Plastic Smart PXL40 DOT DATASHEET
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PLASTIC SMART PXL40 DOT

High Resolution Smart 40mm RGB pixel dot (24V)

SMART.
PXL
16-BIT

AUSTRALIAN
DESIGNED + MADE

Light weight and reliable, ENTTEC's high-resolution, individually addressable Plastic SMART PXL 40 Dots are designed and made in Australia to withstand the harshest of environments.

Easy to install and configure into any conceivable shape, Smart PXL Dots create spectacular, crisp lighting effects while adding a stylish design element to your venue or installation chose between custom options for pitch and a selection of voltages.

Engineered to take any architectural, commercial or entertainment project to the next level, the SMART PXL range has been created by lighting professionals for lighting professionals.

FEATURES

- **Available in 24V RGB option**
- **Auto-addressing LED pixels for fast commissioning.**
- **Customizable cable length.**
- **Premium IP-rated connectors at each end.**
- **Dome lens made from Clear or Diffuse optical grade polycarbonate.**
- **16-bit control for ultra-smooth dimming or option for simulated 8-bit control (ONLY with ENTTEC pixel controllers) for reduced channel quantity.**
- **Control protocol SPXL 16-bit. Refer to www.enttec.com/support/supported-led-pixel-protocols/ for list of compatible ENTTEC controllers.**
- **Reverse polarity protection**
- **Voltage transient protection**
- **IK10 & vibration resistant (IEC68-2-6)**
- **This product requires an external DC power supply and data source for operation. (not included).**

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SPECIFICATION
Electrical

Body material	Injection molded PVC - UV resistant		
Lens material	Optical Grade polycarbonate		
Dot pitch	*Customization options available*		
Weight	Approx. 48g/dot (excl lead in & out)		
IK & IP rating	IK10 & IP67		
Operating temperature	-20°C to +50°C		
Input voltage	24V		
Heat dissipation (maximum per Dot)	1.5Watts		
Maximum power	1.6W/dot		
Maximum current draw	60mA/dot		
Rated current throughput capacity	10A		
Lumen (lm)	Diffuser	Dome Clear	Dome Diffuse
	Red	7.5	6.2
	Green	17.3	14.3
	Blue	4.3	3.6
	White (R+G+B)	29.1	24.1
Efficacy (lm/watt)	White (R+G+B)	18.2	15.1
Cable resistance	0.0132 Ohm/m		
Cable thickness	16AWG		
Incoming cable length (connector to first dot)	*Customization options available*		
Outgoing cable length (last dot to connector)	*Customization options available*		
Connector type	*Customization options available*		
24V Connector pinout	Pin 1	Pin 2	Pin 3	Pin 4
	0V	Data	N/C	+24V
Warranty	3 Year return to base manufacturer warranty.		

Control

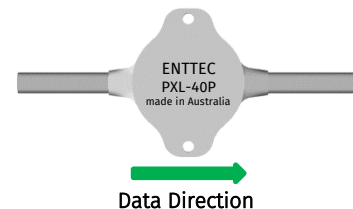| LED source	6 pcs RGB SMD3535	
Control protocol	ENTTEC SPXL-8 / SPXL-16	
SPXL-8 channel footprint (8-bit - RGB)	3 DMX channels/dot Red | Green | Blue	
SPXL-16 channel footprint (16-bit - RGB)	6 DMX slots/dot Coarse | Fine | Coarse | Fine | Coarse | Fine	
Colour resolution (8-bit - RGB)	256^3 = 16.7 million	
Colour resolution (16-bit RGB)	65536^3 = 281.4 Quadrillion	
Dots controllable per DMX universe:	SPXL-8	170 dots
	SPXL-16	85 dots
LED lifetime	**50,000 hrs (L70)**	
Compatible protocol	UCS8903 (Only 16-bit)	

Installation
Before handling or specifying this product, always refer to its installation guide and familiarize yourself with the safety notes. If ever unsure consult ENTTEC.

Data Direction
The pixel data in the Plastic SMART PXL40 Dot must travel in a specific direction for it to function. This direction can be identified through the direction of the arrow printed on the center of PCB.

In the event surface of PCB is inaccessible, data direction always flows as illustrated with respect to ENTTEC logo on the bottom of housing.

