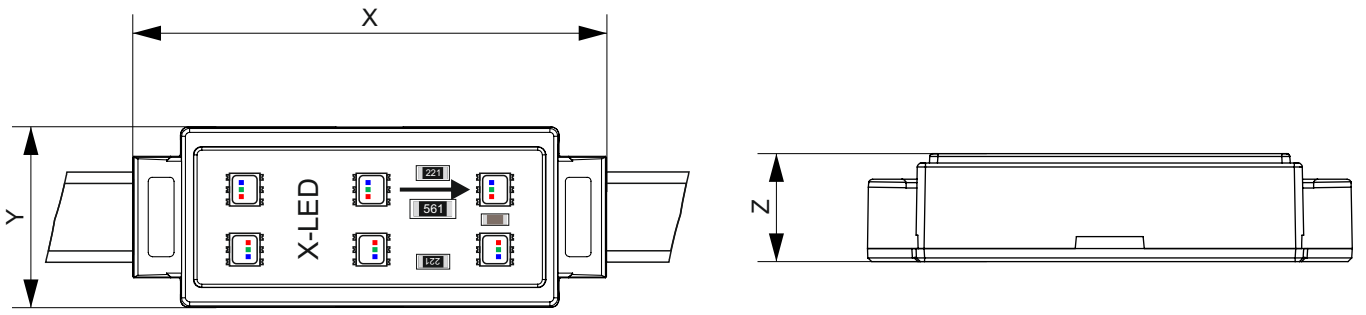
Carl Stahl
ARCHITEKTUR

IP67 COAST IK10 DMX 512

DATASHEET
XLED-LINE-EL44X-RGB

www.x-led.de
v.05.2025

DRAWINGS



DIMENSIONS & STRUCTURE

Module length [X][1]	60.00mm (2.362")
Module width [Y][1]	23.00mm (0.906")
Module height [Z][1]	15.00mm (0.591")
Weight	18.00 gr.
Housing color	Black or Grey
Housing	UV resistant PC
PCB color	White
Potting color	Transparent
Lens color	Transparent
Lens Options	Clear
Cover Lens	UV resistant PC
Fire protection (Housing)	UL94-V0
Fire protection (Lens)	UL94-V2

Remarks: (1) according to ISO 2768-1m.

PHOTOMETRIC CHARACTERISTICS (CLEAR LENS)

Color	Red	Green	Blue
Luminous flux [lm][1]	8.5	25.4	6.0
Luminous flux RGB [lm][1]			39.5
Luminous intensity RGB [cd][1]			13.0
Beam angle			120°

ELECTRIC CHARACTERISTICS

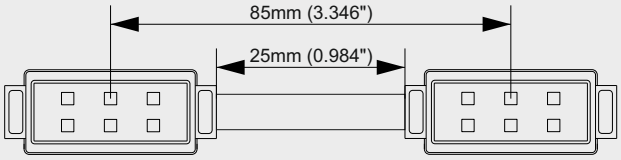
Dimmable		Yes, DMX
Operating mode		Constant voltage
Operating voltage [V][1]	min. 21	typ. 24
Power consumption [W][1]		1.0
Life cycle (T_c=75°C) [h]		50.000

Tolerances: (1) ± 10%

DOT CONFIGURATION

Light Source	6x RGB
Maximum Pixels	56
Pixel Pitch (LED-Line configuration)[1]	var. LED-Dot distribution; min. spacing 85mm (3.346")

Remarks: (1) Center-to-center distance



VISUAL PERFORMANCE METRICS

Gray scale	8-bit
Refresh rate [Hz]	3.600

CONTROL

Control protocol	DMX512
DMX-Addressing	Manual-Adressing with X-LED Node Mapper

TEMPERATURE & ENVIRONMENT

Ambient temperature (°C)	min. -30	max. +50
Storage temperature (°C)	min. -40	max. +70
Operating temperature (°C)[2]	min. -30	max. +85
Junction temperature (°C)[2]	max. +100	
Humidity	0 to 95%, non-condensing	
Environment	Outdoor, IP67, suitable for Coastal Evironment	
Protection class		III
IK - for resistance to mechanical shock class		IK10

Performance temperatures are measured on „T_c“

TECHNICAL SPECIFICATION LINE

Cable color	Black or Grey
Cable weigth [gr./m][1]	55.6
Cable dimensions (W x H)[1]	3.00mm x 10.00mm (0.118"x0.394")
LED-Line length	≥70m (free pixel distribution)
Cable type	60227IEC 53 (RVV) According to IEC 60227-5-1979
Fire protections certifications	EN 60332-1-2:2004 + A12:2020
UV resistant	Yes

Remarks: (1) according to ISO 2768-1m.

