iluminaTronics

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iluminaTronics

Led Strip Solutions

Our company iluminaTronics, is a corporation that specializes in the design and manufacture of led strips and led hoses for tunnels, for harsh environments of rough use, waterproof IP68 to illuminate mining tunnels, trains, subways, hydroelectric tunnels or any type of service tunnel like fiber optic ducts or electrical wiring, etc.

Contents

15W-L10-230V-W
White LED Strip

High-Voltage White LED Strip for Tunnels

The 15W-L10-230V-W is a 6000 K, 220 VAC white LED strip for tunnels. It delivers 1,850 lm/m and provides 180 to 200 lux at a mounting height of 4 m.

LED Strips for Harsh Environments

LED strips are rugged, compression-resistant, and IP68 rated. They are extruded in transparent, food-grade, flame-retardant, halogen-free silicone that does not release toxic gases when exposed to fire.

WHITE LED STRIP	MODEL 15W-L10-230V-W
Input voltage	230 VAC, 50/60 Hz
Input voltage range	200 to 260 VAC, 50/60 Hz
Power consumption per meter	15 W/m
Power per 10 m set	150 W
Illuminance in 5 m x 5 m tunnel	180 to 200 lux at 4 m height
Luminous flux (lm)	1,850 lm/m
Emitted color / CCT	6000 K white (optional 3500 K warm white)
Ingress protection rating	IP68
Extruded material	Food-grade silicone, halogen-free

LED Strips for Different Environments

LED Strips for Different Environments

LED strips are suitable for different applications in tunnels and confined spaces, such as fiber-optic ducts, telecommunications tunnels, and service tunnels.

6W-L10-48V Low-Voltage White LED Strip

Low-Voltage White LED Strip for Tunnels

The 6W-L10-48V low-voltage white LED strip provides approximately 50 to 55 lux in a typical 5 m x 5 m mining tunnel at a mounting height of 4 m. It uses an external LED driver with 100 to 300 VAC input and 48 VDC output.

WHITE LED STRIP	MODEL 6W-L10-48V
Input voltage	48 VDC
Input voltage range	100 to 300 VAC, 50/60 Hz
Power consumption per meter	6 W/m
Power per 10 m set	60 W
Illuminance in 5 m x 5 m tunnel	50 to 55 lux at 4 m height
Luminous flux (lm)	750 lm/m
Emitted color / CCT	6000 K white (optional 3500 K warm white)
Ingress protection rating	IP68
Extruded material	Food-grade silicone, halogen-free

Multi-Voltage LED Strip

The 48 V low-voltage LED strip is recommended for countries with 110 VAC mains power and is also suitable for 220 VAC systems when used with the appropriate driver, making it a multi-voltage solution.

10W-L10-230V-A Amber LED Strip

High-Voltage Amber LED Strip for Conveyor Belts

The 10W-L10-230V-A amber LED strip for conveyor belts is environmentally responsible and compliant with the DS43 standard. Its amber light helps reduce skyglow and minimize impacts on biodiversity, which is why it is recommended mainly for outdoor lighting on mining conveyor belts.

AMBER LED STRIP	MODEL 10W-L10-230V-A
Input voltage	230 VAC, 50/60 Hz
Input voltage range	200 to 260 VAC, 50/60 Hz
Power consumption per meter	10 W/m
Power per 10 m set	100 W
Illuminance in 5 m x 5 m tunnel	55 to 60 lux at 2 m height
Luminous flux (lm)	850 lm/m
Emitted color / CCT	Amber
Ingress protection rating	IP68
Extruded material	Food-grade silicone, halogen-free

Low-Light-Pollution Amber LED Strips

Light pollution is the alteration of the natural darkness of the night caused by wasted, unnecessary, or poorly directed artificial light. Outdoor lighting can reduce sky darkness, hinder astronomical observation, and decrease the effectiveness of optical instruments.

