# SquareEye Spot

RGBW led-spot, IP67 version

Order code: 10659

# CONTENTS

1	PICTURE	3
	1.1 RANGE OF LENSES	
2	DIMENSIONS	4
•	3.1 SYMBOLS 3.2 PROTECTION FROM ELECTRIC SHOCK 3.3 PROTECTIONS FROM FIRE AND BURNS	5 6
	3.4 PROTECTION FROM INJURY 3.5 DISPOSING OF THIS PRODUCT	
4	PHYSICAL INSTALLATION	8
	<ul><li>4.1 UNPACKING</li></ul>	8 8
5	EXTERNAL CONNECTIONS	
6		
7	SPECIFICATIONS	
8	SERVICE AND MAINTENANCE  8.1 SAFETY PRECAUTIONS  8.2 CLEANING	13
9	WARRANTY	14
	9.1 APPLICATION OF WARRANTY	
10	OLIST OF USED ABBREVIATIONS	17

# **Picture**



SquareEye spot on bracket (included)

SquareEye with convection coolers

# 1.1 Range of lenses



15° Spot



24° Medium

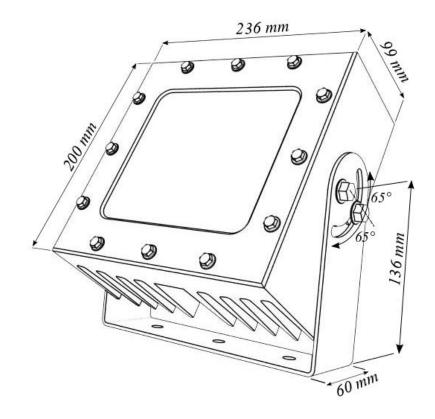


31° Wide



43°x16° Asymmetrical

# **Dimensions**



The maximum height with bracket: 155 mm

# Safety information

Before installing, powering up, or servicing the SquareEye Spot, it is highly recommended that you read this manual and ensure yourself that you completely understand its content. Observe the safety precautions in this manual. Install and operate the led-unit only as described in this manual, and in conformity with local regulations. If you have any questions how to operate this product safely, please contact your point of sale.

# 3.1 Symbols

Following symbols are used to identify important safety information on the product and in this manual.



DANGER! Safety hazard. Risk of severe injury or death.



Warning!
Hazardous
voltage. Risk
of lethal or
severe
electric
shock.



Warning! LED light emission. Risk of eye injury.



Warning! Burn hazard. Hot surface. Do not touch



Warning! Refer to user manual.

# 3.2 Protection from electric shock



Although this device itself does not operate with dangerous voltages, the installation in which is intended to be used, can contain dangerous voltages.

Shut down the power of the complete installation before carrying out any installation, or maintenance work.

Use only AC to DC power sources, suitable for the application, and conform to local regulations. Please ensure yourself that the AC to DC power supply is able to deliver the rated current requirements of the installation.

If any cable, seal or housing is damaged, cracked or reformed, disconnect the power of the installation immediately.

For any additional servicing, not described in this manual, please contact your point of sale.

## 3.3 Protections from fire and burns





Do not operate this led-unit if ambient temperature is over 45 °C (113 °F). Please ensure yourself that sufficient ventilation around the led module is possible.

It might be necessary to allow the led-unit to cool down for 5 minutes, before servicing.

Do not modify the led-fixture, in a way, not described in this manual.

# 3.4 Protection from injury





Ensure yourself that the led-module and all its accessories are securely fastened. Verify that the led unit is firmly fixed to its supporting underground.

# 3.5 <u>Disposing of this product</u>



This led-lighting device is manufactured in compliance with directive of the European community: waste electrical and electronically equipment. Please help to preserve our environment, and ensure that this product will be recycled properly at the end of its life.



# Physical installation

Thank you for selecting this SquareEye Spot as best solution in your setup.

Warning! Read the safety precautions in this manual before integrating this led-unit into your installation.

Installation must be carried out by qualified professionals only.

Assure yourself that there is sufficient and unrestricted air flow around the SquareEye Spot.

# 4.1 Unpacking

The following items are included in your package:

- SquareEye Spot with focussing bracket included
- Protective antistatic packaging, with short form manual

# 4.2 Mounting

#### Surface mounting

The SquareEye Spot can be mounted on all kind of non-combustible materials, but take in consideration that the module can have a Tc of approx. 30 °C higher as ambient temperature.

