

Underscore InOut Pixel is a flexible, continuous linear lighting system designed for exterior applications. This flexible system allows for personalized lines of light with dynamic, constantly changing colors. You can display a different color or effect independently every 3-1/4 inches. The system is controlled via SPI protocol for quick effect transitions and utilizes 22 RGBW LEDs per foot, allowing for precisely defined colors. Underscore InOut Pixel is an ideal solution for spaces requiring colorful and dynamic lighting.

Luminaire characteristics:

MODEL	LED	POWER (W/ft)	LUMENS (lm/ft)	EFFICACY (lm/W)	MAX CANDELA (cd)
IUP16-T	100% White	2.4W	61	25	18
	100% R/G/B	2.7W	32	12	9

Power can vary with the selected driver.

Source:  RGBW, White 4000K, 80CRI (LM-80 tested)

Lumen maintenance:

White LED on:

90% of initial lumens at 100 000 hours (L90 B50)
Ta 77°F (25°C)

80% of initial lumens at 46 000 hours (L80 B50)
Ta 104°F (40°C)

1 color LED on:

70% of initial lumens at 34 000 hours (L70 B50)
Ta 77°F (25°C)

70% of initial lumens at 19 000 hours (L70 B50)
Ta 104°F (40°C)

3 color LED on:

70% of initial lumens at 19 000 hours (L70 B50)
Ta 77°F (25°C)

70% of initial lumens at 11 000 hours (L70 B50)
Ta 104°F (40°C)

Optic:

Underscore InOut can be used to create straight or curved lines on flat surfaces. Darkspot free lighting is guaranteed along the entire strip profile up to the end parts.

Material:

Coextruded high performance polymer extrusion IP68 factory sealed assembly. Designed for extreme temperatures. Integral stainless steel splint system reducing mechanical stress and increasing reliability.

Mounting:

Universal surface mounted, using aluminum profile or stainless steel clips.

Electrical:

24Vdc, supplied with patented IP68 male and female connectors. Remote power supply is not included and needs to be ordered separately. See page 3 for details on remote options.

Dimming:

DMX control with SPI protocol. SPI converters are not included and need to be ordered separately. See page 2 and 3 for details.

Finish:

White polymer extrusion with milky finish. Extruded anodized aluminum mounting profile or stainless steel mounting clips.

Operating temperature:

Underscore Pixel: -22°F to +113°F (-30°C to +45°C)
SPI converter devices: 32°F to 122°F (0°C to 50°C)

Weight:

0.2lb/ft (0.1kg/ft)

Warranty:

5 year limited warranty

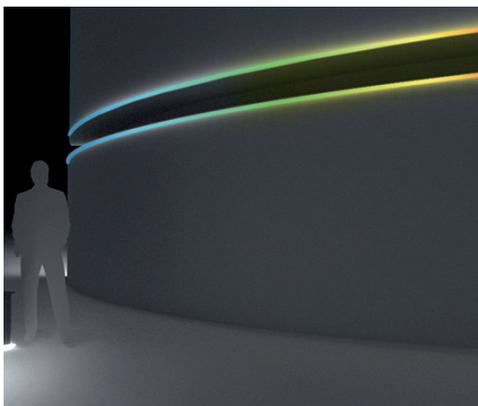
Rating:

IP68, IK10

Certification:



