

LINEAR BAR SERIES | DIRECT VIEW PIXEL BAR

Designed for harsh environments, the LXD delivers dynamic lighting with even illumination with 1 to 16 pixels through its PMMA opal diffuser. Built for durability, it ensures consistent performance in demanding conditions.

Utilising LED CTRL's X-Stream technology, the LXD delivers advanced features including pixel data redundancy for enhanced performance and long data runs for easier installations.

Multiple mounting methods, push lock connectors, and long data runs, make the LXD perfect for signage, building façades, and much more.



At a glance

Emitters

RGBW
(W = 2400K, 2700K, 3000K, 3500K, 4000K, 5000K, 6000K)

OR

RGBA

OR

RGB

OR

Dynamic White (DW)
(2400K to 6000K)

OR

White
(2400K, 2700K, 3000K, 3500K, 4000K, 5000K, 6000K)

Dimensions

Controls

Voltage

24V DC
48V DC

Protection

Ingress – IP66
Impact – IK07

Temperature

-20°C to 50°C
-4°F to 122°F

Optics

Dimensions

FIXTURE PRODUCT CONFIGURATOR

Prefix	Pixels / m	Length	LED Colour	White CCT	Control	Voltage	Housing Colour	Mounting
LXD	1 – 1pixel/m 2 – 2pixels/m 3 – 3pixels/m 4 – 4pixels/m 5 – 5pixels/m 6 – 6pixels/m 7 – 7pixels/m 8 – 8pixels/m 16 – 16pixels/m	300 – 300mm 500 – 500mm 1000 – 1000mm *eg: C – C#1250 Custom length dictated by pixel density	RGBW RGBA RGB DW – Dynamic White (24K - 60K) W – White (24K – 60K)	24K – 2400K 27K – 2700K 30K – 3000K 35K – 3500K 40K – 4000K 50K – 5000K 60K – 6000K	D – DMX P – PWM S – SPI XB – X-Stream Booster X – X-Stream	24 – 24V DC 48 – 48V DC	A – Anodised Aluminium B – Black G – Grey W – White C – Custom RAL	C – Clipped Mount F – Foot Mount B – Bracket

EXAMPLE: LXD – 15 – 1000 – RGBW – 60K – X – 24 – A – B

Note:
XB Booster lives in the inside of the product. Refer to PXT/R page for differences between X and XB.
Need an external controller to run on PWM