In case of problems, or doubts, please contact your point of sale.

### 4.3 Location and orientation

This SquareEye Spot can be used in all directions.











# External connections

## 5.1 Current power input

### Safety precautions

Never connect the live power on the input terminals of the SquareEye Spot led-unit! The SquareEye Spot can only be used by a correct 700mA led driver powered by a 48 VDC power supply.

In case of doubts, contact your point of sale.

### Polarity

The Square-Eye Spot is polarity sensitive. So observe polarity and cabling:

- Inner conductor marked with 1 = Common +700mA
- Inner conductor marked with 2 = Red
- Inner conductor marked with 3 = Green
- Inner conductor marked with 4 = Blue
- Inner conductor marked with 5 = White

Improper connection, might damage the Square-Eye Spot and power supply permanently. In case of inversed polarity, the warranty is void.

## Power supply: Rated current

The rated input current range of the SquareEye Spot is 4 x 700mA. Use a correct led driver. Please note, never apply a 12 V or 24 V DC directly to the units. This will damage the units permanently.

### Preferred power supply:

- ➤ Lux Lumen 12 channel 700mA, a highly suitable DMX led-driver with the proper 48 VDC power supply
  - Max. SquareEye Spot led-units: 3 pcs
  - Order code: 10129

### Applying power

Make sure to connect the SquareEye Spot first, <u>before</u> applying power, otherwise the SquareEye Spot led-unit can be damaged.

#### Cable





Please ensure yourself that the cable end is watertight sealed at the connection. If this is not properly done, water can pass through the inner conductors of the cable and damage the internal electronics of the SquareEye Spot.

### Connectors (on request)

Make sure to use IP67 connectors if the use of connectors is necessary, in an outdoor environment, to keep IP67 for a complete system. The SquareEye Spot can be delivered with suitable IP67 connectors (on request). Please contact your point of sale.

# EMC and safety requirements

The SquareEye Spot is fully compliant to the LVD and EMC directive of the European council, if used in a properly designed setup.

The SquareEye Spot is only intended to be used in lighting applications, and as such, the complete assembly of led unit and power supply needs to be fully compliant with following harmonized standards:

### LVD requirements of the power supply

• EN 60598: general requirements of lighting equipment.

## EMC requirements of the power supply

#### Immunity according to:

- EN 61547:2009 (General EMC immunity requirements lighting eq.)
- EN 61000-4-1:2006 (General immunity testing techniques)
- EN 61000-4-2:2008 (ESD immunity test)
- EN 61000-4-3:2006 + A1:2007 (Radiated immunity test)
- EN 61000-4-4:2004 (Fast transients and burst immunity)
- EN 61000-4-5:2005 (Surge immunity test)
- EN 61000-4-6:2008 (Conducted immunity test)
- EN 61000-4-8:1993 (Magnetic field immunity test)
- EN 61000-4-11:2004 (Voltage variations immunity test)
- EN 61000-6-1:2005 (Generic standards for immunity)

#### Emission according to:

- EN 61000-3-2:2005+A1:2008+A2:2009 (Harmonics emission test<16A)</li>
- EN 61000-3-3:2008 (Flicker+ voltage changes limits< 16A)</li>
- EN 55015:2006+A2:2009 (Conducted + radiated emission lighting equipment)

To achieve this compliance, a proper power supply must be supplied. In case of doubts, contact your point of sale.

# **Specifications**

### 7.1 <u>general</u>

The SquareEye Spot is a light fixture especially designed for outdoor applications where a long lifetime and a strong light output matter. The Led-PCB contains powerful 3W leds: 12x Red, 12x Green and 12x Blue and 12x White.

The ingress protection of this SquareEye Spot is IP67, and as such, the unit can be used in outdoor as well as indoor applications.

The housing is made out of solid aluminium which serves as cooler as well. Housing in anodized aluminium in black finish.

All fasteners are stainless steel.

The front cover is a 4mm tempered, clear glass.

It uses current controlled power supply, able to supply 700mA.

