

Metal SMART PXL40 DOT - Datasheet

High Resolution Smart 41.5mm RGB pixel dot. Default String of 20 with 125mm pitch



Robust and reliable, ENTTEC's high-resolution, individually addressable Metal Smart PXL40 Dots are made from marine grade aluminium to withstand the harshest of environments.

Engineered for flexibility, Metal Smart PXL40 Dots can be easily configured into virtually any shape, enabling stunning, precise lighting effects that double as a bold design feature.

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.

Contact ENTTEC to explore options with customisable pitch, connector types, and a variety of lens shapes to suit architectural or creative requirements.

FEATURES

- 41.5 diameter 24V RGB dot.
- Marine grade aluminium housing.
- Auto-addressing LED pixels for fast commissioning.
- Flat and dome lens made from Clear or Diffuse optical grade polycarbonate.
- Premium IP-rated automotive style connectors with integrated latching system.
- Customisable cable configuration and pitch length 125mm~2000mm.
- Default string 20 dots with premium IP-rated connectors at each end (length: 3375mm)
- 16-bit control for ultra-smooth dimming.
- Control protocol SPXL 16-bit. Explore ENTTEC's full range of pixel controllers at [enttec.com](#).
- IK10 & vibration resistant (IEC60068-2-6).
- UV resistant & IP67.
- This product requires an external DC power supply and data source for operation. (not included).

SPECIFICATIONS

LED source	6 pcs RGB SMD3535 - <i>Customisation options available</i>	
Lumens (lm)	No Lens	33
	Dome Lens	24
	Flat Lens	29
Efficacy lm/watt	No Lens	22
	Dome Lens	16
	Flat Lens	19.3
Control protocol	ENTTEC SPXL-16	
SPXL-16 channel footprint	6 DMX slots/dot	
	Course Fine Course Fine Course Fine	
Pixel ordering	SPXL-16: R-R-G-G-B-B	
Colour resolution	$2^{16} \times 2^{16} \times 2^{16} = 68$ billion	
Dots controllable per DMX universe:	85 dots	
Compatible protocol	UCS8903 (16-bit ONLY)	
Projected lumen maintenance	50,000 hrs (L70) - within the working temperature range	
Body material	Machined and anodised 6032 aluminium body	
Base dot size	47 x 57 x 13 mm	
Weight	1.00 kg (string of 20 dots)	
IP rating	IP67	
UV Resistance	Yes	
Operating temperature	-20°C to +50°C	
Heat dissipation (maximum)	1.5 Watts	
Input voltage	24 V DC	
Maximum power	1.6 W/dot (1.4W nominal)	
Maximum current draw	60 mA/dot	
Rated current throughput capacity 10A	10A	
Cable resistance	0.0132 Ohm/m	
Cable thickness	16AWG	
Dot pitch	Default: 125mm (8 dots/m) - <i>Customisation options available</i>	
Incoming cable length (connector to first dot)	Default: 500mm <i>Customisation options available</i>	
Outgoing cable length (last dot to connector)	Default: 500mm <i>Customisation options available</i>	
Connector type	Automotive style Connector <i>Customisation options available</i>	
Connector gender	In	Male
	Out	Female
Connector pinout	Pin 1	GND
	Pin 2	Data+
	Pin 3	Not Connected
	Pin 4	+24v
Warranty	3 Year Return to Base Manufacturer Warranty	

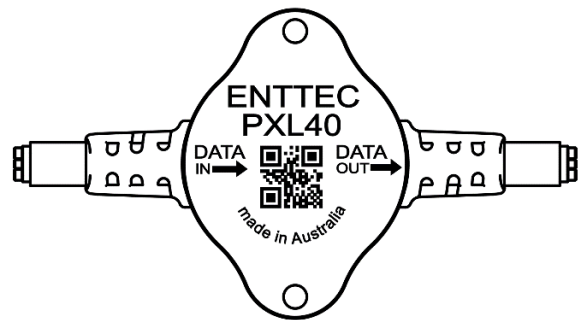
INFORMATION

Controlling SMART PXL Dots

Use any 24v compatible ENTTEC pixel controller to control the Metal Smart PXL Dot 40. For the latest information visit: [LED pixel control technology | ENTTEC](#)

Data Direction

The pixel data in the Metal Smart PXL40 Dot must travel in a specific direction for it to function. This direction can be identified through the laser etching on the base of the first and last dot of each string:



