

# Pixi-LED User Guide

(Version 1)

Pixi-LED is a self-contained LED colour change fixture. It measures 80mm in diameter and is fabricated in moulded plastic. Pixi-LED uses the latest 'point source' LED technology. The technology provides three primary coloured LEDs in a single package. The red, green and blue light emitted from the LED is effectively a single point of coloured light. This feature leads to superb quality of colour mixture with none of the chromatic aberration familiar from earlier technologies.

## Key Features include:

- ❑ Long Lamp Life
- ❑ 16 Million Colours
- ❑ High Colour Purity
- ❑ Excellent white tracking
- ❑ RDM Draft V1.0
- ❑ Remote sensor feedback
  - Temperature
  - Voltage
  - Lamp Hours
  - Device Hours
  - Power Cycles
- ❑ Over-temperature shutdown
- ❑ Remote Start Address Programming
- ❑ Choice of two lenses (Clear & Opal)
- ❑ Sold in a pack of 10
- ❑ Remote firmware upload



## Specification:

- ❑ Illumination at 1m: 15 Lux (Opal lens)
- ❑ Illumination at 1m: 23 Lux (Clear lens)
- ❑ Material: Polycarbonate
- ❑ Beam Angle: 80 Degree
- ❑ Listing: CE FCC
- ❑ Control: DMX512-A / RDM V1.0
- ❑ IP Rating: Indoor use
- ❑ Net Weight: 40g
- ❑ Power: 3.25W
- ❑ Input Voltage: 15VDC
- ❑ Current: 215mA
- ❑ Bezel Diameter: 80mm
- ❑ Lens Diameter: 57mm
- ❑ Depth: 66mm (Overall inc connector)
- ❑ Depth behind panel: 24mm (inc connector)
- ❑ Connection: IDC 20pin
- ❑ Operating Temperature: -10 to +40 Celsius
- ❑ Protection Shutdown: 58 Celsius
- ❑ Protection Recovery: 51 Celsius
- ❑ Humidity: 90% non condensing
- ❑ Fire Rating: UL/94 EN60695-2-1/1 1996 (Glow Wire)

## Pixi-LED Wiring Diagram:

The recommended method of powering and controlling a Pixi-LED is using a Pixi-Power L1. Shown opposite is the wiring diagram for Pixi-LEDs and a Pixi-Power L1.

20-way flat IDC ribbon cable is used to distribute the power and data from the Pixi-Power L1 to the Pixi-LED. This method can have a maximum of 20 Pixi-LEDs on the output cable.

Artistic Licence produces a range of cables ready to be used with Pixi-Power L1. Please see the product range:

Pixi-Cable A/B/C/D

A – Number of Pixi-Leds

B – Length of cable to first Pixi-Led

C – Length of cable between Pixi-Leds

D – Colour of cable

The end Pixi-LED must be terminated. Please see the section below for more information.

If an alternative controller is used follow the Pixi-LED specifications and the wiring table to ensure correct operation.

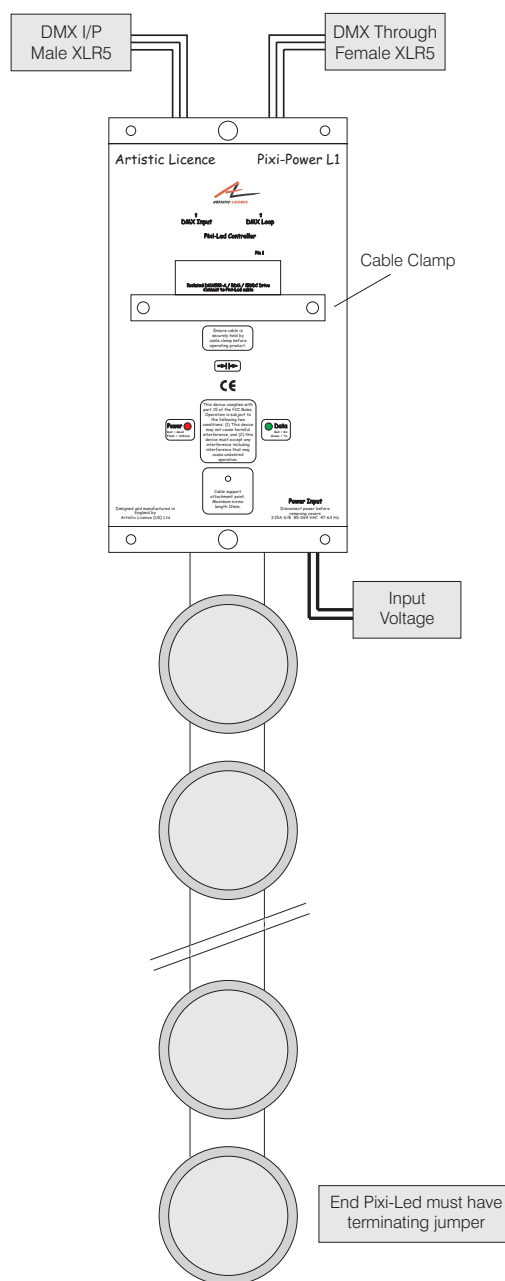
## IDC 20-way Connector Wiring:

