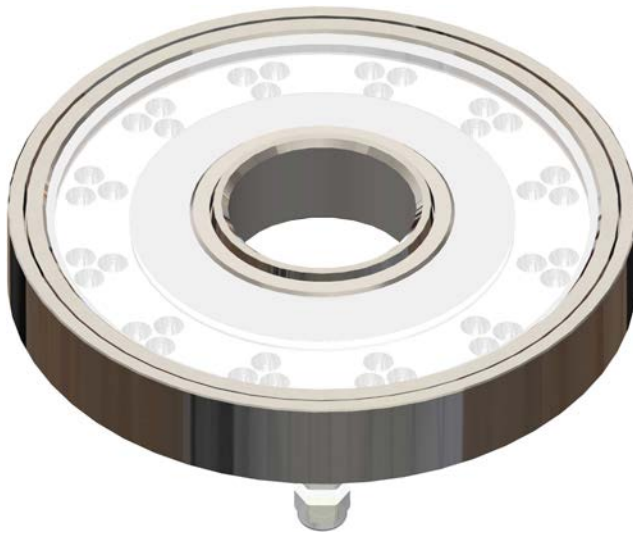

CASCADA

LPR36240

LPS36240

FOUNTAIN
LIGHT



Operating Instructions

ASTEL
LIGHTING

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PREFACE

The CASCADA series of modular underwater/outdoor fountain light with built-in driver is designed to use the latest LED lighting technology.

The modular designed casing enables the selection of different mounting options and cable installations.

The CASCADA series is available in stainless steel casings with high-grade polycarbonate glass. The lighting is available in Warm White, Cool White or RGB color with 36 high-power LEDs.

The most advanced engine with built-in microprocessor enables network connection and simple control of complete groups of multi-color lights through the complete rainbow spectrum by using optional momentary switch or optional DMX512 interfaces with built-in ASTEL protocol.

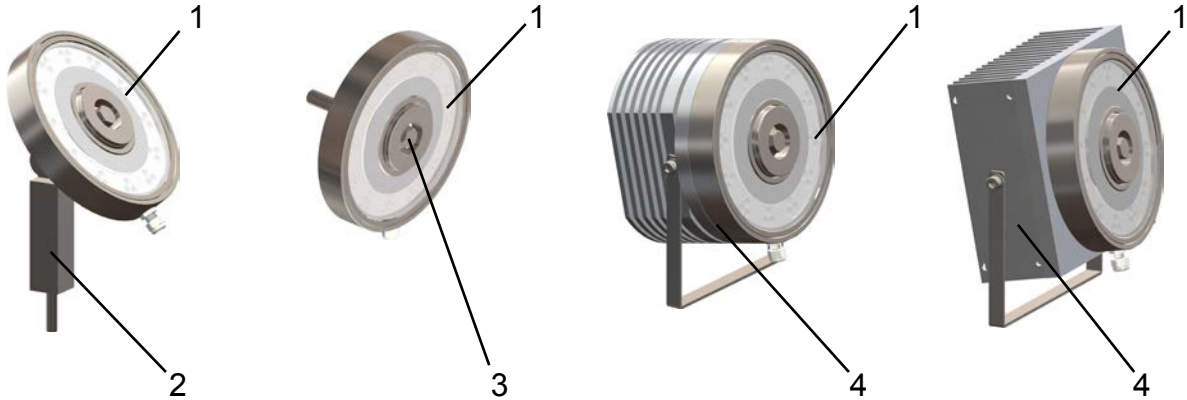
FEATURES

- Modular Stainless Steel Casing
- Polished Finishing
- 36 High-Power LEDs Design
- Warm White, Cool White or Multi-Color RGB Lighting
- High Grade Polycarbonate Glass Optical Window
- Vacuum Metalized Reflector
- Remote Control
- Digital Dimming
- Built-in ASTEL Protocol for DMX512 Control
- Polarity Protection
- Transient Protection
- Thermal Protection
- Low Power Consumption
- Simple Installation

PRECAUTIONS

- The fountain light has to be installed and used in accordance with the instructions of this manual only.
- The power supply has to be disconnected before installation.
- Avoid using this unit near appliances generating strong magnetic fields.
- The optical window has to be cleaned with a mild soap or detergent and lukewarm water by using a soft cloth or sponge. Do not use abrasive or highly alkaline cleaners. Never scrape with razor blades or other sharp instruments. Benzene, leaded gasoline, acetone or carbon tetrachloride should never be used.
- Do turn power off immediately and refer servicing to qualified service personnel if the interior & exterior light does not operate normally following the operating instructions.