Remarks: (2) The performance must be adjusted depending on the temperature
Remarks: (2) Referring to the max. operating temperature / junction temperaure of the LED

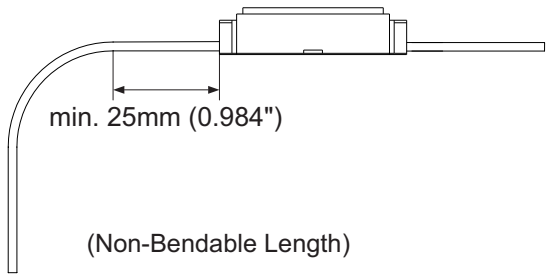
TEST & CERTIFICATION

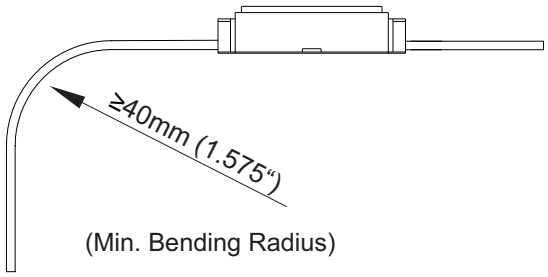
Compliant with:	Remark:
2011/65/EU	RoHS 2 Directive
2015/863/EU	RoHS 2 Directive
2014/53/EU	Radio Equipment Directive
EN 61547:2009	EMC immunity requirements
IEC 60332-1-2	EN 60332-1-2:2004/A12:2020
UL 94-2013	Vertical burn test // IEC 60695-11-10:2013 + IEC 60695-11-4:2011
IEC 60695-2-11	Glow-wire flammability test (GWEPT) - IEC 60695-2-11:2021
1907/2006/EU	Compliance with EU regulations regarding the registration, evaluation, authorization, and restriction of chemical substances, as well the permissible limits of SVHC (Substances of Very High Concern). REACH Regulation 1907/2006/EU.
EN IEC 55015:2019 + A11:2020	Limits and measurement methods for radio interference caused by electrical lighting equipment and similar electrical appliances.
EN 63000:2019	Technical documentation for the assessment of electrical and electronic equipment regadring the restriction of hazardous substances (IEC 63000:2016)
EN 61347:2021	Devices for lamps - Part 1: General and safety requirements (IEC 61347-1:2015 + A1:2017) Devices for lamps - Part 2: Particular requirements for electronic controlgear for LED modules
EN 60529:1991	Degrees of protection provided by enclosures (IP Code) (AC:1993 + A1:2000 + A2:2013 +AC:2016 + A2/AC:2019) German version EN 60529:1991 + A1:2000 + A2:2013
GB/Z30418-2013	IEC 62262 - Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)

TEST & CERTIFICATION

Compliant with:	Remark:
EN 62471:2008	Photobiological safety of lamps and lamp systems
EN 62493:2015	Assessment of lighting equipment related to human exposure to electromagnetic fields
EN IEC 60598-1:2021 + EN IEC 60598-2-1	General requirements and tests & particular requirements - fixed general purpose luminaires
DIN EN ISO 4892-3	UV aging and frost simulation - DIN EN ISO 4892-3, method A, cycle 2
DIN EN ISO 9227	Saltwater spray test
DIN EN ISO 20105	Greyscale evaluation DIN EN ISO 20105-A02:1994-10

CABLE BENDING AND NON-BENDING LENGTH





NOTE: Water ingress incurred due to excess cable bending/twisting will not be under warranty by Carl Stahl ARC.

LEAD ASSIGNMENT

Wire#	Description	Color
1	GND	BLACK
2	DMX +	BLUE
3	Address (AD0)	GREEN
4	DMX-	YELLOW
5	+VDC	RED

INSTALLATION & COMMISSIONING

Please refer to our Installation Manual before handling or installing the LED Lines or LED Dots.
Always ensure you are using the latest version of the installation instructions, available at www.x-led.de.

SAFETY INSTRUCTIONS

Devices must be installed by qualified personnel in compliance with all pertaining regulations.