cULus for wet location



ORDERING INFO

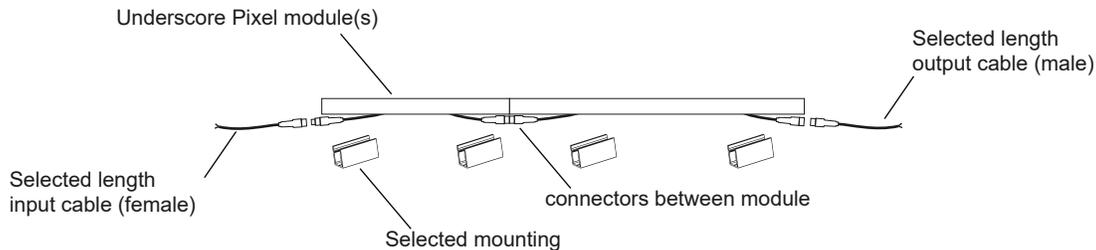


PRODUCT CODE

MODEL	LED	LENGHT	MOUNTING ¹	INPUT CABLE	OUTPUT CABLE	FINISH
IUP16 Underscore Pixel 5/8" (16mm) Top bend	RGBW40 RGB Led, white 4000K		AL Aluminum low support clips (Curved installation) AH Aluminum high support clips (Curved installation) CL Stainless steel low support clips (Curved installation) CH Stainless steel high support clips (Curved installation) LP Aluminum low profile (strait installation) HP Aluminum high profile (cut to length of each module) (strait installation)	A 4.5" (115mm) input cable (female) B 5' (1500mm) input cable (female) N No cable	D 4.5" (115mm) Output cable (male) E 5' (1500mm) Output cable (male) N No cable (Last module of line)	01 White <input type="checkbox"/>

¹ See page 6 for mounting details and dimensions.

INCLUDED IN PRODUCT CODE



REMOTE LED DRIVER OPTIONS
(TO BE ORDERED SEPARATELY)

Watts	Voltage	Rated	Dimming protocol	Dimensions	Max distance* 18AWG
4449-0024A-060-UNV-ND					
<input type="checkbox"/>					
60	120-277V	Indoor	NO DIMMING	12" x 8" x 4" (305 x 203 x 102mm)	30ft(9m)
4549-0024A-060-UNV-ND					
<input type="checkbox"/>					
60	120-277V	Outdoor	NO DIMMING	14" x 5" x 3" (356 x 127 x 76mm)	30ft(9m)

*For longer remote distance, contact customer service.

ACCESSORY



CABLES

(INCLUDED IN PRODUCT AS SELECTED IN ORDERING INFO)

IX494 - 4.5" (115mm) ø0.15in input cable with female connector. 24AWG, black.

IX573 - 5' (1500mm) 

IX181 - End cap 

IX576 - 4.5" (115mm) ø0.15in output cable with male connector. 24AWG, black.

IX577 - 5' (1500mm) 

JUMPERS

(TO BE ORDERED SEPARATELY)

IX720 - Jumper cable Ø 0.15" (3.9mm) with male and female connectors. 23.6" (600mm), 24AWG, black



Quantity:

IX721 - Jumper cable Ø 0.15" (3.9mm) with male and female connectors. 59" (1500mm), 24AWG, black

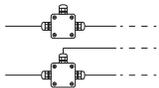


Quantity:

ELECTRONIC DEVICES

(TO BE ORDERED SEPARATELY)

4543 - Wet location connection box
For cable Ø 3/16" to 7/16"
(4mm to 11mm)



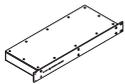
Quantity:

4640 - SDI - Designer Serial Data Interface (RS485 in, DC Power in, SPI Out)
Compatible with Pharos DMX controller only.
3.54" x 1.39" x 1.39"
(90xmm x 35mm x 35mm)



Quantity:

4641 - EDN 10 - Designer Ethernet Data Node 10
(1+1 Ethernet, 10 DMX/RDM) 100-240V AC, 50-60Hz, 0.25-0.12A, 25W typical (30W maximum)
Compatible with Pharos DMX controller only.
19" x 7.11" x 1.75"
(482xmm 180mm x 44mm)



Quantity:

4643 - PAC S - PoE Ethernet switch with 4 Port, Class 2, 24Vdc.
Compatible with Pharos DMX controller only.
4.2" x 3.5" x 1.6"
(108mm x 90mm x 40mm)



Quantity:

4642 - EDN 20 - Designer Ethernet Data Node 20
(1+1 Ethernet, 20 DMX/RDM) 100-240V AC, 50-60Hz, 0.25-0.12A, 25W typical (30W maximum)
Compatible with Pharos DMX controller only.
19" x 7.11" x 1.75"
(482xmm 180mm x 44mm)



Quantity:

4644 - TPS 5 - Designer touch panel station 5".
Compatible with Pharos DMX controller only.
5.5" x 3.8" x 1.1"
(140mm x 97mm x 28mm)