Installation

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

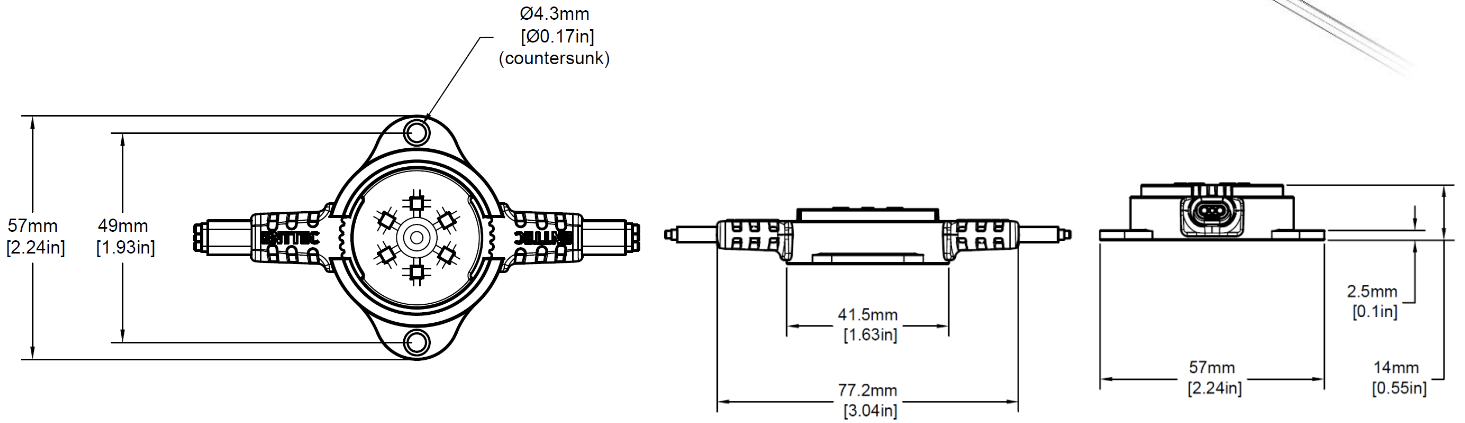
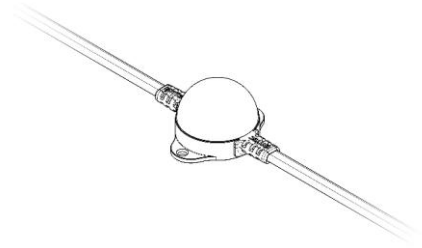
Certification



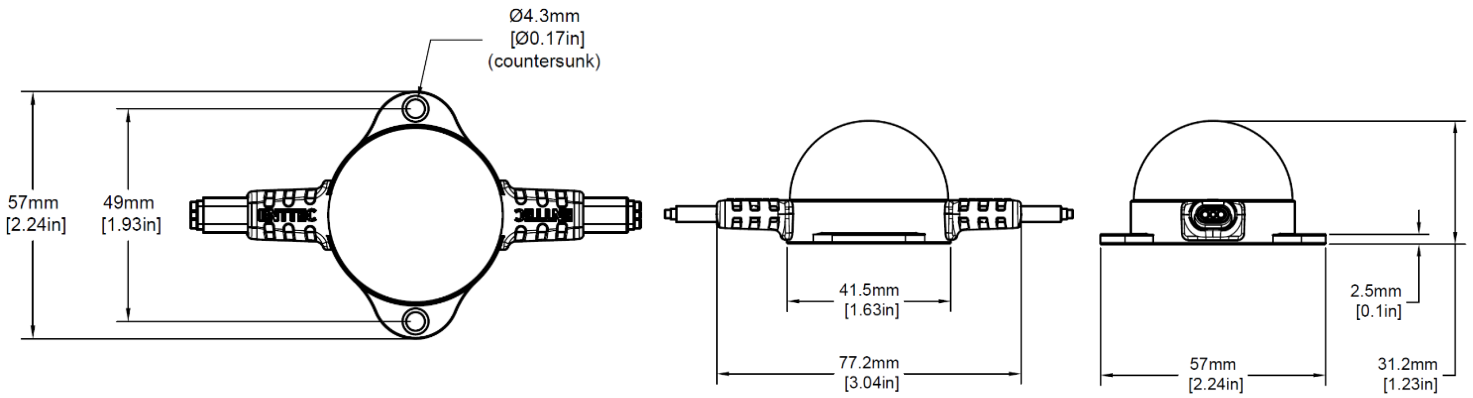
Salt corrosion test (eg ASTM B117) not applicable due to non-metallic, inherently salt resistant body and lens material.

