



# XILVER™

## DYNAMIC LED FIXTURES

## User manual Xilver RainDrop RGB

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### I. Declaration of Conformity

Manufacturer's name:  
Xilver International B.V.

Address:

Proostwetering 50  
3453 AH Utrecht  
The Netherlands

Declares that the product:

Name: RainDrop™ RGB LED Lighting Fixture  
Conforms to the following EEC Directives

89/336/EEC Electromechanical Contamination Directive

2006/95/EEC Low Voltage Directive

IEC 60950-1:2005, mod: Safety of Information Technology Equipment, including Electrical Business Equipment

EN55022 (1998) +A1(2000) +A2(2003): Information technology equipment. Radio disturbance characteristics.

EN 55024 (1998) +A1 (2000) +A2(2003): Information technology equipment. Immunity characteristics.

Utrecht, June 11th, 2009

Xilver International B.V.

### II. Important Safety Instructions

It is extremely important to read ALL safety information and instructions provided in this manual and any accompanying documentation before installing and operating the products described herein.

Heed all cautions and warnings during installation and use of this product.

Keep this instruction manual for future reference

This unit does not contain any user serviceable parts.

Do not open this unit. Doing so will void warranty and might present a risk. Servicing must be performed by qualified personnel only. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug being damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

This unit is not designed for residential use.

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Allow for sufficient airflow to this unit.

Do not connect or disconnect the power connector under load.

Protect the power lead from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. When damaged, replace the power lead.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Do not stare into the beam of this unit, the intense light output may cause injury to the eye.

Do not leave this unit in strobe mode for indefinite time. This may cause epileptic response.

When in operation this device may reach high temperatures. Do not touch the fixture by hand during operation. Allow for sufficient time for cooling before handling this device.

### III. Disclaimer

All rights reserved. Although the information in this manual has been compiled with care, individual items may vary in size, ratings and functionality from what is included in this manual.

Xilver™ disclaims any liability for damage, losses or other consequences suffered or incurred in connection with the use of the measurements, data or information contained in this manual. Xilver™ may change this product without prior notice.

### IV. About this Manual

This Manual provides basic information explaining the functionality, installation, operation and maintenance of the Xilver™ RainDrop™ RGB LED fixture.

This manual serves as a first reference for the use of this product.

### V. Customer Service and Warranty

This product is supplied with a limited warranty for 12 months following purchase.

To obtain warranty service, please contact your local Xilver™ dealer.

Please do not send equipment to Xilver™ International without authorisation. If asked to do so, please add a copy of the original invoice, together with the faulty device in a secure shipping container.

### VI. Recycling and hazardous substances

This product complies to the EU RoHS- Reduction of Hazardous Substances (2002/96/EC) and WEEE – Waste Electrical and Electronic Equipment (2002/95/EC) directives.

The selection of hazardous substances in all components and parts has been reviewed with care in order to comply or exceed the RoHS directive.

If this product, when purchased and used in the EU, has reached the end of its useful life it may be returned to the original dealer at no cost, or to Xilver™ International with a proof of ownership.

### Chapter 1: Description

#### 1.1 Application

The Xilver™ RainDrop™ LED Lighting Fixture is designed as a highly advanced lighting instrument.

It is designed to be a robust, easy to install, reliable lighting fixture, to be used in temporary or permanent installations, indoor or outdoor.

#### 1.2 Features

The RainDrop™ RGB LED Lighting Fixture incorporates the following technologies and features:

- Lumiled Rebel LED sources
- Environmental protection to IP65
- Powder coated die-cast housing
- Cable management behind the fixture, allowing surface mounting
- M8 attachment point for standard clamps
- Polycarbonate dome, UV stable.
- Automatic Temperature correction
- Power and Data supply via Xilver™ X-900™ Intelligent Controller
- Setup with the Xilver X-Navigator pc application thru the Xilver™ X-900™ Intelligent Controller

#### 1.3 Products

For operation of the RainDrop™ RGB LED Lighting Fixture the following products are required

- One or more RainDrop™ RGB LED Lighting Fixtures
- Proprietary Xilver™ X-series cabling
- A Xilver™ X-900™ Intelligent Controller, connected to either DMX or Ethernet
- The PC-based Xilver™ X-Navigator configuration application

#### 1.4 Xilver™ Power and Data structure

Xilver™ products are designed around a proprietary Power and Data supply structure.

This structure allows an optimal use of power, data and distance from a Xilver™ X-900™ Intelligent Controller, whilst safeguarding the environmental protection.

The power connector on every fixture is an 8-pin connector, with power and data in and out. To connect multiple fixtures to a single output from a Xilver™ X-900™ Intelligent Controller Xilver™ Y-adapters must be used.

