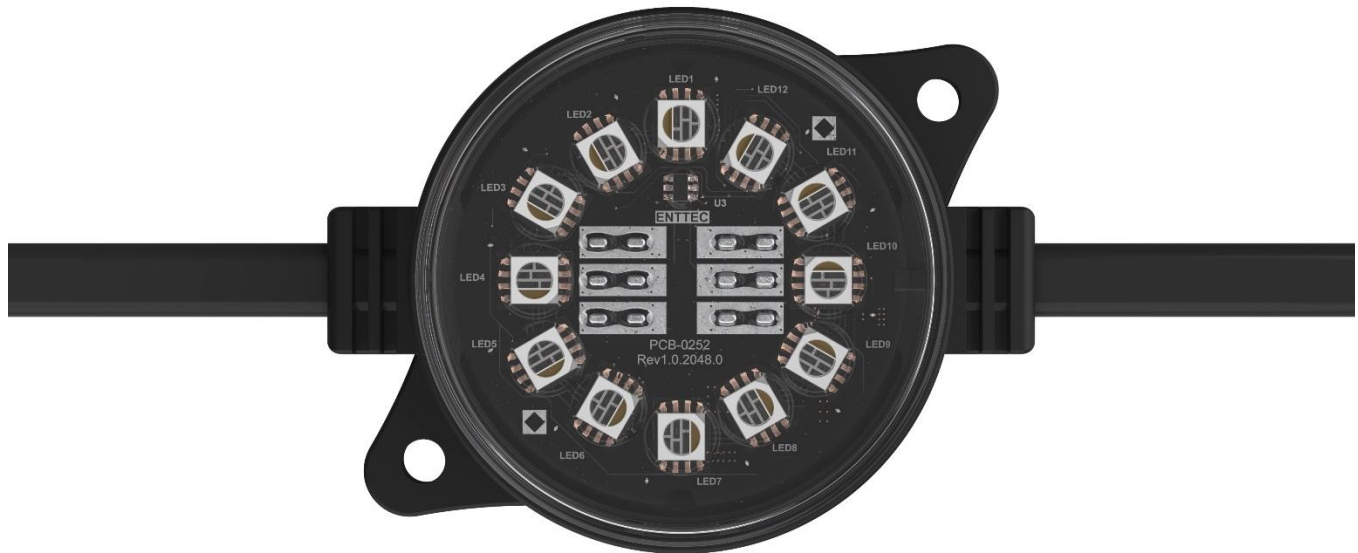


SMART PXL-60 DOT - Datasheet

60mm diameter 24V/48V & RGB/RGBW LED pixel dot with high resolution dimming.



Robust and reliable, ENTTEC's high-resolution, individually addressable SMART PXL 60 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 & lens.

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 24/48V & RGB/RGBW.
- Auto-addressing LED pixels for fast commissioning.
- Customisable cable length.
- Premium IP-rated connectors at each end.
- Flat or Dome shape lens options 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. Explore ENTTEC's full range of pixel controllers at www.enttec.com.
- Reverse polarity protection
- Voltage transient protection
- IK10 & 3G vibration resistant (IEC68-2-6)
- UV resistant & IP67
- This product requires an external DC power supply and data source for operation. (not included).

SPECIFICATION

Electrical (24V & 48V)

Body material	Injection molded PVC - UV resistant			
Lens material	Optical Grade polycarbonate			
Dot pitch	Customisation options available			
Weight	Approx. 70g/dot (excl lead in & out)			
IP & IK rating	IP67 & IK10			
Operating temperature	-20°C to +50°C			
Input voltage	24V		48V	
Heat dissipation (maximum per Dot)	24V	RGB: 2.5W	48V	RGB: 2.5W
		RGBW: 2.6W		RGBW: 2.6W
Maximum power per dot	24V	RGB: 1.6W	48V	RGB: 2.2W
		RGBW: 2.1W		RGBW: 2.7W
Maximum current draw per dot	24V	RGB: 65mA	48V	RGB: 45mA
		RGBW: 88mA		RGBW: 55mA
Rated current throughput capacity	10A			
Cable resistance	0.0132 Ohm/m			
Cable thickness	16AWG			
Incoming cable length (connector to first dot)	Customisation options available			
Outgoing cable length (last dot to connector)	Customisation options available			
Connector type	Default: AMPHENOL AT Series Customisation options available			
24V Connector pinout	Pin 1	Pin 2	Pin 3	Pin 4
	0V	Data	N/C	+24V
48V Connector pinout	Pin 1	Pin 2	Pin 3	Pin 4
	0V	Data	+48V	N/C
Warranty	3 Year return to base manufacturer warranty.			