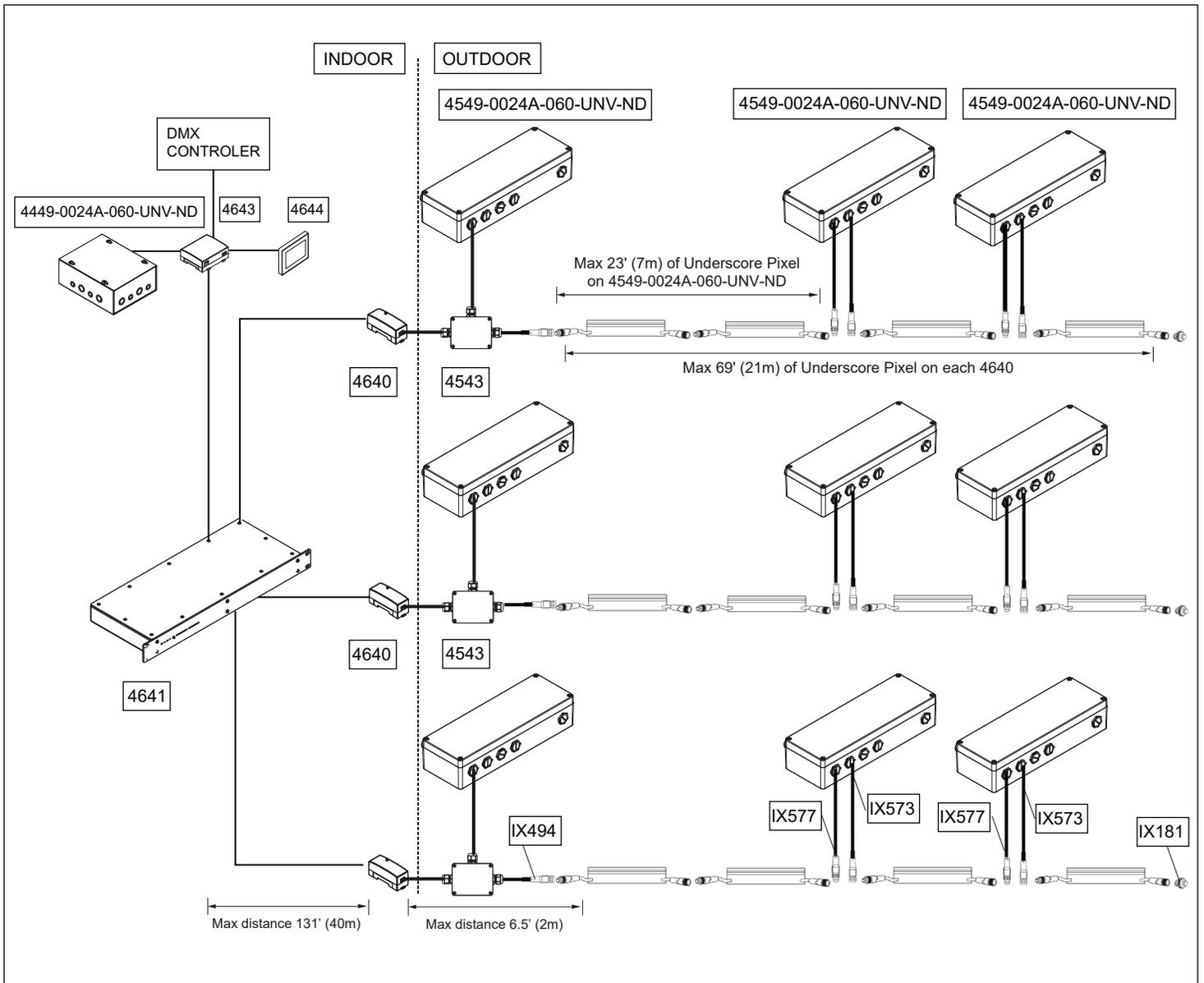
Finish: 01 - White
 02 - Black

Quantity:

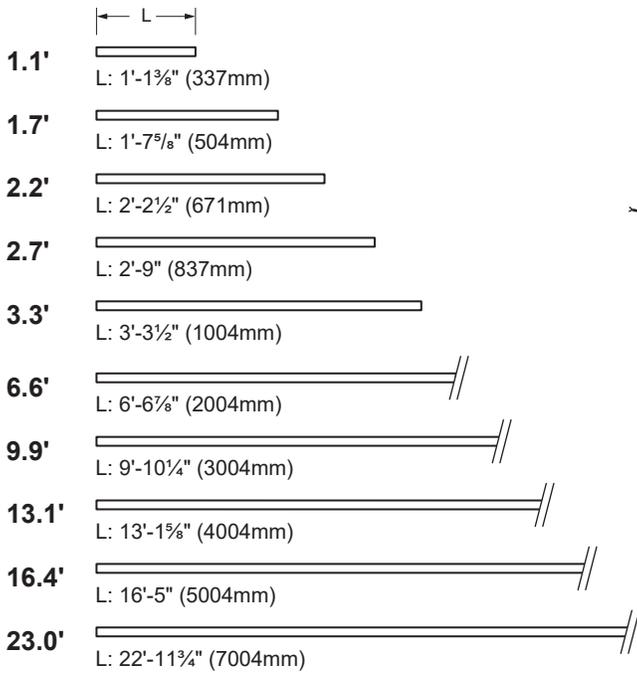
See page 4 for typical wiring diagram.
We recommend consulting our technical team before ordering.