COMPONENTS



Model	Description
LPR36240	Rear Cable Inlet
LPS36240	Side Cable Inlet

Color of lighting	Description
M	Red + Green + Blue
WW	Warm White
CW	Cool White

Mounting assembly	Description
-blank-	Fountain Light
FLM36	Flood Light
SLM36	Surface Light
HFL36	Outdoor Light, Round
HFL-SQ36	Outdoor Light, Square

(1) Fountain light

LED light CASCADA series built-in polished stainless-steel casing with different cable installations.

(2) Flood-light mounting assembly

For fixing of fountain modular designed LED light CASCADA series with adjusting of lighting angle.

(3) Surface-light mounting assembly

For fixing of fountain modular designed LED lights CASCADA series to the flat surface.

(4) Outdoor light mounting assembly

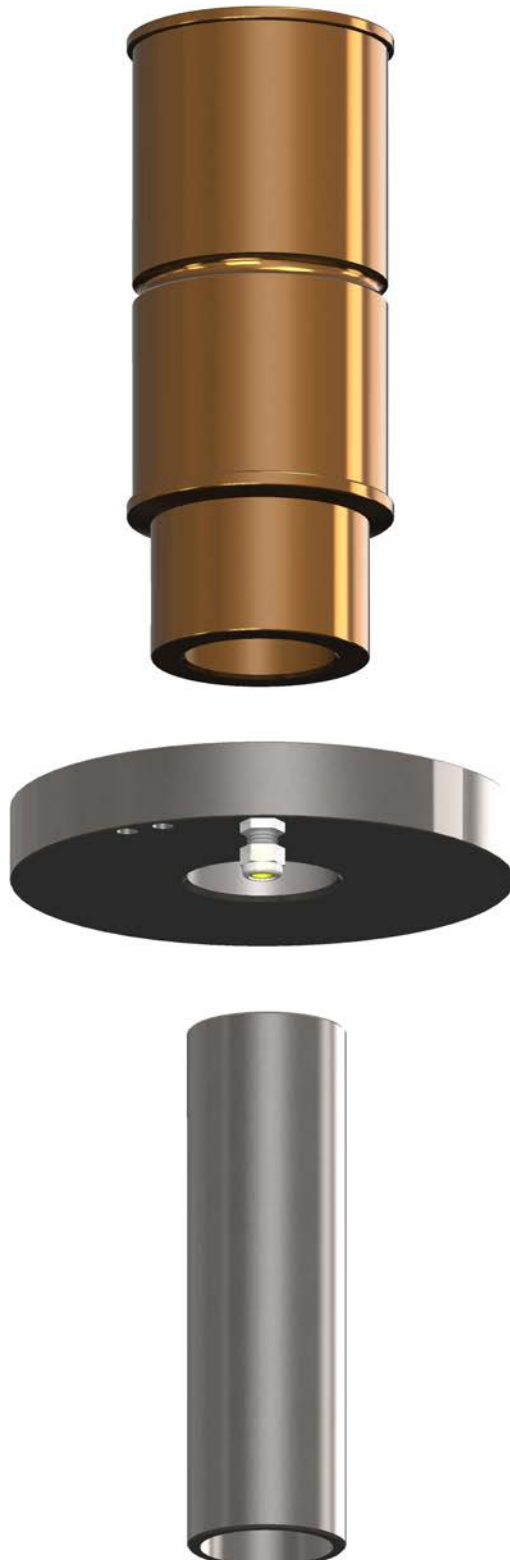
For fixing of fountain modular designed LED lights CASCADA series to the ground or wall with heatsink and mounting bracket.