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LXD SPECIFICATIONS

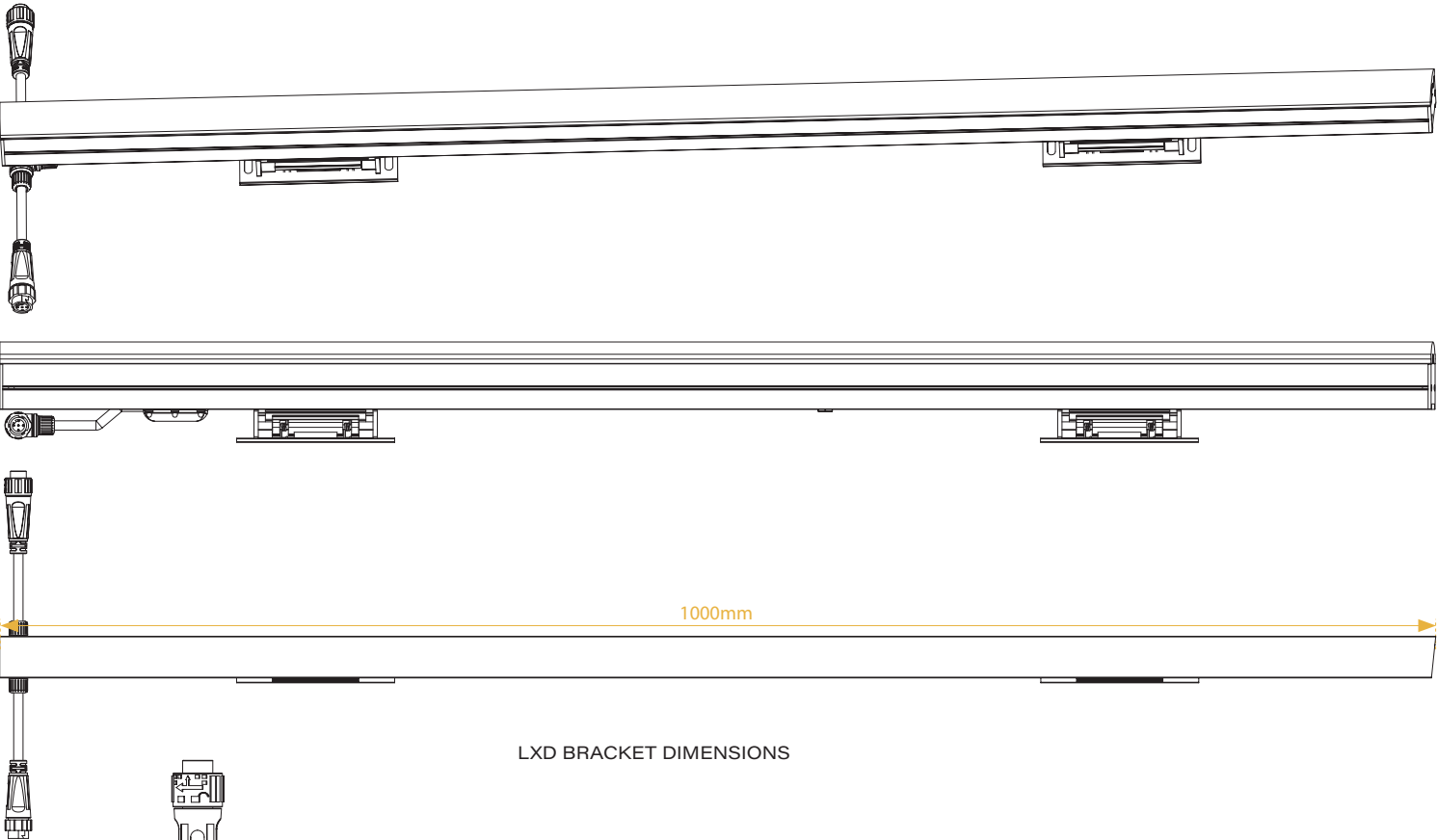
ELECTRICAL	POWER CONSUMPTION OPERATING VOLTAGE OPERATING TEMPERATURE STORAGE TEMPERATURE	14W PER METER 24V DC / 48V DC -20°C TO 50°C (-4°F TO 122°F) -20°C TO 70°C (-4°F TO 158°F)
PHYSICAL	STANDARD FIXTURE DIMENSIONS ALUMINIUM HOUSING UV STABLE LENS WEIGHT / M DIFFUSER CONNECTORS IK RATING IP RATING MOUNTING OPTIONS SOURCE LIFE CONNECTION MAXIMUM RUN LENGTH	L: 300MM – 1200MM (VARIABLE DEPENDING ON PIXEL PITCH) – W: 24MM – H: 45MM STANDARD (DEFAULT) OR CUSTOM RAL PMMA OPAL DIFFUSER 1.26KG / M FLAT MULTIPIN IP67 PUSH LOCK IK07 IP66 CLIP MOUNT, FOOT MOUNT, AND BRACKET 50,000 HOURS/ L70 AT 25°C 6-PIN DC / SPI CABLE WITH IP CONNECTORS FOR DAISY CHAIN 78.8M @ 10PIXELS/M – 3 UNIVERSES 38.4M @ 10 PIXELS/M – 6 UNIVERSES
OPTICAL	BEAM ANGLE COLOUR RANGE ACCURATE COLOUR CONTROL PIXEL DENSITY LED TYPE	120° – DIRECT VIEW WHITE (2400K, 2700K, 3000K, 3500K, 4000K, 5000K, 6000K), RGB, RGBA, DYNAMIC WHITE (2000K – 5000K) RGBW CONFIGURATIONS WITH SELECTABLE CCT 1 – 16 PIXELS / METER 5050 SMD LEDS
DIMING & CONTROL	CONTROL PROTOCOLS DIMMING RESOLUTION	X-STREAM PROTOCOL WITH DATA REDUNDANCY AND SPI, DMX 8 BIT RESOLUTION DOING 65536 STEP WITH BUILT-IN GAMMA 2.2, 12-BIT, 14-BIT, 16-BIT.
FIXTURE RATING & CERTIFICATIONS	CE / IP66 / IK07 / UL / RoHs	    
LIMITED WARRANTY	5 YEARS *Extendable warranty available	