PHYSICAL DIMENSIONS

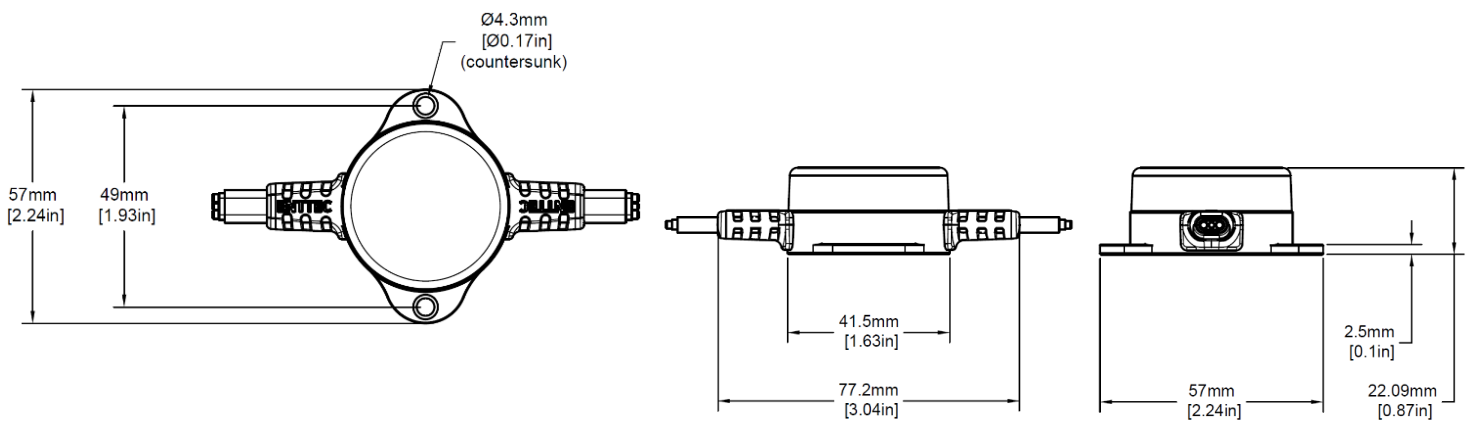
Metal Smart PXL40 Dot - No Lens (73010)



Metal Smart PXL40 Dot - Dome Lens (73011)

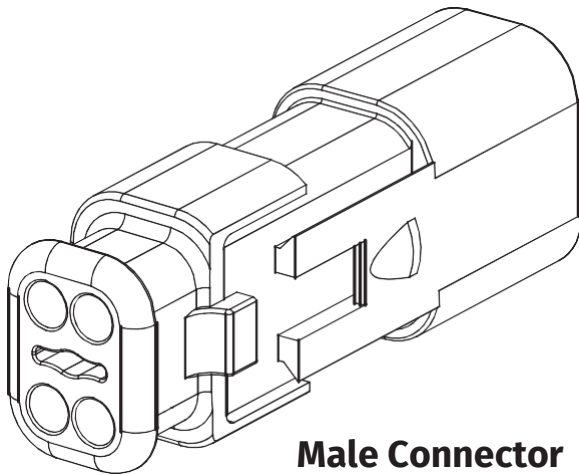


Metal Smart PXL40 Dot - Flat Clear Lens (73012)



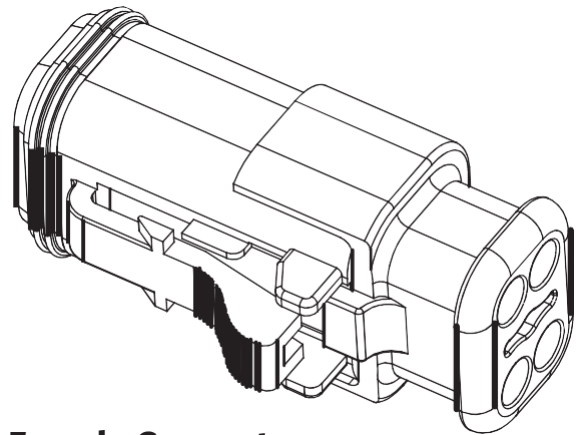
PREMIUM CONNECTORS

For ultimate reliability, ENTTEC offers IP-rated automotive style connectors with integrated latching system.



Male Connector

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



Female Connector

4-way plug, FEMALE connector with reduced diameter seal, endcap and strain relief.