ASSEMBLING AND INSTALLATION

The modular fountain LED light CASCADA series can be used as stand-alone unit or combined with the following assemblies.

- Flood-light mounting assembly
- Surface-light mounting assembly
- Outdoor light mounting assembly

The assembling and installation have to be realized by qualified personnel.
The CASCADA has to be assembled and fixed as shown in the drawings below:



Note:

- ***Do not cover the FOUNTAIN light body with any kind of temperature isolating material. The FOUNTAIN light is protected by a temperature sensor against over-heating. When the temperature of the FOUNTAIN light exceeds 85°C the FOUNTAIN light is automatically switched off.***

CONNECTION

The power supply has to be connected through the main switch (not included) with correct polarity and protected by a fuse (not included). The power supply voltage has to be from 10 - 30Vdc.

Note:

- ***The power supply has to be switched off before installation.***

The underwater light has to be connected as described in the table below:

CASCADA wire color	FUNCTION
Red	+ DC Power Supply
Black	GND Power Supply
Orange	+ Control
Brown	GND Control

For basic control of the light the CONTROL wire has to be connected through the momentary switch (not included) to the GND by using a 2-pole signal cable extension. (not included)
For DMX512 control optional LXU01 or LXU03 interface can be connected to the CONTROL and GND wires by using a 2-pole signal cable (not included).

Note:

- ***When two or more lights are connected in the lighting system the control wires (red) can be connected in parallel and all the lights then can be controlled by using only one momentary switch or LXU01 (LXU03) interface.***

Earthing

The fountain light has to be earthed by using a pre-tinned green wire with a yellow stripe a minimum of 8 AWG (8.36 mm²). The wire has to be connected to the path light by the help of one fixing screw M8x60

Synchronization

When more than one light is connected to the system the optional Synchronization Unit LSU08 is recommended to synchronize the colors of lighting at the Rainbow Color Spectrum mode of lighting. On the other case the colors of all installed lights would not be the same after few minutes or hours of operation in the Rainbow Color Spectrum mode.

If the multi-color RGB light is used only with one of the fixed color of lighting the synchronization is not necessary.

CONTROLS

Single-color warm white (WW) or cool white (CW)

Control by momentary switch

Remote control by momentary switch can be used to turn-on and turn-off the light and to control the luminosity.

Turning on / off

Press the momentary switch momentary.

Dimming

When the light is on, press the momentary switch longer until the desired power is achieved.

Turning on minimum

When the light is off, press the momentary switch longer (e.g. one second or more) until the light is turned on at minimum power.

Set default

Press the momentary switch for min. 40 seconds or until the light is turned off.

DMX512 control

The network connection to control the light with the standard DMX512 protocol is enabled by using optional LXU01 or LXU03 interfaces.

Multi-color (RGB) model:

Control by momentary switch

Remote control by momentary switch has to be used to turn-on and turn-off the light and to control the mode of lighting and luminosity.

When the light is turned-off the color or mode of lighting can be changed sequentially by pressing the momentary switch for 2 seconds:

RGB Sequence of lighting
Custom Color
Full RGB
Cool White
Bluish White
Red
Green
Blue
Rainbow Color Spectrum

Turning on /off

Press the momentary switch shortly.

Changing the color or mode of lighting

When the light is turned-off press the momentary switch for 2 seconds.

Setting the Custom Color

At the selected Rainbow Color Spectrum mode press the momentary switch shortly to turn the light off. After that press the momentary switch for 5 seconds or until the light is switched to the selected color and then the Custom Color is set and selected.

Dimming

When the light is turned-on press the momentary switch until the desired illumination is achieved. By another pressing of the momentary switch the luminosity will increase to the maximum illumination.