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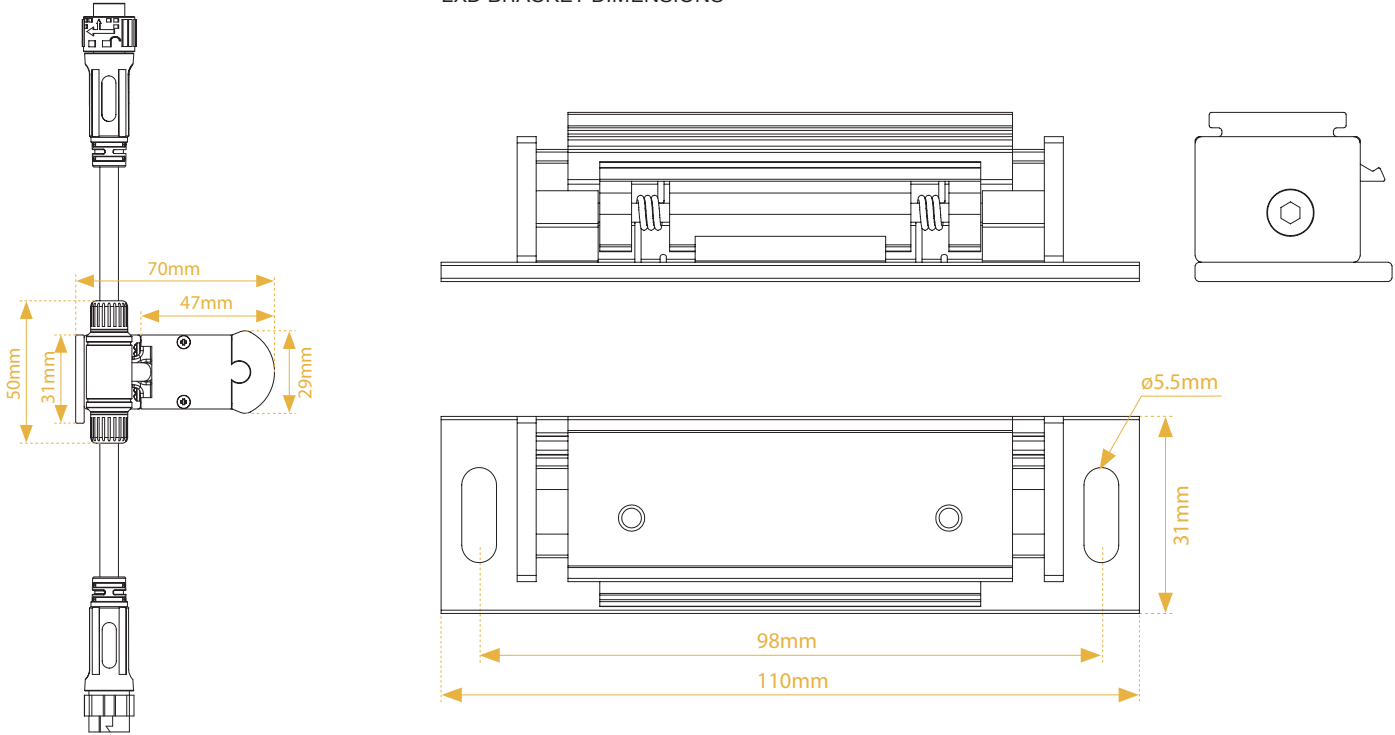
DIMENSIONS