Data Direction

Connecting Smart PXL Dots
Use any ENTTEC pixel controller compatible with the voltage range of the Plastic Smart PXL40 dot. For the latest information visit:
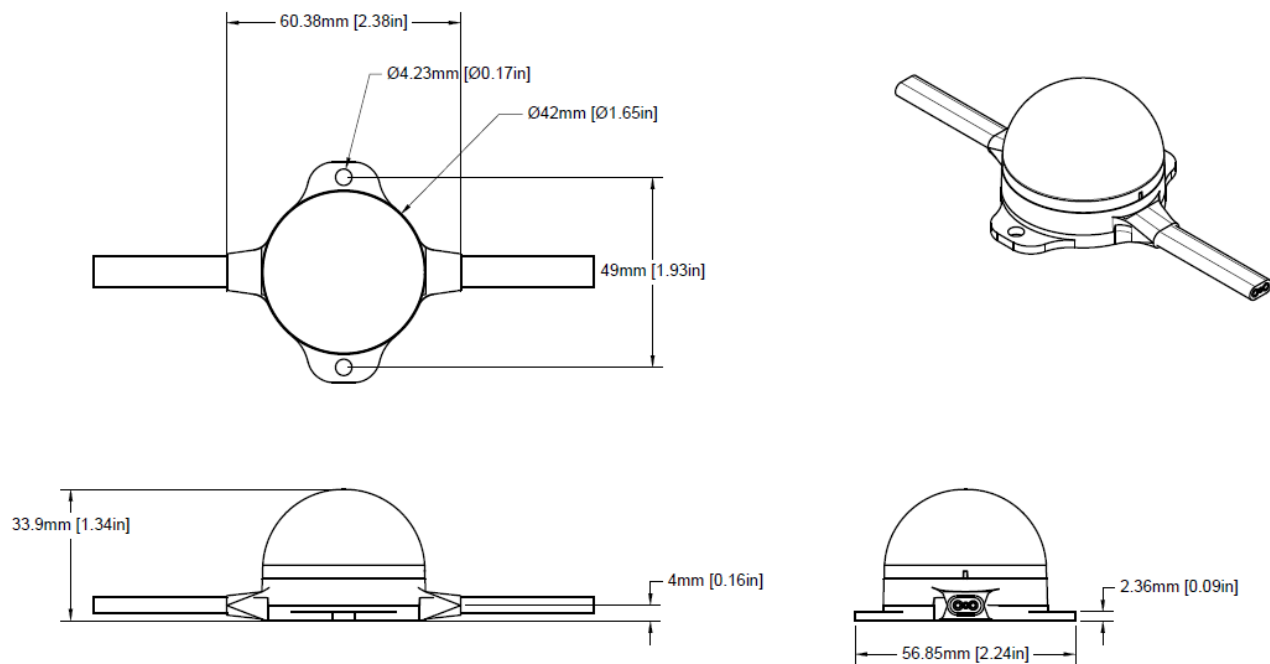www.enttec.com/range/controls/addressable- led-pixel-control/.

Certification

Salt corrosion test (eg ASTM B117) not applicable due to non-metallic, inherently salt resistant body and lens material.
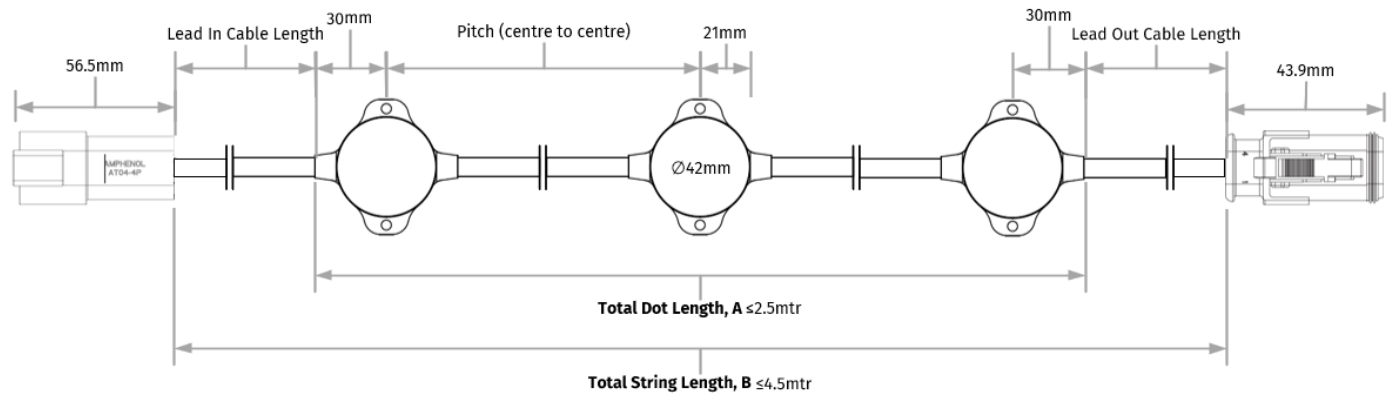
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PHYSICAL DIMENSIONS
Plastic Smart PXL40 Dot

