VOLCANO

0110

INGROUND
LED
LIGHT

Operating Instructions

ASTEL
LIGHTING

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PREFACE

The VOLCANO 0110 series of compact outdoor light with built-in driver is designed to use the latest LED lighting technology.
The modular designed casing enables the selection of different niches, light engines and beams.
The VOLCANO 0110 series is available in sand-blasted / black nitride stainless steel or anodized aluminium casings with E6C0 finishing. The lighting is available in warm white, daylight white, cool white, red, green, blue, RGB or RGBW colors with 1 high-power LED.
The most advanced engine with built-in microprocessor enables network connection and simple control of complete groups of single-color or multi-color lights through the complete rainbow spectrum by using optional momentary switch or optional DMX512 interfaces with built-in ASTEL protocol.

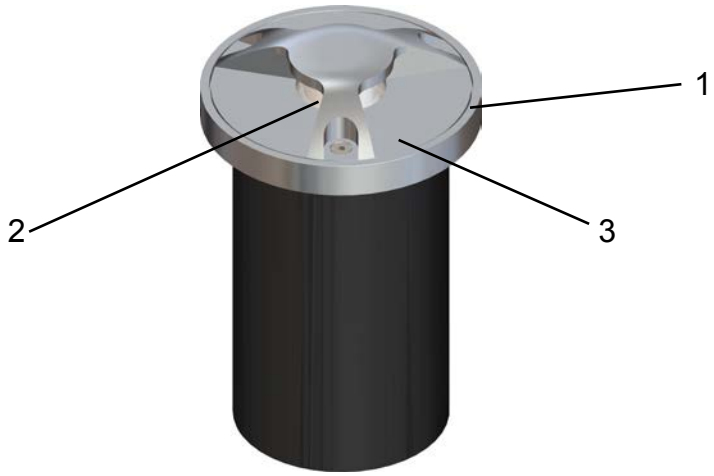
FEATURES

- Compact Stainless Steel or Aluminium Casing
- Sand-Blasting and/or Anodizing E6CO Finishing
- 1 High-Power LEDs Design
- Warm White, Daylight White, Cool White, Blue, Green, Red, Multi-Color RGB or Multi-Color RGBW Lighting
- High Grade Polycarbonate Glass / Tempered 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 inground 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



(1) Niche
Sand-blasted stainless steel or anodized aluminium, with diameter of 78 mm for inground light installation.

Model	Description
0110-IGCNSS	1 High-Power LED, Stainless Steel, Sand-Blasting
0110-IGCNSB	1 High-Power LED, Stainless Steel, Black Nitride
0110-IGCNAN	1 High-Power LED, Aluminium, Neutral Anodized
0110SS-IGCNAB	1 High-Power LED, Aluminium, Black Anodized

(2) Engine
Sand-blasted stainless steel or anodized aluminium, with different lighting colors and beam options.

Color of lighting	Description
WW	Warm White
DW	Daylight White
CW	Cool White
R	Red
G	Green
B	Blue
RGB	Red + Green + Blue
RGBW	Red + Green + Blue + Warm White

Beam	Description
N	Narrow
M	Medium
W	Wide

(3) Beam
Stainless steel or sand-blasted anodized aluminium, with high-grade polycarbonate glass / tempered glass optical window.

Beam	Description
IGCBD	Direct No-Reflective Beam
IGCBR120	Reflective Beam 120°
IGCBR240	Reflective Beam 240°
IGCBR360	Reflective Beam 360°

INSTALLATION AND CONNECTION

The installation have to be realized by qualified personnel.

Note:
- ***Do not overtighten the screws and threads as this can result in path light damage.***

Note:
- ***Do not cover the inground light body with any kind of temperature isolating material.***

The inground light is protected by a temperature sensor against over-heating. When the temperature of the flood-path light exceeds 85°C the inground light is automatically switched off.

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 range has to be from 10 – 30 Vdc.

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

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

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 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 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 inground light has to be earthed by using a pre-tinned green wire with a yellow stripe a minimum of 8 AWG (8.36 mm^2). The wire has to be connected to the flood-path light by the help of one assembling screw.

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), daylight white (DW), cool white (CW), red (R), green (G) or blue (B) models:

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.

Multi-color (RGBW) 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:

RGBW Sequence of lighting
Custom Color
Full RGB
Cool White
Bluish White
Red
Green
Blue
White Color Spectrum
Custom White Color
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 White Color
At the selected White Color Spectrum mode press the key-switch momentary to turn the light off. After that press the key switch for 5 seconds or until the light is switched to the selected white color and then the White Color is set and selected.

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.

TECHNICAL SPECIFICATIONS

Power supply	12 – 24 Vdc, max. 130 mA
Lens angle	12°(N), 30°(M), 80°(W)
Optical window	High Grade Polycarbonate Glass / Tempered Glass
Luminous flux	max. 130 lm
ASTEL protocol default address	1
Operating temperature	-10°C - +50°C
Casing	Stainless steel / Anodized Aluminium
Protection	IP 67
Dimensions	Ø78x125 mm
Weight	max. 450 g (aluminium) max. 650 g (stainless steel)

Design and specifications subject to change without notice.

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. INGROUND LED light VOLCANO 0110 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

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 od 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 adress of the installer, and the Purchaser's name, adress 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 coused 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.

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