IDC Pin	Function
9	Data -
11	Data +
5-8, 13-16	Ground
1-4, 17-20	15VDC
10, 12	No Connection

## Maximum Cable Length:

Number of Pixi-LEDs	Max Distance to 1 <sup>st</sup> Pixi-LED	Max Distance between Pixi-LEDs
5	5M	15M
5	10M	15M
10	5M	5M
10	10M	4M
15	5M	1.9M
15	10M	1.2M
20	5M	0.95M
20	10M	0.45M

Note: For applications over 15M please contact Artistic Licence



## Health & Safety for flying equipment

- ❑ Flying or overhead mounting of equipment **shall** be undertaken by **qualified** staff. The staff shall be capable of undertaking a risk assessment.
- ❑ Each Pixi-Power L1 provides safety wire points that **must** be used. Artistic Licence recommends the use of load arrestors in all overhead applications.
- ❑ **Safety should be your prime concern.** If in any doubt seek professional advice.

## Input:

Pixi-LED receives data directly from the Ribbon cable without the need for an 'In' and a 'Loop Thru' connection.

## Indicators:

On the back of the Pixi-LED there is a single red LED to indicate power and data. This LED can be disabled using RDM.

LED	Description
Off	No power or LED has been disable
On	Power and Data being received
Flashing	Power but no Data

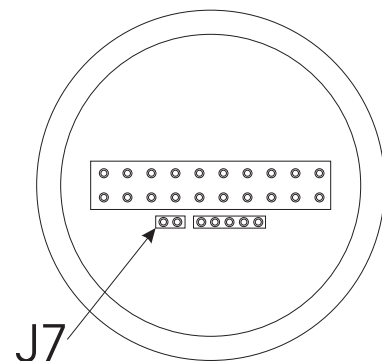
## Termination:

Pixi-LED follows the same rules as a standard DMX512 cable run. That is:  
At the end of a DMX512 cable there should be a single termination of 120 Ohms.

As the wiring diagram illustrates at the end of a Pixi-LED cable (no matter how many Pixi-LEDs are used) there should be a terminated Pixi-LED. In a pack of 10 Pixi-LEDs you will find one terminated unit that is identified by a blue dot.

All Pixi-LEDs come with a terminating resistor fitted via a jumper. To remove or replace the terminating jumper, remove the cover and locate J7 (located near the IDC connector).

J7 Jumper	Terminated
Present	Yes
Not Present	No



## RDM Functions:

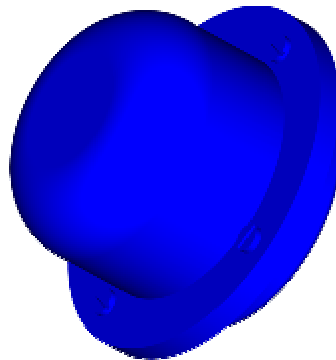
Pixi-LED utilizes the RDM protocol for programming and sensor feedback. Below is a table of the functions that are used

RDM Function	Description	RDM Tools
Start Address	Remotely set start address	Jump-Start / Art-Net
Locate	Pixi-LED will turn white for identification	Jump-Start / Art-Net
Sensor call-back	Finding the value of the sensors	Jump-Start / Art-Net
Firmware update	Remotely update to the latest firmware	Art-Net
Reset Device	Reset the Pixi-LED	Jump-Start / Art-Net
Set Label	Give a Pixi-LED a label	Jump-Start / Art-Net
Product details	Call back info; eg software version, manufacturer, product name	Jump-Start / Art-Net

*Note: When Art-Net is stated as an RDM Tool an Art-Net to DMX/RDM converter is required along with an Art-Net RDM application, such as DMX-Workshop or Colour-Tramp.*

## The Pixi Range:

- ❑ Pixi-Core – The optical module used inside Pixi-Led. It is available in this format for OEMs and set designers
- ❑ Pixi-Led – A self contained LED colour changing fixture
- ❑ Pixi-Bulb – A miniature self contained LED colour changer
- ❑ Pixi-Cloth – A Star-Cloth with a difference. Each RGB pixel can be individually controlled resulting in an impressive display
- ❑ Pixi-Bar – A self-contained modular assembly containing ten Pixi-LEDs
- ❑ Pixi-Power L1 – Combines the functions of a power supply and an isolated DMX512-A / RDM splitter for Pixi-LED & Pixi-Core
- ❑ Pixi-Power SB1 – A power and data controller for Pixi-Bulb and Pixi-Strip
- ❑ Pixi-Power SB2 – A power and data controller for Pixi-Cloth



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