60.38mm [2.38in]

Ø4.23mm [Ø0.17in]

Ø42mm [Ø1.65in]

49mm [1.93in]

33.9mm [1.34in]

4mm [0.16in]

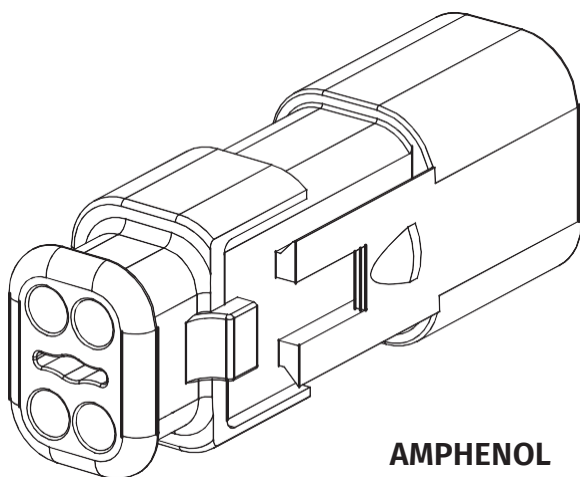2.36mm [0.09in]

56.85mm [2.24in]

Enttec support cable length customization. Please see below illustration for length limit.
Refer to order code section and reach out to ENTTEC or your ENTTEC dealer to discuss your project needs.
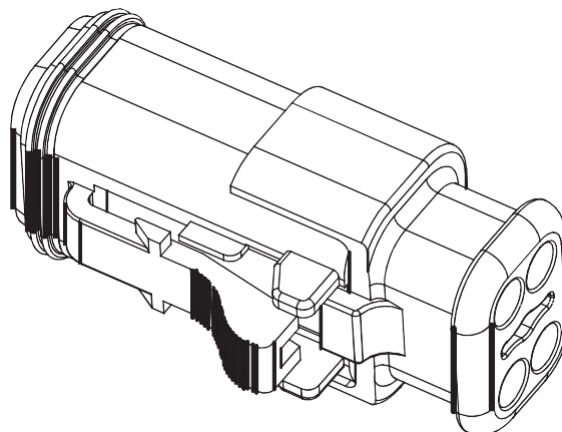
Cable length customisation limit

56.5mm

Lead In Cable Length

30mm

Pitch (centre to centre)

21mm

30mm

Lead Out Cable Length

43.9mm

AMPHENOL
AT04-4P

Ø42mm

Total Dot Length, A ≤2.5mtr

Total String Length, B ≤4.5mtr

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PREMIUM CONNECTORS

For ultimate reliability, ENTTEC offers Amphenol AT series connectors (compatible with DEUTSCH DT systems).

