

# Amusement Park Spares Ltd

Supplier to the  
Amusement Ride Industry



MADE IN ITALY

## FUN-MODULE FAMILY

L172/L322/L472



**Fun-Module** is a family of rectangular lamps, conceived to serve the world of amusement rides and attractions. They are particularly suitable for lighting Drop Towers and Ferris Wheels, as they enhance the linear shape of these structures. The lamps are totally designed and produced in our factory in Italy with first choice materials such as the OSRAM LED, polyurethane resins and gold-plated connection contacts and they are intended for both an indoor and outdoor use. The body is made of polycarbonate and the lid in methacrylate, in order to grant the maximum transparency and resistance to the damaging effects of the UV rays. The electrical connection is based on commercial wires and the connection is fast and secure thanks to the isolation drilling technique. Considering the nature and construction of the lamp, it is available only in the frontal pull out version with a special lamp socket allowing an easy and quick replacement. The family is composed of 3 different formats which differentiate in length: mm 172, 322 and 472 and 2 operative modes: Plug & Play and Controllable Pixel Enhanced. The available optoelectronics range from a minimum of 40 LEDs to a maximum of 120 LEDs according to the size of the lamp. Each lamp can be supplied with RGB or Mono-color LEDs.



## PLUG & PLAY

It is based on electronics with internal programming which work without controller, just power supplied with alternating current through a standard ferromagnetic transformer. The lamp can be supplied pre-programmed, with customized sequences, or virgin and programmable by the user, without limits to the number of channels, with a simple programming kit provided by Fun-Led.

## CONTROLLABLE PIXEL ENHANCED

It adopts the standard WS2811 protocol based on a serial signal (SPI). The lamps are not numbered and their cascaded connection must follow a precise path based on an initial project. This operative mode requires a power supply with direct current and a controller board. As default, these lamps are equipped with the Enhanced features which increase the performances of the lamps, granting at the same time the absolute compatibility with the WS2811 protocol. These functions range from the managing of the Super Strobe, to the thermal protection and the emergency mode functioning.

## OPTIONAL FEATURES

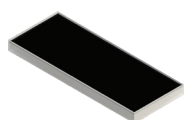
### SUPER STROBE OPTION

Absolute Fun-Led innovation which characterizes the lamps in both operative modes. It consists in equipping the lamps with extremely bright white LEDs to grant a very powerful flashing effect integrated into the lamp itself.



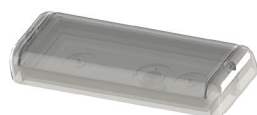
## MECHANICAL CHARACTERISTICS

### THE BASE



The structure is made of polycarbonate; it houses the optoelectronics which is covered with resin and forms the waterproof lighting fixture. The connection mode to the electrical system is the "Frontal Pull Out" which uses a connector to be inserted into a lamp socket. This system allows an easy removal of the lamp in case of replacement. The contacts are made of brass which is nicked and gold plated to assure the best contact and protection against oxidation.

### THE LID



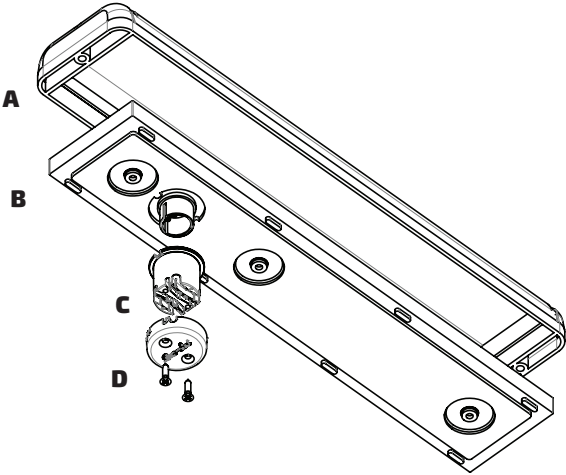
The lid is made of transparent methacrylate which prevents it from yellowing in case of UV exposure and assures an excellent resistance to bad weather conditions. Outside it is perfectly smooth in order to avoid the deposit of dust and dirt and to grant an easy cleaning. Inside the standard pattern is "Sphere".

### THE SOCKET

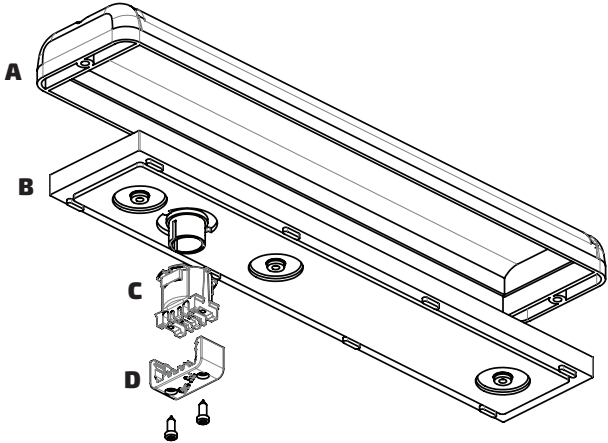


There are two models: D24 and R24. They consist of a body which can be with two or four isolation drilling contacts and a socket cap which drills the isolation of the wires through the tightening of two screws, thus making the electrical connection. They are characterized by a compact volume and assure the maximum safety in making a good electrical connection. The body presents a polarization which helps in setting the correct orientation of the lamp on the support.