Control (24V & 48V)

LED source	RGB	12 pcs RGB SMD3535
	RGBW	12 pcs RGBW 3000K SMD5050
Control protocol	ENTTEC SPXL-8 / SPXL-16	
SPXL-8 channel footprint (8-bit - RGB)	3 DMX channels/dot Red Green Blue	
SPXL-8 channel footprint (8-bit - RGBW)	4 DMX slots/dot Red Green Blue White	
SPXL-16 channel footprint (16-bit - RGB)	6 DMX slots/dot Coarse Fine Coarse Fine Coarse Fine	
SPXL-16 channel footprint (16-bit - RGBW)	8 DMX slots/dot Coarse Fine Coarse Fine Coarse Fine Coarse Fine	
Colour resolution (8-bit - RGB)	256 ³ = 16.7 million	
Colour resolution (8-bit - RGBW)	256 ⁴ = 4.294 trillion	
Colour resolution (16-bit RGB)	65536 ³ = 281.4 quadrillion	
Colour resolution (16-bit RGBW)	65536 ⁴ = 18.4 Quintillion	
Dots controllable per DMX universe:	SPXL-8 RGB:	170 dots
	SPXL-8 RGBW:	128 dots
	SPXL-16 RGB:	85 dots
	SPXL-16 RGBW:	64 dots
LED lifetime	50,000 hrs (L70)	
Compatible protocol	RGB	UCS8903B (Only 16-bit)
	RGBW	UCS8904B (Only 16-bit)

Lumen Output

RGB					
Lumen (lm)	Voltage	24V		48V	
	Lens Type	Dome Diffuse	Flat Clear	Dome Diffuse	Flat Clear
	Red	12.4	16.6	12.3	17.1
	Green	28.4	38.7	27.4	38.3
	Blue	7.1	9.6	5.9	8.2
	White (RGB)	47.9	65	45.7	63.5
Efficacy (lm/watt)	White (RGB)	29.9	40.6	20.8	28.9

RGBW					
Lumen (lm)	Voltage	24V		48V	
	Lens Type	Dome Diffuse	Flat Clear	Dome Diffuse	Flat Clear
	Red	12.5	16	11.6	15.0
	Green	29.5	37.4	25.5	33.5
	Blue	7.2	9.0	6.2	8.2
	White (RGB)	49.3	62.4	43.3	56.7
Max White (RGBW)	87.3	110.4	76.7	101.4	
Efficacy (lm/watt)	Max White (RGBW)	41.6	52.6	28.4	37.6

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 SMART PXL 60 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 centre 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.



Connecting Smart PXL Dots

Use any ENTTEC pixel controller compatible with the voltage range of the Smart PXL Dot 60. For the latest information visit: [LED pixel control technology | ENTTEC: ENTTEC](#).

Certification

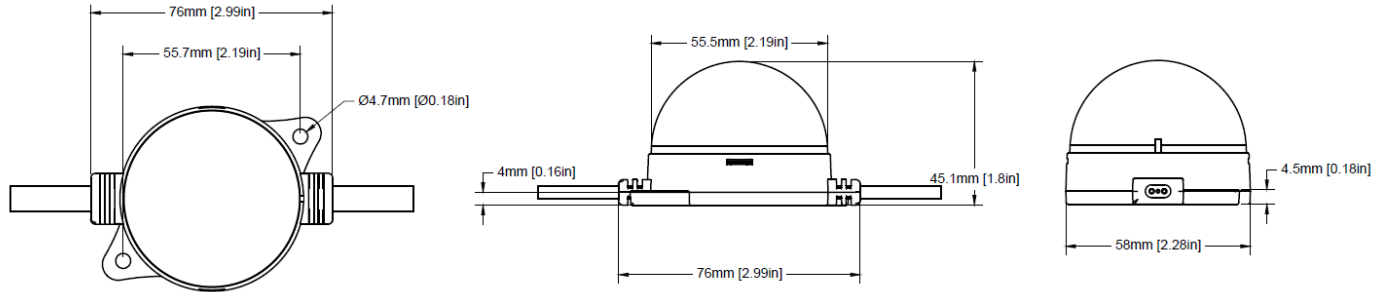


Salt corrosion test (e.g. ASTM B117) not applicable due to non-metallic, inherently salt resistant body and lens material.