AMPHENOL AT04-4P-SR02BLK

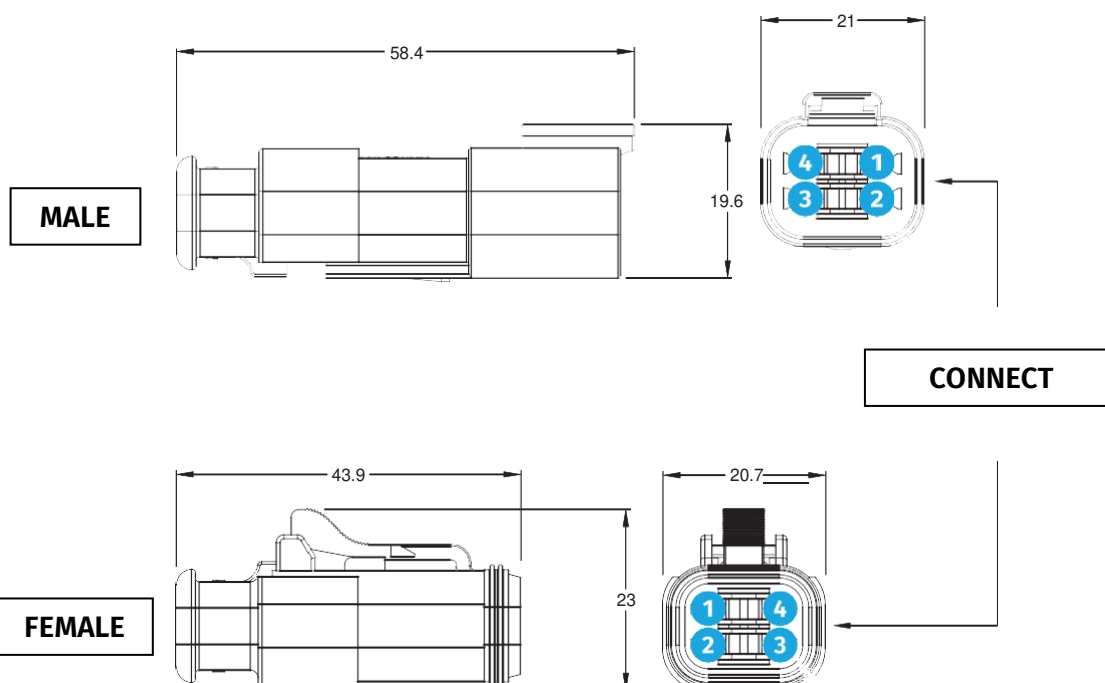4-way receptacle, **MALE** connector with strain relief, reduced diameter seal, black.

AMPHENOL AT06-4S-SR02BLK

4-way plug, **FEMALE** connector with reduced diameter seal (E-Seal), endcap, and strain relief, black.

Pin output configurations

	PIN 1	PIN 2	PIN 3	PIN 4
24V	0V	DATA	NC	+24V DC

MALE

58.4

21

19.6

CONNECT

FEMALE

43.9

20.7

23

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ORDERING INFORMATION

Plastic Smart PXL40 Dots

Visit ENTTEC's website to shop for Plastic SMART PXL40 Dots.
To discuss customization options, pricing and lead times contact our sales team at sales@enttec.com.

Order codes

Order codes are created using the table below:

Product code	Diffuser type	Dots per string	Pixel pitch (mm)	Lead in length (mm)	Lead out length (mm)	LED type	Lead in connector type	Lead out connector Type[1]	Voltage
73040 (Plastic Smart PXL40 Dot)	DC (Dome Clear) / DD (Dome Diffuse)	Min: 1 Max: 20	Min: 125 Max: 2000 Increment: 25	Min: 125 Max: 2000 Increment: 25	Min: 125 Max: 2000 Increment: 25	RGB	ATM (Amphenol AT Series **Male** - Connectors will be wired as per the diagrams above based on voltage) / BET (Custom - Bare end tinned)	ATF (Amphenol AT Series **Female** - Connectors will be wired as per the diagrams above based on voltage) / BET (Custom - Bare end tinned)	24V

Please refer to cable customizable section for length limit.
Refer to order code section and reach out to ENTTEC or your ENTTEC dealer to discuss your project needs.

Example order codes

The codes below reflect options shown within the table above.

Item	Order code
Plastic Smart PXL40 DOT / Dome Clear Lens / 10 dots per string/ 150mm pitch/ 500mm lead in cable/ 500mm lead out cable/ RGB/ Amphenol AT Series male input/ Amphenol AT Series female output/24 volts	73040-DC-10-150-500-500-RGB-ATM-ATF-24

enttec.com

MELBOURNE AUS / **LONDON** UK / **RALEIGH-DURHAM** USA / **DUBAI** UAE

Due to constant innovation, information within this document is subject to change.

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[1] ENTTEC Termination End Cap [73015] only compatible with Female Amphenol AT series connector.