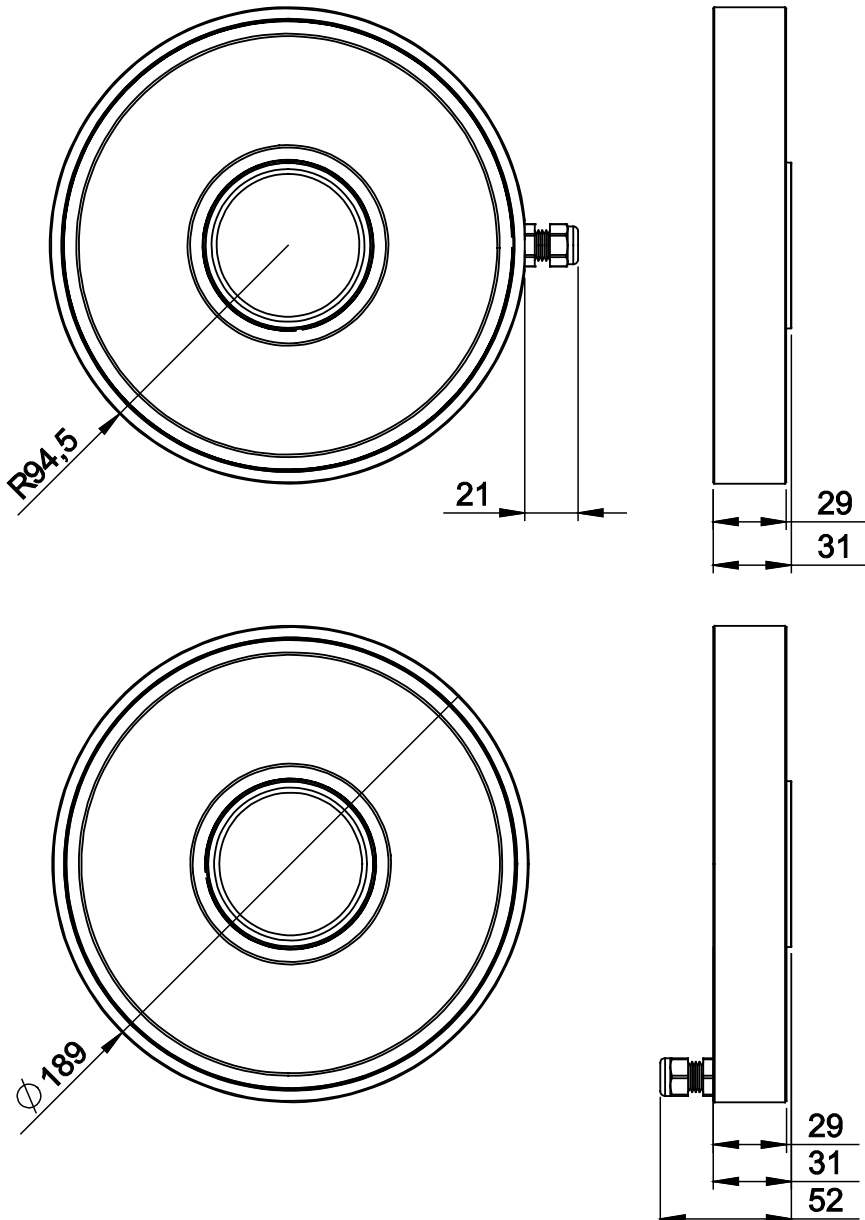
Set default

Press the momentary switch for min. 40 seconds or until the light is turned off.

DMX512 control

The built-in ASTEL protocol enables the network connection to control the lights with the standard DMX512 protocol by using optional LXU01 or LXU03 interfaces.

