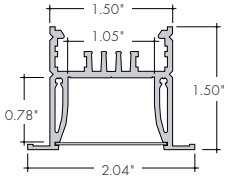


Lens	Clear	Frosted	No Lens
Transmission %	85%	75%	90%
Dotting*	CD	ND	CD

*At 100% brightness

KILOR CHANNEL
-KILORC
(Link to Web)

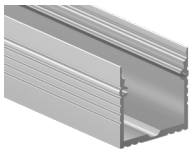


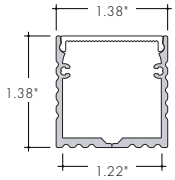


Lens	Clear	Frosted	No Lens
Transmission %	85%	75%	90%
Dotting*	CD	ND	CD

*At 100% brightness

PLA CHANNEL
-PLAC
(Link to Web)





Lens	Clear	Frosted
Transmission %	56%	34%
Dotting*	CD	ND

*At 100% brightness

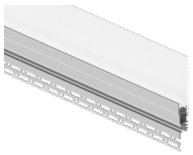
LLX18 Pixel SPI | Dynamic Color, RGB Pixel SPI - 24 VDC

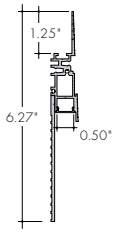
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Lens Options / Light Transmission

KREST EDGE CHANNEL -KRESTC-E

(Link to Web)



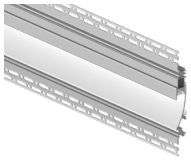


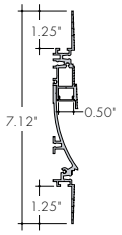
Lens	Frosted
Transmission %	45%
Dotting*	CD

*At 100% brightness

KREST REVEAL CHANNEL -KRESTC-R

(Link to Web)



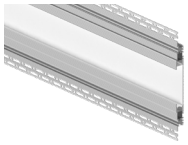


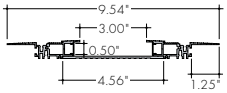
Lens	Frosted
Transmission %	45%
Dotting*	CD

*At 100% brightness

KREST DUO CHANNEL -KRESTC-D

(Link to Web)



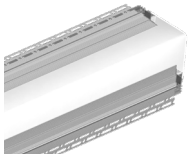


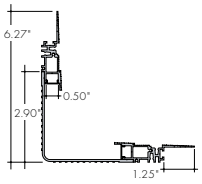
Lens	Frosted
Transmission %	41%
Dotting*	CD

*At 100% brightness

KREST CORNER CHANNEL -KRESTC-C

(Link to Web)





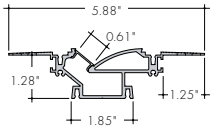
Lens	Frosted
Transmission %	31%
Dotting*	CD

*At 100% brightness

KREST WASH CHANNEL -KRESTC-W

(Link to Web)





Lens	Frosted
Transmission %	45%
Dotting*	CD

*At 100% brightness

Installation

All mounting channels are field cuttable using miter saw with circular blade suitable for cutting aluminum.

Ordering

Extrusions are sold separately. View respective specsheets for details on ordering extrusions and their accessories (endcaps, mounting brackets, etc).

Led Dotting Reference

Use complete Dotting Chart Tool online for more dotting information

Dotting Chart Tool

I'm also click-able

CD - Clear Dotting **SD** - Slight Dotting **ND** - No Dotting

Power Consumption

Tested at full power with PDC Series power supplies.

	LLRGBX18		LLRGBWX18	
Nominal Length	W/ft	Total Wattage	W/ft	Total Wattage
1	4.6	4.6	5.7	5.7
2	4.6	9.1	5.7	11.3
3	4.5	13.1	5.7	16.5
4	4.5	17.4	5.6	21.9
5	4.4	21.7	5.5	27.1
6	4.4	25.8	5.5	32.3
7	4.3	29.8	5.4	37.1
8	4.3	33.4	5.3	41.6
9	4.2	37.2	5.3	46.4
10	4.2	40.9	5.2	51.2
11	4.1	45.7	5.1	57.4
12	4.0	49.2	5.1	61.9
13	4.0	52.3	5.0	66.0
14	3.9	55.6	4.9	69.6
15	3.9	58.8	4.8	73.0
16	3.8	61.8	4.7	76.2
17	3.7	64.0	4.6	78.4
18	3.7	66.8	4.5	81.2
19	3.7	69.4	4.4	83.6
20	3.6	72.0	4.3	86.0
21	3.6	74.6		
22	3.5	75.9		
23	3.4	78.2		
24	3.4	80.2		
25	3.3	82.3		
26	3.3	84.3		
27	3.2	85.0		
28	3.1	86.7		
29	3.1	88.2		
30	3.0	89.7		