15W-L10-230V-B
Blue
LED Strip

High-Voltage Blue LED Strip for Tunnels

The 15W-L10-230V-B blue LED strip is intended for specialized signaling and illumination applications where blue light is required. It provides clear visual differentiation in industrial environments.

BLUE LED STRIP	MODEL 15W-L10-230V-B
Input voltage	230 VAC, 50/60 Hz
Input voltage range	200 to 260 VAC, 50/60 Hz
Power consumption per meter	15 W/m
Power per 10 m set	150 W
Illuminance in 5 m x 5 m tunnel	100 to 110 lux at 4 m height
Luminous flux (lm)	Varies by color
Emitted color / CCT	Blue
Ingress protection rating	IP68
Extruded material	Food-grade silicone, halogen-free

Blue LED Strip Applications

Underground mines use blue light to illuminate refuge chambers and shelters to help reduce anxiety and stress if personnel become trapped after a tunnel collapse.

15W-L10-230V-G
Green
LED Strip

High-Voltage Green LED Strip for Tunnels

The 15W-L10-230V-G LED strip plays an important role in accident prevention and industrial safety. Green indicates a safe condition, which is why mining operations use green LED strips as traffic signals to indicate right of way at intersections.

GREEN LED STRIP	MODEL 15W-L10-230V-G
Input voltage	230 VAC, 50/60 Hz
Input voltage range	200 to 260 VAC, 50/60 Hz
Power consumption per meter	15 W/m
Power per 10 m set	150 W
Illuminance in 5 m x 5 m tunnel	60 to 70 lux at 4 m height
Luminous flux (lm)	Varies by color
Emitted color / CCT	Green
Ingress protection rating	IP68
Extruded material	Food-grade silicone, halogen-free

Emergency Lighting Colors

Green is commonly used for emergency lighting. However, orange or blue light may be preferred in some applications because it can provide better visibility in fog and smoke during a fire.

15W-L10-230V-R
Red
LED Strip

High-Voltage Red LED Strip for Tunnels

The 15W-L10-230V-R LED strip plays an important role in accident prevention and industrial safety. Red indicates a danger condition, which is why mining operations use red LED strips as traffic signals that require a complete stop at intersections.

RED LED STRIP	MODEL 15W-L10-230V-R
Input voltage	230 VAC, 50/60 Hz
Input voltage range	200 to 260 VAC, 50/60 Hz
Power consumption per meter	15 W/m
Power per 10 m set	150 W
Illuminance in 5 m x 5 m tunnel	60 to 70 lux at 4 m height
Luminous flux (lm)	Varies by color
Emitted color / CCT	Red
Ingress protection rating	IP68
Extruded material	Food-grade silicone, halogen-free

Red Light Applications

Red is used to indicate danger on high-voltage signs, fire emergency equipment, restricted areas, ambulances, and emergency stop buttons.

EPS50
Emergency Power Supply

EPS50 Backup Power Supply for Emergency Lighting

Emergency lighting is intended only for emergency conditions. It does not need to match normal lighting levels; according to international standards, it typically must provide at least 10% of the normal lighting level.

EMERGENCY LIGHTING POWER SUPPLY	MODEL: EPS50
Input voltage	100 to 300 VAC
Input current	0.2 A
Illuminance with 50 m LED strip 750 W system model 15W-L10-230V-W	25 lux at 4 m height
Output voltage	220 VAC
Operating frequency	50/60 Hz
Recharge time	24 h
Emergency backup time	120 min