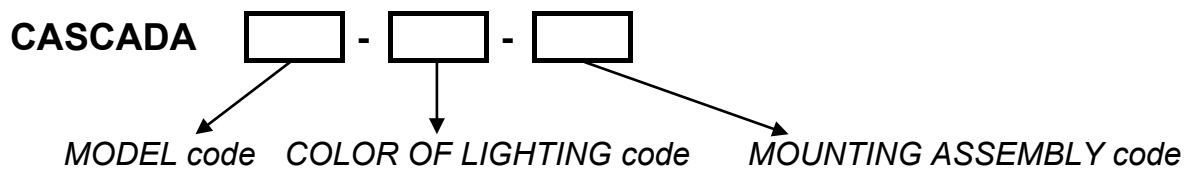
APPEARANCE



TECHNICAL SPECIFICATIONS

Power supply	12 – 24 Vdc, max. 4.3 A/12 Vdc or 1.9 A/24 Vdc
Lens angle	15°
Optical window	High-grade polycarbonate glass
Luminous flux	max. 5.700 lm
ASTEL protocol default address	1
Operating temperature	-10°C - +50°C
Casing	Stainless steel (316L)
Protection	IP 68
Dimensions	Ø189 x 31 mm
Weight	3.5 kg

The model specification:



Design and specifications subject to change without notice.

WARRANTY

1. The equipment manufactured by ASTEL d.o.o. is warranted to be free from defects in workmanship and materials under normal use and service.
2. This Warranty is in effect for of two years from the date of purchase by the user. Proof of purchase must be included, to establish that it is inside the warranty period.
3. This Warranty is transferrable and covers the product for the specified time period.
4. In case any part of the equipment proves to be defective, other than those parts excluded in paragraph 5 below, the owner should do the following:
 - (a) prepare a detailed written statement of the nature and circumstances of the defect, to the best of the Owner's knowledge, including the date of purchase, the place of purchase, the name and address of the installer, and the Purchaser's name, address and telephone number;
 - (b) the Owner should return the defective part or unit along with the statement referenced in the preceding paragraph to the warrantor, ASTEL d.o.o., or an authorized distributor, postage/shipping prepaid and at the expense of the Purchaser;
 - (c) if upon the Warrantor's or authorized distributor's examination, the defect is determined to result from defective material or workmanship, the equipment will be repaired or replaced at the Warrantor's option without charge, and returned to the Purchaser at the Warrantor's expense;
 - (d) no refund of the purchase price will be granted to the Purchaser, unless the Warrantor is unable to remedy the defect after having a reasonable number of opportunities to do so. Prior to refund of the purchase price, Purchaser must submit a statement in writing from a professional supplier that the installation instructions of the Operating Instructions manual have been complied with and that the defect remains;
 - (e) warranty service shall be performed only by the Warrantor, or an authorized distributor, and any attempt to remedy the defect by anyone else shall render this warranty void.
5. There shall be no warranty for defects or damages caused by faulty installation or hook-up, abuse or misuse of the equipment including exposure to excessive heat, salt or fresh water spray, or water immersion except for equipment specially designed as waterproof.
6. There shall be no responsibility or liability whatsoever on the part of the Warrantor or its employees and representatives for injury to any person or persons, or damage to property, loss of income or profit, or any other consequential or resulting damage or cost which may be claimed to have been incurred through the use or sale of the equipment, including any possible failure or malfunction of the equipment, or part thereof.

DECLARATION OF CONFORMITY

according to IEC Guide 22 and EN 45014

Manufacturer's Name: ASTEL, Podjetje za projektiranje, proizvodnjo in trgovino, d.o.o.

Manufacturer's Address: Dutovlje 138
6221 Dutovlje
Slovenija

declares that the products

Item, Product Name and Model Number: 1. Fountain LED light CASCADA series

conform to the following Product Specifications:

EMC: EN 55015:2006 + A1:2007
EN 61547:1995 + A1:2000 + A2:2009
EN 61547:2009

Safety: EN 60598-2-18:1995/A1:2012
EN 60529:1992+A2:2013

Supplementary Information:

The products herewith comply with the requirements of the following Directives and carry the CE-marking accordingly:

- the Low Voltage Directive 2014/35/EU
- the EMC Directive 2014/30/EU
- the RoHS Directive (EU) 2015/863

ASTEL d.o.o.
Dutovlje 138
6221 Dutovlje
Slovenija

18th January, 2017

ASTEL d.o.o., Dutovlje 138, 6221 Dutovlje, Slovenia
Tel: +386 5 7310771, +386 5 7310772
Fax:+386 5 7310789
E-mail: info@astel-lighting.com
Web: www.astel-lighting.com