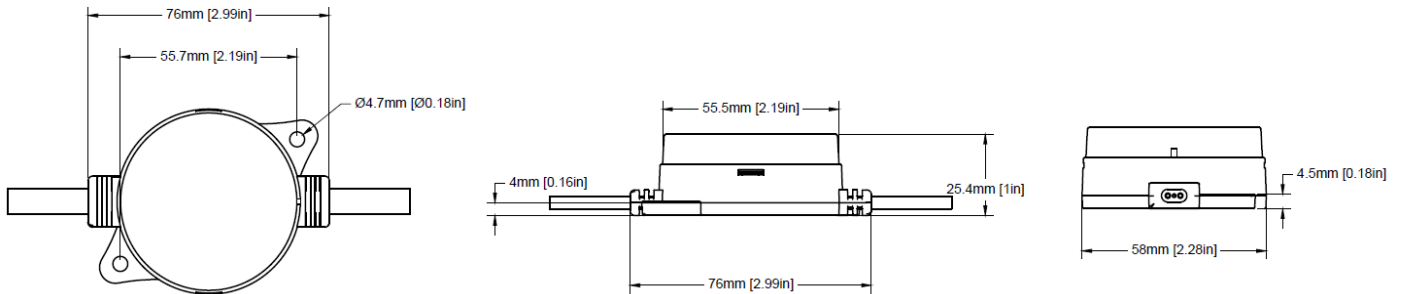
PHYSICAL DIMENSIONS

Note: Lenses are non-removable & recommended in the absence of protective measure against external impact in installation. One small slit on the bottom edge of Diffuser for pressure relief.

Smart PXL-60 Dot - Dome Lens

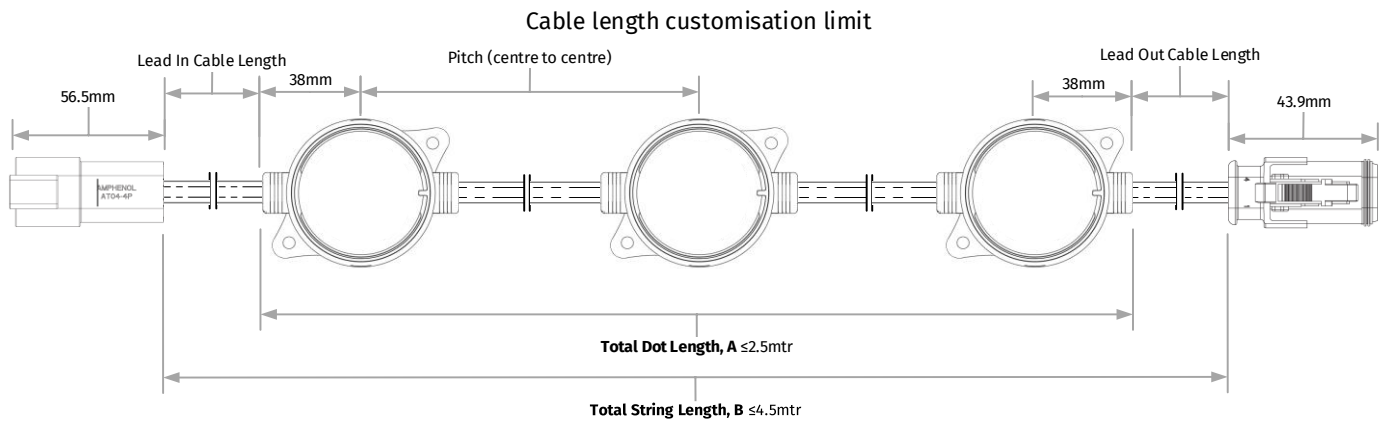


Smart PXL-60 Dot - Flat Lens



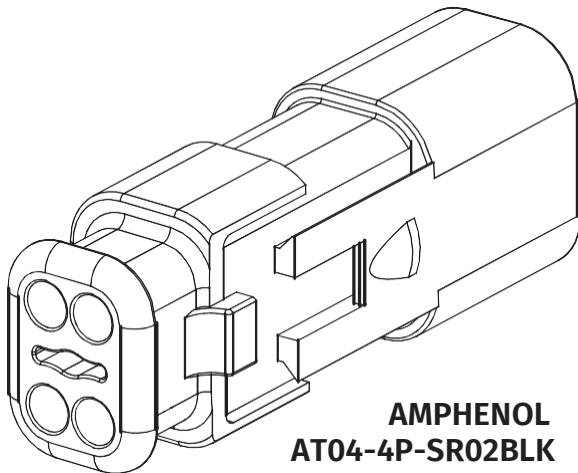
Cable Customisation

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.