LXD BRACKET DIMENSIONS

Available in lengths of 100mm increments from 300mm to 1200mm



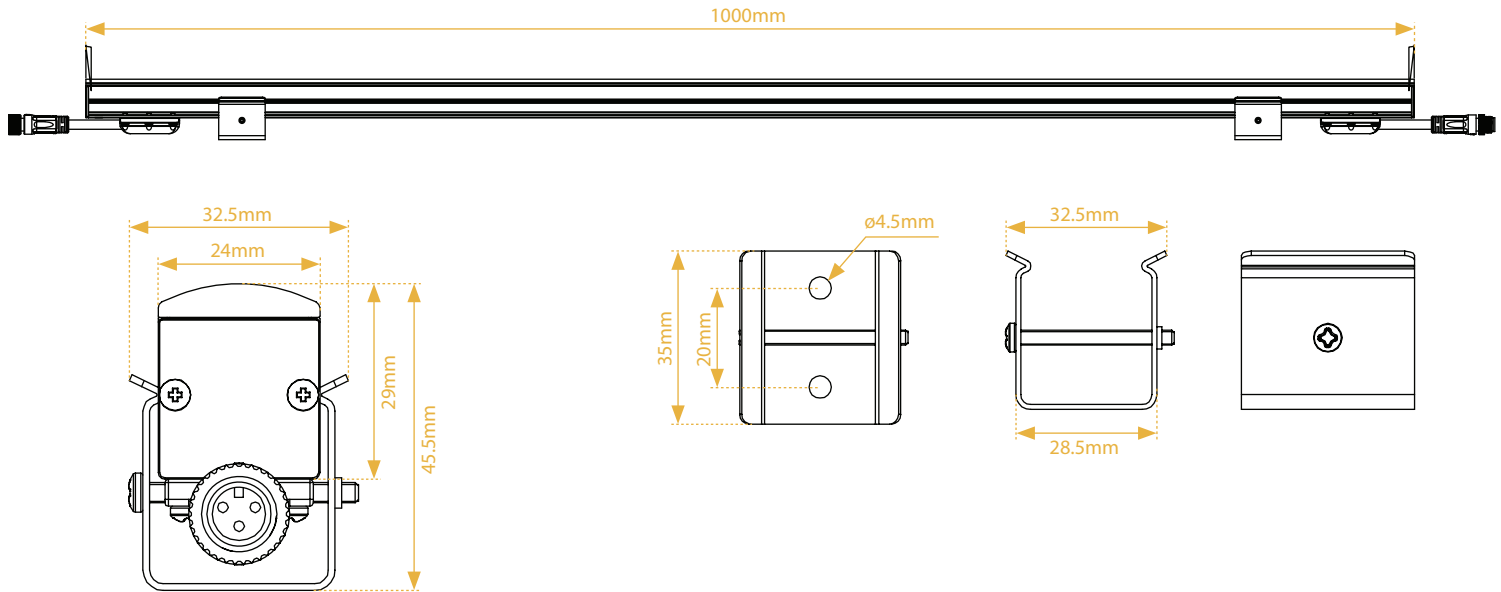