Voltage Drop Calculator

The below chart assumes nominal voltage of 24 Volts and a Voltage Drop Allowance of 3% through the wire

Wattage [W]	Maximum Wire Length From Power Supply to Start of Run [ft]						
	12 AWG	14 AWG	16 AWG	18 AWG	20 AWG	22 AWG	24 AWG
5	1088.2	684.4	430.3	270.6	170.2	107.1	67.3
10	544.1	342.2	215.1	135.3	85.1	53.5	33.7
15	362.7	228.1	143.4	90.2	56.7	35.7	22.4
20	272.0	171.1	107.6	67.7	42.6	26.8	16.8
25	217.6	136.9	86.1	54.1	34.0	21.4	13.5
30	181.4	114.1	71.7	45.1	28.4	17.8	11.2
35	155.5	97.8	61.5	38.7	24.3	15.3	9.6
40	136.0	85.5	53.8	33.8	21.3	13.4	8.4
45	120.9	76.0	47.8	30.1	18.9	11.9	7.5
50	108.8	68.4	43.0	27.1	17.0	10.7	6.7
55	98.9	62.2	39.1	24.6	15.5	9.7	6.1
60	90.7	57.0	35.9	22.6	14.2	8.9	5.6
65	83.7	52.6	33.1	20.8	13.1	8.2	5.2
70	77.7	48.9	30.7	19.3	12.2	7.6	4.8
75	72.5	45.6	28.7	18.0	11.3	7.1	4.5
80	68.0	42.8	26.9	16.9	10.6	6.7	4.2
85	64.0	40.3	25.3	15.9	10.0	6.3	4.0
90	60.5	38.0	23.9	15.0	9.5	5.9	3.7
96	56.7	35.6	22.4	14.1	8.9	5.6	3.5

LLX18 Pixel SPI | Dynamic Color, RGB Pixel SPI - 24 VDC

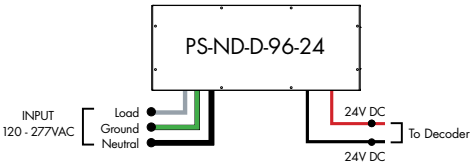
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Power Supplies

See fixture and power supply instructions & spec sheet for wiring information. Dimming possible in select models - view Luminii website for list of compatible dimmers.

Ordering Code **Non-Dimming Power Supply 120VAC - 277VAC** Requires Controller and Decoder

MODEL	INPUT CONTROL	ENVIRONMENT	WATTAGE	OUTPUT
PS - Power Supply, 120-277VAC	ND - Non Dimming	D - Dry	96 - 96 Watts	24 - 24 VDC



MODELS	96W
Length	14.40"
Width	5.20"
Depth	2.60"

Touch DMX Controller

Touchscreen digital LED controller



MODEL

TSDMX-E

TSDMX-E - Touchscreen DMX controller

Programmable advanced DMX512 lighting controller featuring a touch-screen interface. Operates as stand alone controller or integrated with most architectural lighting control systems. Can controller endless DMX512 enabled devices.

Mounts to standard single or dual gang wall box with the included power supply inside the junction box. Terminal block design for power and data connections.

Features

- Sleek glass design which sits 0.43" from the wall
- Graphical color display to show selected environment
- Color/dimmer/speed palette
- Color temperature mixing
- Touch sensitive buttons. No mechanical parts
- Touch sensitive wheel allows for accurate color selection
- Multi-zone microSD memory
- Multi-room control with 500 scenes, 10 zones
- 1024 DMX channels. Control 340 RGB fixtures
- USB & Ethernet connectivity for programming and control

Power Supply

7 VDC (included)

Programmability

PC, Mac, Tablet, Smartphone

Output Signal

DMX512 (1024 channels)

Color Parameters

- Brightness
- Saturation
- Speed of color changing sequence
- Fading / dimming / brightness

Smart Pixel Decoder

SPI signal to DMX signal decoder



ORDERING CODE

MODEL

SR-DMX-SPI

SR-DMX-SPI - Smart Pixel Decoder

The SR-DMX-SPI is a smart LED pixel decoder that controls RGB/RGBW pixel LED strips with SPI signal. Designed with an OLED backlit panel, the pixel controller allows for easy configuration of most settings. Four push buttons are available for control of the LED functions.

*For pixel only.

Features

- 2 in 1 in-Wall Controller: DMX Control or Wireless RGB-W
- SPI signal output for RGB/RGBW pixel light control
- DMX512 controllable and RF/WIFI remote controllable
- Capable of addressing up to 1020 RGB pixels & 765 RGBW pixels
- OLED panel allows for easy configuration

Operating Voltage

12 - 36V DC

Power capacity

up to 96W at 24V

Operating temperature range

from -4°F to +122°F in case