FUN-MODULE L172/L322/L472



Frontal Pull Out  
Model **D24**

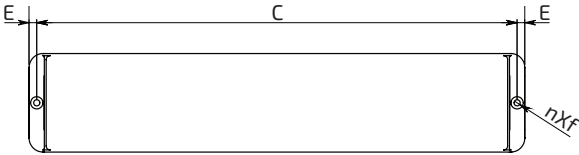
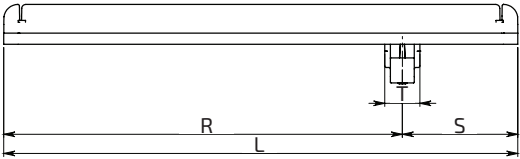


Frontal Pull Out  
Model **R24**

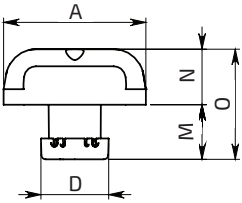
<b>A</b>	LID
<b>B</b>	LIGHTING FIXTURE
<b>C</b>	SOCKET
<b>D</b>	SOCKET CAP

SIZES AND VOLUME

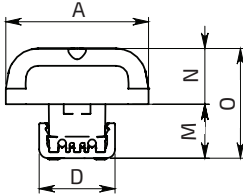
FRONTAL PULL OUT



Socket Type D24



Socket Type R24



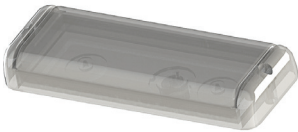
Socket Type		L	A	C	D	E	M	N	O	R	S	T	nXf
<b>D24</b>	mm	172	64	162	30,5	5	24,6	25	49,6	99,7	72,3	30,5	2XØ4
		322	64	312	30,5	5	24,6	25	49,6	249,7	72,3	30,5	2XØ4
		472	64	462	30,5	5	24,6	25	49,6	399,6	72,4	30,5	2XØ4

Socket Type		L	A	C	D	E	M	N	O	R	S	T	nXf
<b>R24</b>	mm	172	64	162	34	5	24,2	25	49,2	99,7	72,3	22	2XØ4
		322	64	312	34	5	24,2	25	49,2	249,7	72,3	22	2XØ4
		472	64	462	34	5	24,2	25	49,2	399,6	72,4	22	2XØ4



FUN-MODULE L172

It has a length of 172 mm and is equipped with 40 LEDs. It is available in both the Plug & Play and the Controllable Pixel Enhanced operative modes.



Operative Mode	LED	Wire Connection	Supply Voltage	Rated Power Strobe+STRB	Options
	n°	n°	Volt	Watt	Super Strobe (STRB) LED n°
Plug&Play (PP)	40	2	24V AC	18,7	30
Controllable Pixel Enhanced (PXE)	40	4	36V DC	39,4 <sup>1</sup>	48

<sup>1</sup>Maximum programmable duration is of 50 ms with a duty cycle of 25%

FUN-MODULE L322

It has a length of 322 mm and its base can be equipped with 50 or 80 LEDs, according to the power level you want to obtain. It is available in both the Plug & Play and the Controllable Pixel Enhanced operative modes.

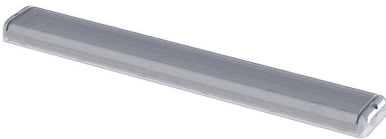


Operative Mode	LED	Wire Connection	Supply Voltage	Rated Power Strobe+STRB	Options
	n°	n°	Volt	Watt	Super Strobe (STRB) LED n°
Plug&Play (PP)	50	2	24V AC	23,35	30
	80			37,4	48
Controllable Pixel Enhanced (PXE)	50	4	36V DC	49,25 <sup>1</sup>	30
	80			78,8 <sup>1</sup>	48

<sup>1</sup>Maximum programmable duration is of 50 ms with a duty cycle of 25%

FUN-MODULE L472

It has a length of 472 mm and its base can be equipped with 80 or 120 LEDs, according to the power level you want to obtain. It is available in both the Plug & Play and the Controllable Pixel Enhanced operative modes.



Operative Mode	LED	Wire Connection	Supply Voltage	Rated Power Strobe+STRB	Options
	n°	n°	Volt	Watt	Super Strobe (STRB) LED n°
Plug&Play (PP)	80	2	24V AC	37,4	48
	120			56	72
Controllable Pixel Enhanced (PXE)	80	4	36V DC	78,8 <sup>1</sup>	48
	120			118,4 <sup>1</sup>	72

<sup>1</sup>Maximum programmable duration is of 50 ms with a duty cycle of 25%