LXD BRACKET DIMENSIONS



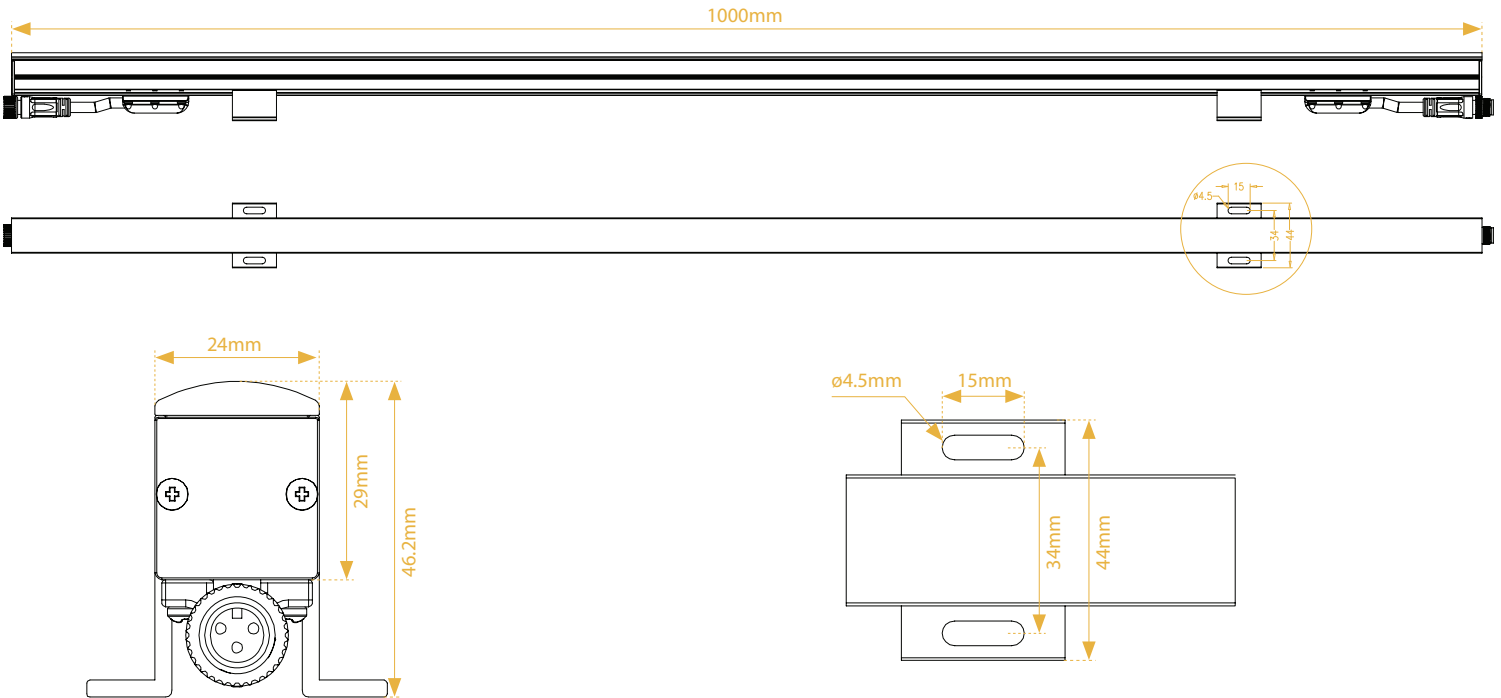
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DIMENSIONS AND MOUNTING