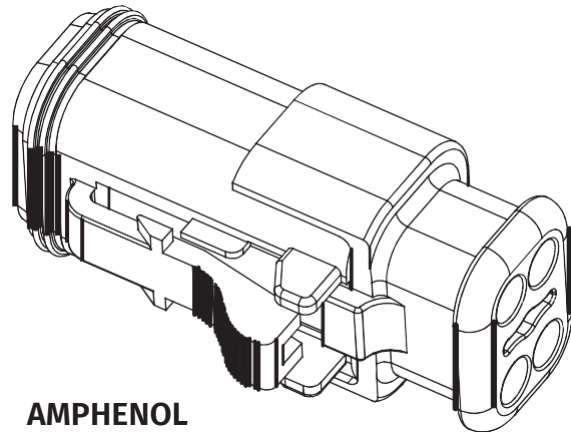
PREMIUM CONNECTORS

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.

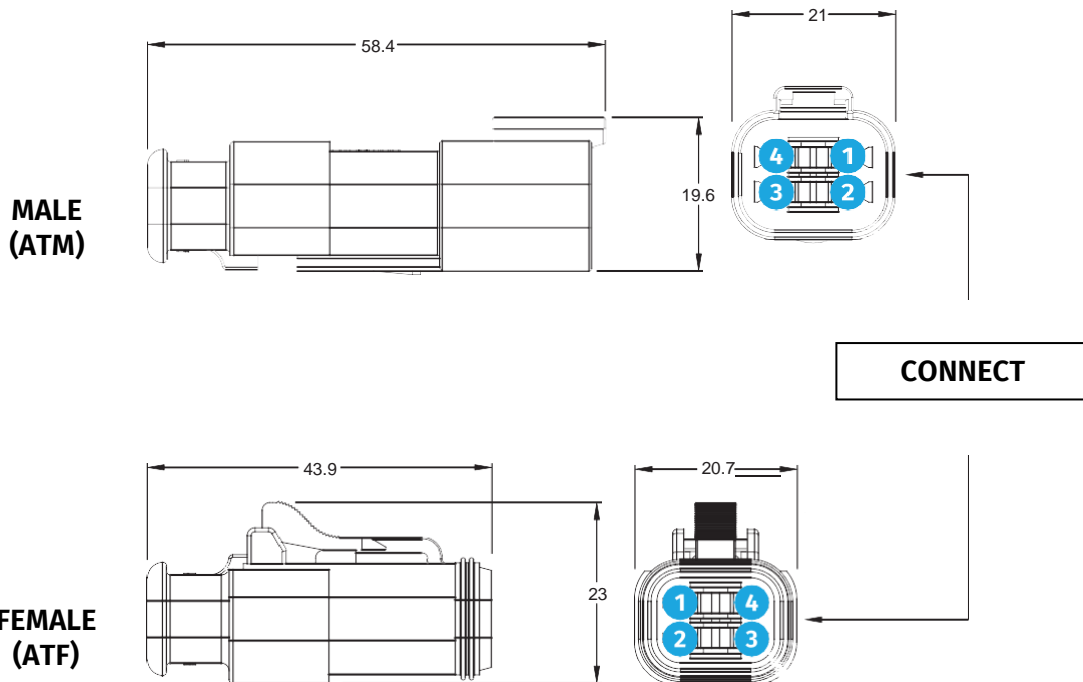


**AMPHENOL
AT06-4S-SR02BLK**

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

Pin output configurations

	PIN	PIN	PIN	PIN
	1	2	3	4
24V	0V	DATA	NC	+24V DC
48V	0V	DATA	+48V DC	NC



ORDERING INFORMATION

Smart PXL-60 Dots

Visit ENTTEC's [website](#) to shop for SMART PXL 60 Dots.

To discuss customisation options, pricing and lead times contact our sales team at sales@enttec.com.

Refer to Order Codes section for customisation and limitation.

Order Codes

Order codes are created using the table below:

Product Code	Lens 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
73050 (Smart PXL-60 Dot)	FC (Flat Clear)	Min: 1 Max: 17	Min: 150 Max: 2000	Min: 150 Max: 2000	Min: 150 Max: 2000	RGB	ATM (Amphenol AT Series Male - Wired per diagram)	ATF (Amphenol AT Series Female - wired per diagram)	24V
	DD (Dome Diffuse)		Increment: 25	Increment: 25	Increment: 25	RGBW	BET (Custom - Bare End Tinned)	BET (Custom - Bare End Tinned)	48V

* Length tolerance: ±5%

Example Order Codes

The codes below reflect options shown within the table above.

Item	Order code
Smart PXL-60 DOT / Dome Diffuse 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	73050-DD-10-150-500-500-RGB-ATM-ATF-24

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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 Female Amphenol AT series connector