TYPICAL WIRING DIAGRAM

We recommend consulting our technical team before ordering.

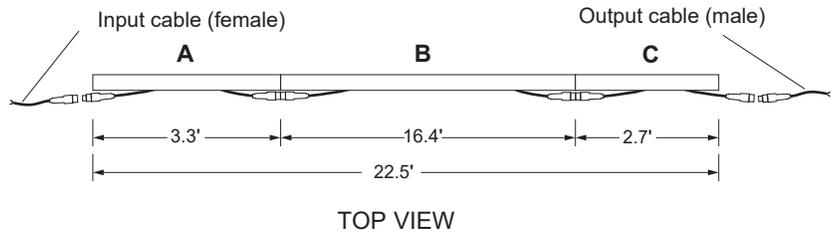


LENGTHS



COMBINED MODULES

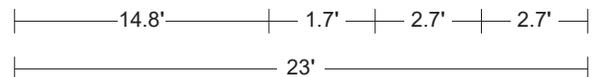
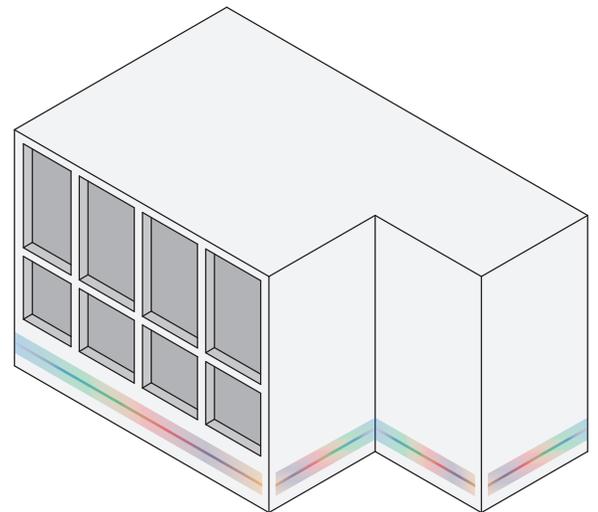
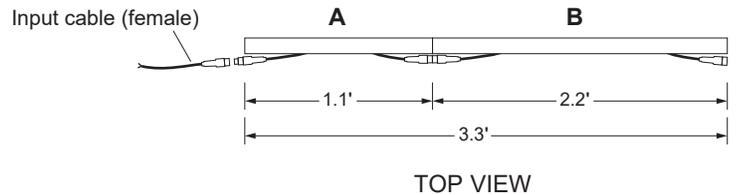
We supply predefined combinations in the ordering info page 2. This includes up to 3 modules in continuous row for a maximum of 23' (7m) per feed as well as mounting and input / output cables. See in the length roll down menu the module in each standard length composition on page 2.



Standard modules can be combined in continuous rows, to create other length options. Thanks to the side positioning of the connectors, dark areas are avoided.

To get the desired length, simply choose standard modules to combine (example : **A+B**). For in-line modules (**B**), no input cable is required.

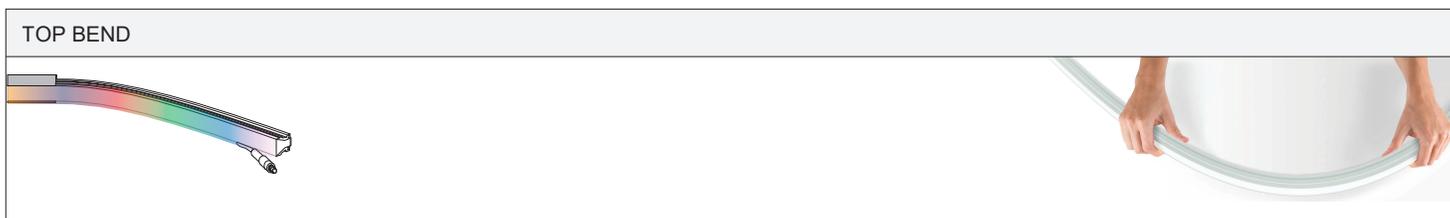
Each module is supplied with 3" (80mm) long cable with connector, to interconnect the modules, up to 23' (7004mm) long.