LXD SPRING CLIP BRACKET DIMENSIONS



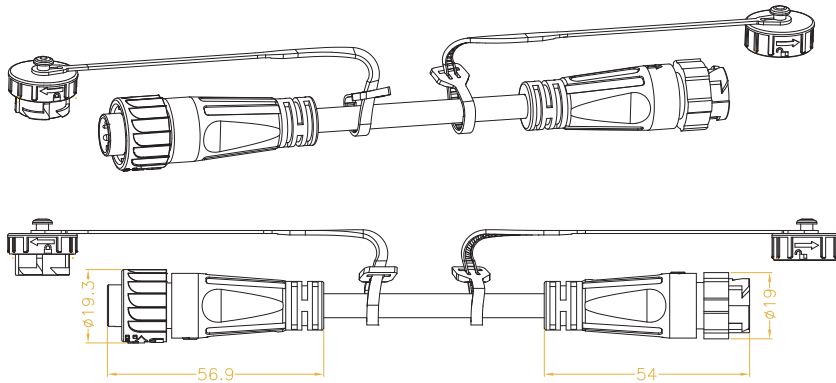
LXD FOOT MOUNG BRACKET DIMENSIONS



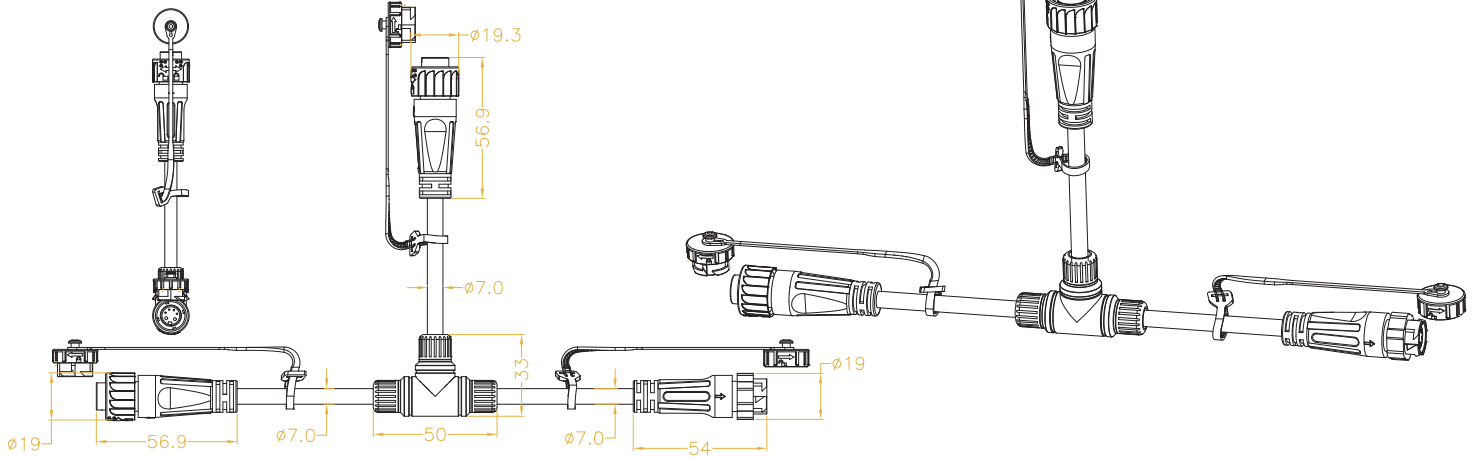
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CABLES AND CONNECTORS

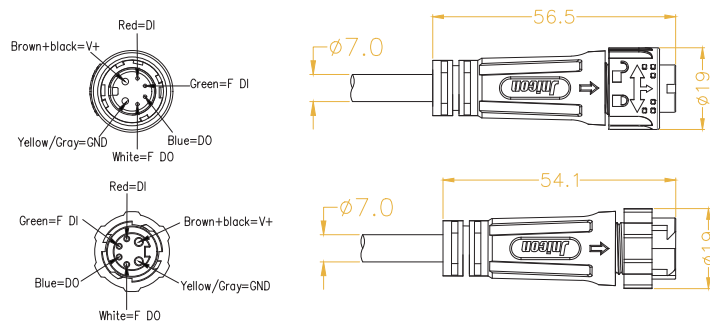
6-PIN AC/DMX LINKING CABLE



6-PIN AC/DMX T-CABLE



6-PIN AC/DMX IP CONNECTOR



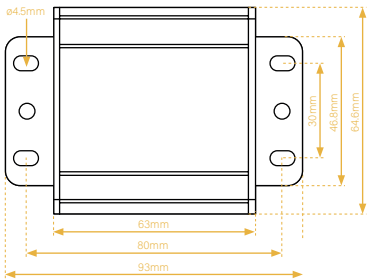
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PXT/R BOOSTERS

The PXT and PXR work together as a transmitter/receiver pair to allow you to extend SPI signals up to 100 metres. The units convert the standard API signal to/from a differential pair to allow the signal to travel this distance while minimising interference.

Wide input voltage range allows support for many LED products, and the compact size makes it easy to accommodate in installations.

D1 and B1 inputs support standard data (D1) and backup data (B1) for pixel protocols supporting data redundancy.