Pin output configurations

- PIN

1

0V
- PIN

2

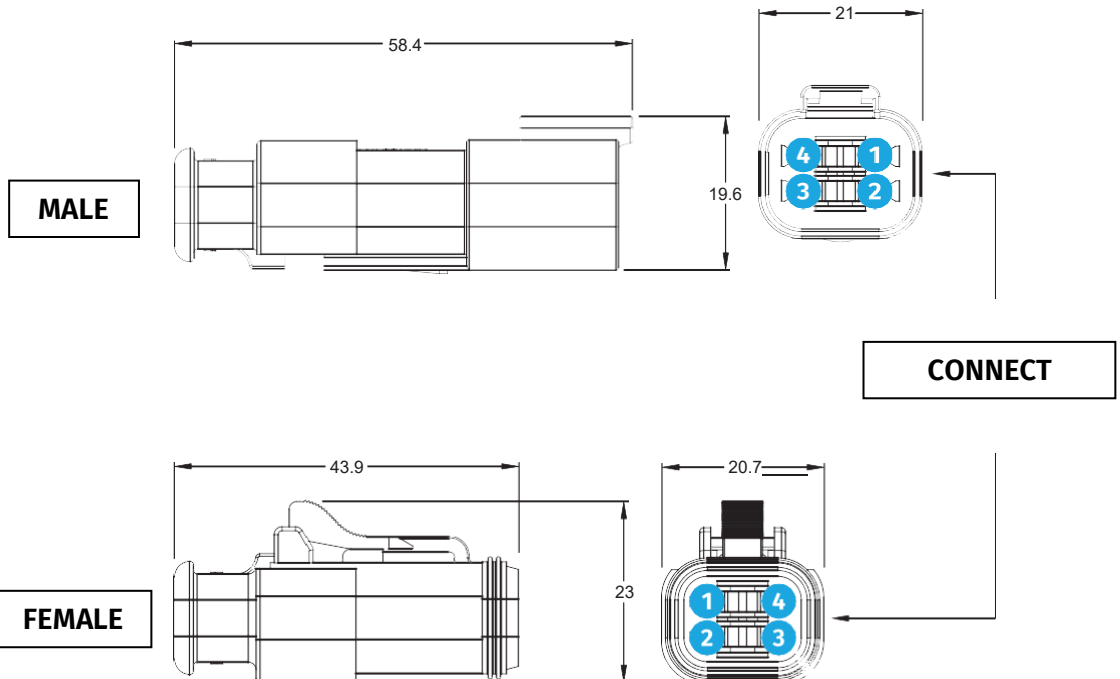
DATA
- PIN

3

NC
- PIN

4

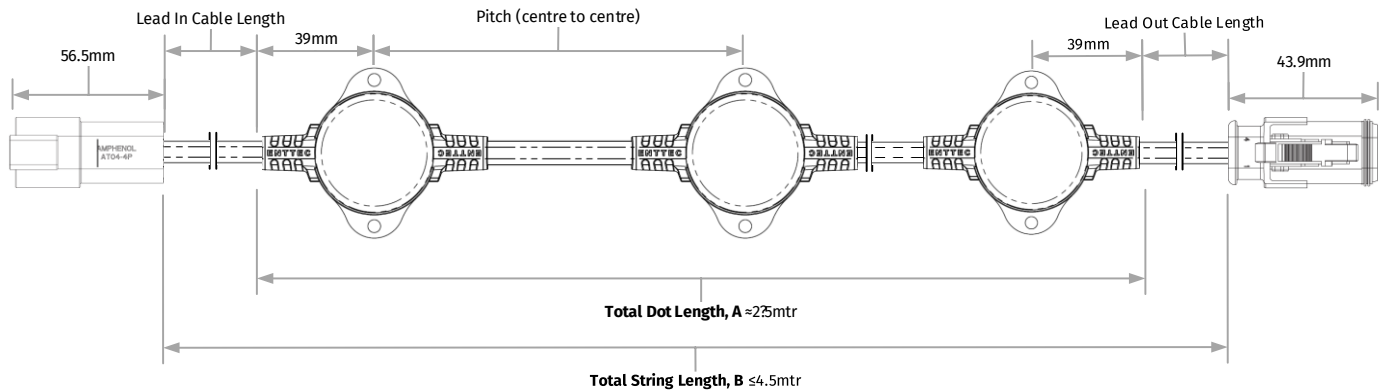
+24V DC



Cable Customisation

ENTTEC support cable length customisation. 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



ORDERING INFORMATION

Metal Smart PXL40 DOTs

Visit ENTTEC's [website](https://www.enttec.com) to shop for Metal Smart PXL40 Dots.
 To discuss customisation 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	Dots per string	Pixel pitch* (mm)	Lead in length* (mm)	Lead out length* (mm)	LED type	Body material	Lead in connector type	Lead out connector Type ¹
73010 No Lens	Min: 3 Max: 20	Min: 125	Min: 150	Min: 150	RGB	DFT Default metal body	ATM (Automotive style Male connector - Wired per diagram)	ATF (Automotive style Female connector - wired per diagram)
73011 Frosted Dome Lens		Max: 1200	Max: 2000	Max: 2000			BET (Custom - Bare end tinned)	BET (Custom - Bare end tinned)
73012 Clear Flat Lens		Increment: 25	Increment: 25	Increment: 25				

* Length tolerance: ±5%

Example Order Codes

The codes below reflect options shown within the table above.

Product Specification	Order Code
METAL SMART PXL40 Dot no lens/ 20 dots per string/ 125mm pitch/ 500mm lead in cable/ 500mm lead out cable/ RGB/ Default Body/ Automotive style male input / Automotive style female output	73010-20-125-500-500-RGB-DFT-ATM-ATF

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

¹ ENTTEC Termination End Cap [73015] only compatible with ENTTEC Female automotive style connector.