- Power consumption: max. 144W
- Power voltage: Do not apply voltage sources!
- Current: max. 700mA (full rated output)
- Total weight: 5,75 kg
- 48x 3W leds (12x red, 12x green, 12x blue, 12x white) on PCB
   4 groups of 12 LEDs in serial connection x 700mA
- Light output angle: 120° (without any lens)
   By using lenses the light output angle can be chosen:

o Spot: 15°

o Medium: 24°

o Wide: 31°

o Asymmetrical: 43° x 16°

# Service and maintenance

## 8.1 <u>Safety precautions</u>



Read carefully the safety information in this manual. Lock out the power on the entire system and allow all electronic devices to discharge, and cool down, before executing any service or maintenance.

# 8.2 Cleaning

### The SquareEye Spot itself



Extensive dirt, and particle build-up degrades performance, may cause overheating can result in damaged led-unit and power supply's. Damage by inadequate cleaning or maintenance is not covered by the product warranty.

Never use solvents to clean the outer housing of the unit.

# Warranty

# 9.1 Application of warranty

#### Warranty period

Warranty service is valid for one year from the date of purchase by the consumer, as evidenced by invoice date given out by your point of sale.

#### Warranty service

Service under warranty can only be done by Lux Lumen.

#### Coordinates:

Lux Lumen Kernenergiestraat 53 A 2610 Wilrijk Belgium

Any cost of secure transportation of the product to and from Lux Lumen service department, will be borne by the customer.

#### Limitations

Lux Lumen will not warrant the following:

- Periodic check-ups, maintenance and repair or replacement of parts due to normal wear and tear.
- Consumables
- Any software
- Defects caused by modifications carried out without Lux Lumen's approval.
- Damage resulting from the fact that a product is not conforming to country specific standards or specifications in another country that the country of purchase.

Costs incurred by Lux Lumen's service center in making any adoptions or modifications of a product necessary for country specific technical or safety standards or specifications, or any other cost to adjust the product as a result of any specifications which have changed since the delivery of the product.

#### Warranty service is excluded if damage or defects have been caused by:

Improper use, extensive use, handling or operation of the product as referred to in the user manual or operator manual and/or relevant user documents, including without limitation, incorrect storage, dropping, excessive shocks, corrosions, dirt, water, or sand damage, if the product is not rated to be used in severe conditions, indicated by its IP and IK degree, mentioned in the product specifications in this manual.

Repairs, modifications or cleaning carried out by a non Lux Lumen service centre.

Use of spare parts, software or consumables, which are not compatible with the product.

Connecting the product to equipment not intended to be used with this product.

Defects caused by improper condition of the power supply network.

Inadequate packaging of the product when returning it under the RMA procedure.

Accidents or disasters or any cause beyond the control of Lux Lumen, including but not limited to lightning, water, fire, public disturbances, improper ventilation, and acts of god.

#### Others

It is the responsibility of the customer to backup and save any software files and programs before repair and to restore the same after such repair.

This warranty does not affect the consumer's statutory rights under applicable national legislation in force, nor the consumer's rights against the retailer arising from the sales/purchase contract. In the absence of applicable national legislation, this warranty will be the consumer's sole and exclusive remedy, and Lux Lumen cannot be liable for any incidental or consequential damages for breach of any express or implied warranty of this product.

For full details of the warranty offered on this product, please contact Lux Lumen's service center.

# 9.2 RMA procedure

To send material back to Lux Lumen, you need a RMA (Return Material Authorization) document that you will receive from Lux Lumen.

Without the RMA document, we cannot accept the material.

The procedure to obtain a RMA:

#### Step 1:

Customer contacts Lux Lumen about warranty, defects if material has to be returned.

#### Step 2:

Lux Lumen sends the customer a filled out RMA document (using a unique RMA number)

#### Step 3:

Customer sends material (include a copy of the RMA document with the material)

#### Step 4:

Lux Lumen evaluates and informs the client if repair is under warranty, or – if not - makes an offer for repair to the client.



# List of used abbreviations

- AC: Alternating current
- DC: Direct current
- °F: Temperature in degrees Fahrenheit
- °C: Temperature in degrees Celsius
- LED: Light Emitting Diode
- CRI: Color Rendering Index
- RMA: Return Material Authorization
- LVD: Low Voltage Directive
- EMC: ElectroMagnetic Compatibility