PXT TRANSMITTER	INPUT VOLTAGE AMP INPUT OUTPUT IP RATING	12V – 48V DC 6A MAX SPI OR X-STREAM FROM CONTROLLER OR LEDS X-STREAM DIFFERENTIAL SIGNAL IP20
PXT RECEIVER	INPUT VOLTAGE AMP INPUT OUTPUT IP RATING	12V – 48V DC 6A MAX X-STREAM DIFFERENTIAL SIGNAL SPI OR X-STREAM TO LEDS IP20

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X-STREAM® TECHNOLOGY

X-Stream® Technology is LEDCTRL's premium communication and power delivery platform, built on the advanced UCS7604 driver IC. It is designed to deliver high speed data transmission, exceptional reliability, and superior visual performance across large-scale and demanding lighting installations.

At its core, the system integrates intelligent signal processing, high-precision constant current control, and advanced error-detection mechanisms to ensure stable operation and consistent output, even in complex or long-distance configurations.

KEY FEATURES

Built-in Redundancy

X-Stream® incorporates dual-channel signal transmission with intelligent fault detection. In the event of a pixels or signal failure, the system automatically bypasses the faulty node and continues data transmission without interruption.

- Dual signal channels with real-time monitoring
- Automatic switching between channels in case of failure
- Fault identification accuracy greater than 99%
- No visible disruption during signal switching

This ensures continuous operation and eliminates single-point failures across the installation.

Auto-Addressing

Fixtures require no manual addressing or pre-configuration. Each unit automatically interprets incoming data, allowing for flexible installation and simplified maintenance.

- Plug-and-play installation
- No addressing sequence required
- Fixtures can be installed in any order

This significantly reduces installation time and minimises the risk of configuration errors.

High-Speed Communication

X-Stream® supports high-speed PWM data transmission, enabling smooth and dynamic lighting effects across long runs.

- Transmission speeds: 800 Kbps and 16 Mbps
- Supports high frame rates and fast data refresh
- Capable of filming environments up to 533 FPS without flicker
- Stable performance regardless of frame frequency

This ensures high-quality visual output suitable for media façades, dynamic content, and camera-facing applications.

Advanced Dimming Performance

The system supports multiple dimming resolutions, delivering precise brightness control and smooth transitions across the full output range.

- 8 / 12 / 14 / 16-bit dimming options
- Up to 65,536 levels of greyscale
- Built-in gamma correction (8-bit to 16-bit equivalent)
- Seamless dimming from 0% to 100%

High refresh rates (up to 16 kHz) further ensure stable, flicker-free performance and accurate colour rendering.

Signal Integrity & Reliability

X-Stream® integrates advanced anti-interference and signal enhancement technologies to maintain reliable communication in challenging environments

- S-AI anti-interference technology reduces radiation and conduction interference
- Enhanced signal receiving and transmission stability
- Consistent performance across varying environmental conditions
- Extended standard spacing between fixtures (>15 m)

These features ensure robust operation in large-scale and electrically complex installations.

Data Booster Technology

To support extended installation distances, X-Stream® incorporates data boosting capabilities both within fixtures and via external booster units.

- Extends communication distance up to 100 m between fixtures
- Maintains signal integrity over long data runs
- Supports large-scale linear and distributed installations

This allows for greater design flexibility without compromising system performance.

Long-Distance Power Distribution

X-Stream® systems are designed to support extended power runs through intelligent power management and integrated hardware.

- AC fixtures with built-in, replaceable power supplies
- High power factor for efficient energy distribution
- Managed startup and inrush current control
- Smart load regulation for stable operation
- Supports continuous runs of up to 96 m of linear product

This ensures reliable power delivery across extended fixture runs while maintaining system safety and efficiency.

System Overview

By combining high-speed communication, intelligent redundancy, and advanced signal processing, X-Stream® Technology enables the creation of large-scale, high-performance lighting systems with minimal installation complexity and maximum operational reliability.

Its integration of the UCS7604 chipset ensures that each fixture operates with precision, consistency, and resilience, making it suitable for demanding architectural, façade, and media lighting applications.

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TYPICAL WIRING DIAGRAM