Emergency Lighting Colors

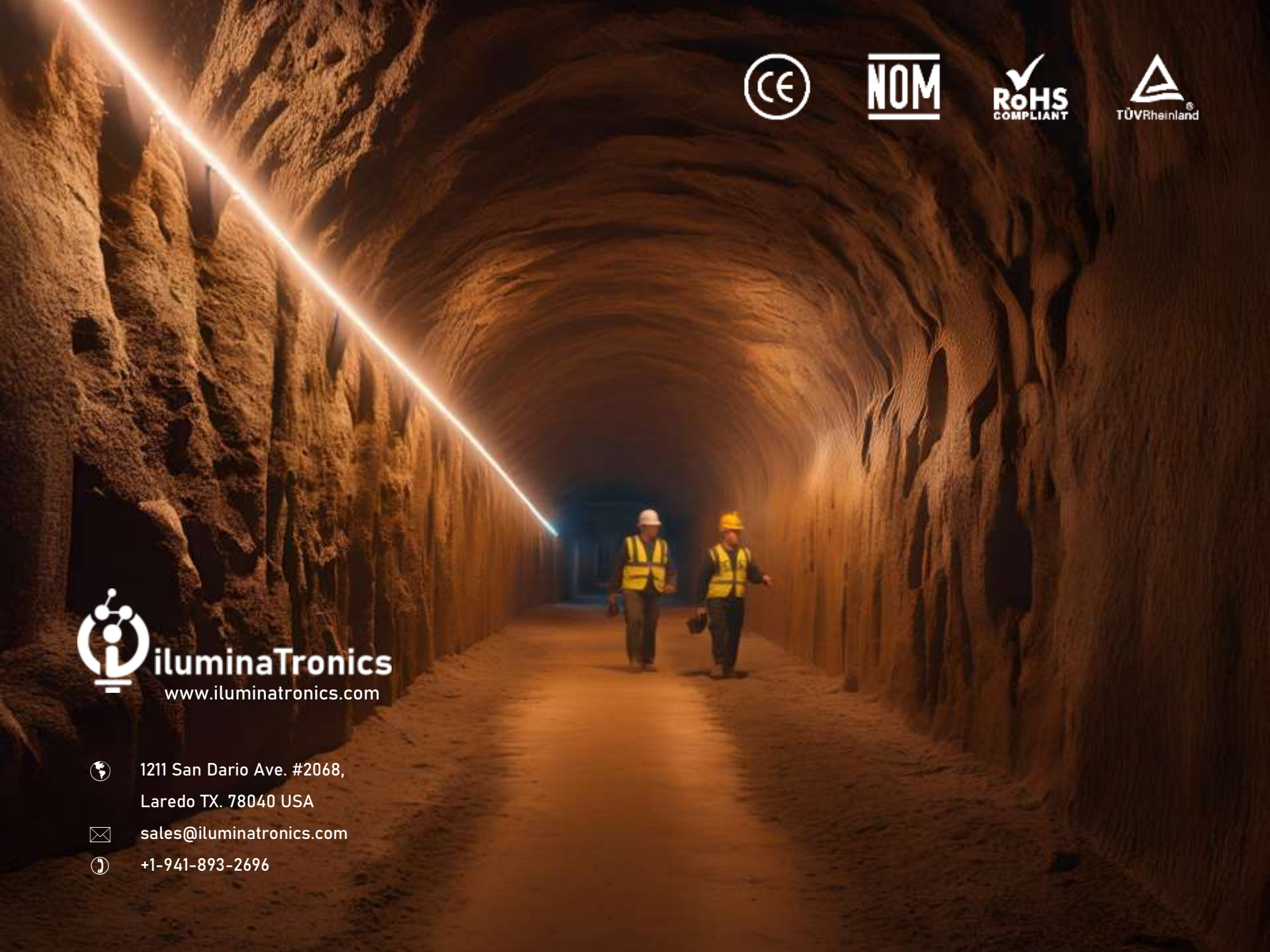
Green is commonly used for emergency lighting. However, orange or blue light may be preferred in some applications because it can provide better visibility in fog and smoke during a fire.

AC-1T3 / AC-1T2
LED Strip Splitters

Splitters

Some tunnels include lateral areas that house transformers or electrical substations, as well as mechanical or electromechanical maintenance workshops, dining rooms, offices, and meeting rooms.

Splitters are used in these sections because LED strips cannot be branched easily. A splitter allows the strip to be routed to one side or to both sides, as required.



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