- Before installing this product, please visit the product page www.x-led.de for the latest version of the installation instructions.
- Always refer to the technical parameters in the data sheet. All items are subject to technical modification
- The LED modules and all their components must not be mechanically stressed. (Avoid excessive force, e.g. from screws or excessive bending.)
- Refer to the attached User Manual as a basis for correct use.
- Consult circuit diagram for correct wiring.
- Note! Before attempting any work, make sure device is separated from main power.
- Make sure protection against line voltage shock is provided during installation. We recommend securing the installation by RCD circuit breakers.
- Note that adjacent parts or devices must be temperature proof up to 90°C.
- Do not operate electronic devices with inductive consumers (fluorescent lamps, gas discharge lamps, ventilators, etc.) in the same electric circuit. Activation of inductive consumers can cause damage to the operating device.
- Do not place heat insulation material on the device.
- Do not exceed the typ. output voltage per individual power supply.
- Mind the operating temperatures of the device according to the technical data sheet.
- Before drilling the mounting holes or cutting the lamp cutouts, take precautions not to harm or damage any power lines underneath.
- Do not solder cable strands. Use cable strand sleeves instead
- Note and mind voltage label on device.
- Make sure flawless electrical connectivity is provided.
- Do not cross primary and secondary lines
- Do not interconnect secondary lines of power supply blocks.
- The device must only be powered up with lamp connected! Connecting the lamp to the powered-up device can cause damage to the lamp! (Voids product warranty!)
- No modification allowed. No liability will be assumed in case of damage incurred by alteration, improper use of faulty installation.
- Do not attempt installation in wet or severe weather conditions.
- Do not leave and expose any LED Dots, or LED Driver unconnected under wet/raining or snowing evironment.
- The installation of the module (with control gear) must take into account all applicable electrical and safety standards.
- Pay attention to standard ESD precautions when installing the modules.
- The LED modules, both in operation and in storage, must not come into contact with aggressive chemical substances.
- During operation, it is possible for the product to generate heat. To ensure safety and guarantee its longevity, it is imperative that touching or conducting maintenance work on the product is strictly prohibited while it is in an active or heated state.
- Do not dispose of in household waste after use.

SAFETY INSTRUCTIONS & POWER SUPPLY REQUIREMENTS

Our LED modules are not protected against overload, over-heating, and short-circuit currents. Therefore, it is mandatory to use electronically stabilized power supply units and additional components that provides these safety functions.

To ensure the safe and reliable operation of both the modules and the power supply, it is crucial to install surge protection devices to safeguard both the branch circuit and the connected equipment.
Always adhere to local electrical codes. (For further information, please refer to our surge protection guideline!)

Ensure the following protective measures:

1. Short Circuiting
2. Electrical Overloading
3. Over-Heating

LED CHARACTERISTICS

LEDs are semiconductor devices whose performance is subject to inherent variability within the semiconductor industry. To ensure consistent performance across a product, LED manufacturers sort LEDs into bins based on preset parameters such as forward voltage, brightness, etc. This "binning" process is purely a sorting function and not a correction process. Variations in the manufacturing process inevitably result in different binning distributions across production batches. Carl Stahl ARC uses the closest binned LEDs in its products to minimize variations within the model range. As with all electronic components, LED output decreases over time – a phenomenon known as lumen degradation. Therefore, it is nearly impossible to expect identical photometric performance from two LED products with different service life spans. The rate of LED degradation depends on various factors, such as operating efficiency, duration of continuous operation, and, most importantly, environmental conditions (e.g., ambient temperature). When operating under optimal temperature conditions and with proper ventilation, LEDs enjoy a longer lifespan compared to conventional light sources. When using or installing LEDs, care should be taken to ensure that the devices operate within the conditions specified in the respectiveproduct documentation.

CLEANING & MAINTENANCE

Regular cleaning of the product is required to maintain its performance and longevity. The process is straightforward but must be done regulary to prevent the buildup of dirt and dust, which can lead to an increase in temperature and a decrease in light output.
Use solvent-free cleaning agents only and do not employ agressive chemicals or high pressure cleaner.
Ensure that the LED dot is turned off and has cooled down completely. Operate device only after complete drying.

WARRANTY

We provide for our LED-Dots (XLED-DOT-...-...) and LED-Lines (XLED-LINE-...-...) a warranty of 5 years.
Any other system related products (e.g. products from other manufacturers) are covered by their standard warranty.
Within the warranty period a failure rate of 3% for interior and 5% for exterior installations could occur.
This failure rate is no claim for warranty. Failures/damage and consequential damage to LED-Dots or LED-Lines caused by improper installation/mounting (e.g. damaged ribbon cable) are not covered by the warranty.
Any visual changes due to UV, salt or other enviromental impacts, which doesn´t effect the functional behavior of the product, are not covered by the warranty. It is the responsibility of the client to ensure that the LED DOT operation temperature remains below 85 degrees Celsius. We advise to order a corresponding number of spare parts. For professional replacement we provide a training by our specialists.
Requirement for our warranty is the compliance with our installation and maintenance guidelines. Certain site conditions and application problems may occur that are not covered specifically by the warranty. These conditions and applications must be addressed with the client in advance to assure warranty coverage. Installation must be provided by trained and qualified personnel. For complete terms and conditions, please consult our General Sales and Planning Terms. They are available on our website at: www.x-led.de

CONTACT

For any further questions please contact us

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