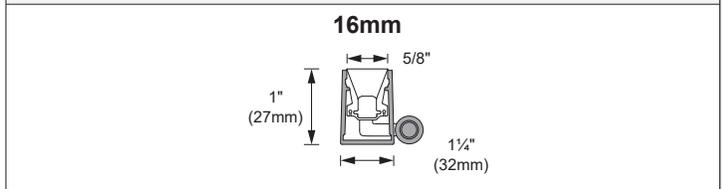
ATTENTION: When ordering, each part of the design must be calculated separately.

- 14.8' + 1.7' + 2 x 2.7'
- 1 x 23'

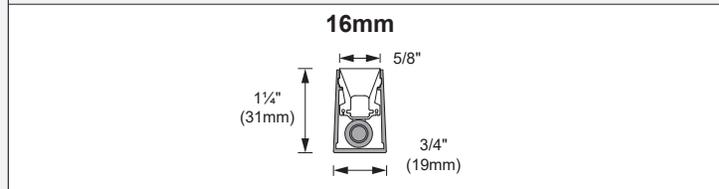
MODEL AND MOUNTINGS



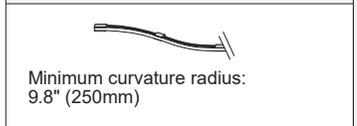
LOW CLEARANCE MOUNTING - 1" HEIGHT
WITH EXPOSED CONNECTORS



HIGH PROFILE MOUNTING - 1 1/4" HEIGHT
WITH HIDDEN CONNECTORS



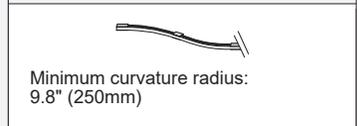
CURVED INSTALLATION



STRAIGHT INSTALLATION



CURVED INSTALLATION



STRAIGHT INSTALLATION



CLIP OPTIONS

AL - Anodized aluminum clips
X142

CL - Stainless steel clips
X141

PROFILE OPTION

LP - Anodized aluminum high profile

- X133 Low profile with opening L: 0.8' (250mm)
- X134 Low profile with opening L: 1.6' (500mm)
- X135 Low profile with opening L: 3.3' (1000mm)
- X136 Low profile with opening L: 6.5' (2000mm)
- X137 Pair of low profile terminal with opening
- X138 Low profile no opening L: 3.3' (998mm)
- X139 Low profile no opening L: 5.9' (1790mm)

CLIP OPTIONS

AH - Anodized aluminum clips
X132

CH - Stainless steel clips
X131

PROFILE OPTION

HP - Anodized aluminum high profile

- X129 L:3.3' (1000mm)
- X130 L:6.5' (1981mm)

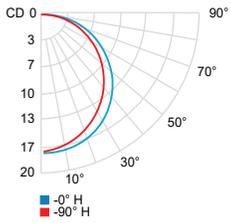
MODULE LENGTH Ft (mm)	SPRING CLIP QTY *
1'-1 3/8" (337mm)	2
1'-7 5/8" (504mm)	3
2'-2 1/2" (671mm)	3
2'-9" (837mm)	4
3'-3 1/2" (1004mm)	4
6'-6 5/8" (2004mm)	6
9'-10 1/4" (3004mm)	9
13'-1 5/8" (4004mm)	12
16'-5" (5004mm)	14
22'-11 3/4" (7004mm)	18

* Spring clips quantity included if AL, AH, CL or CH is selected in ordering info page 2.

PHOTOMETRIC DATA

LED	POWER (W / ft)	OPTIC	LUMEN (lm / ft)	EFFICACY (lm / W)	MAX CANDELA (cd)	BUG	MODEL
100% WHITE	2.4W	General light	61	25	18	B0 U1 G0	IUP16-T
100% R/G/B	2.7W		32	12	9		

General light (White)



General light (R/G/B)