When an connector is left unterminated, all fixtures on that output will not be operational. In this event a proprietary Xilver™ X-series Terminator must be used.

The Xilver™ Power and Data structure is based around a 48V DC power source, capable of supplying a maximum of 5 amperes. The electronics and cable used guarantee a maximum distance of 100 metres between the X-900™ Intelligent Controller and the last fixture on the line. The data signal used is not compatible to DMX.

### Chapter 2: Installation

#### 2.1 Included Items

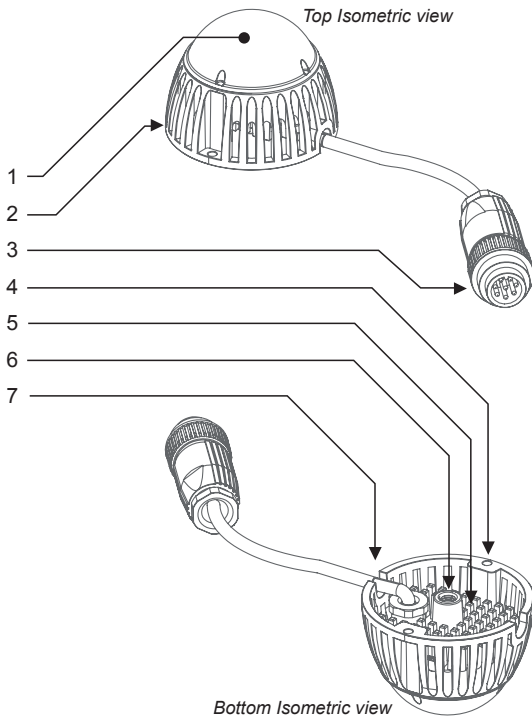
In the box containing this product, the following items should be present:

- 1 Xilver™ RainDrop™ RGB LED Lighting Fixture
- 1 Manual (this manual)

Caution: When unpacking handle the fixture with care. The dome is sensitive to scratches.



### 2.2 Layout



1	Dome
2	Vents
3	Connector
4	Mounting hole (2x)
5	Heatsink
6	Mounting Hole (internally threaded, M8)
7	Cable slot

### 2.3 Mechanical Installation requirements

The RainDrop™ Fixture is designed to be mounted in any orientation.

The RainDrop™ Fixture can be used outdoors (rated to IP65 specification) Please note that these specifications do not allow for submersion.

It can be wallmounted via two attachment points in the outer ring. It can be attached to any other object via the rear-mounted M8 threaded hole.

When attaching a RainDrop™ Fixture to an object, ensure that this object is suited to the weight, heat exposure and mounting method chosen for this RainDrop™ Fixture.

**Warning:** When in operation the RainDrop™ Fixture may reach high temperatures. Do not touch the fixture by hand during operation. Allow sufficient time after removing electrical power for cooling before handling any RainDrop™ Fixture.

**Warning:** This fixture is convection cooled. Allow for sufficient airflow to this fixture. Failure to do so may shorten the operational life of this fixture and may void warranty.

During mounting of the RainDrop™ Fixture use caution to prevent breaks and damage to the power input cable of the RainDrop™ Fixture. In the outer ring 2 gaps are present which are specifically designed to guide the cable from this fixture.

### 2.4 Electrical Installation requirements

The Xilver™ RainDrop™ Fixture is designed to be used in conjunction with Xilver™ X-900™ Intelligent Controllers.

**Note:** Only use Xilver™ approved Intelligent Controllers and cabling.

The RainDrop™ Fixture is fitted with a cable with an 8-pin IP65-rated male connector. This connector suits Xilver™ supplied cabling. Plug the male connector in a female, (note the orientation pin inside the connector, and screw the two locking rings into each other.

**Note:** When looking into the female connector, around the center insert a rubber O-ring should be present. When using Xilver™ products outdoors, always verify that this ring is clean and undamaged.

For pin layout, see Appendix 3: Wiring Chart

The Xilver™ X-series Power and Data wiring system is inherently different from DMX, RS232 or Ethernet. A single connector is used for power input and data in- and output.

This means that, in order to connect multiple fixtures to a single output on a Xilver™ X-900™ Intelligent Controller, Y-adapters must be used.

**Note:** If connectors are left loose (e.g. not connected to a fixture) all of the fixtures connected to that output will not be operational. Use a Xilver™ approved terminator on that position.

The maximum operational cable length between a X-900™ Intelligent Controller and a RainDrop™ Fixture is specified at 100 metres.

A maximum of 40 RainDrop™ Fixtures can be connected to a single output (with a total of 160 RainDrop™ Controllers)

**Warning:** Do not plug or unplug connectors while the Xilver™ X-900™ Intelligent Controller is powered!

### 2.5 Software setup

For addressing, fixture settings, test procedures and all other features please refer to the Xilver Navigator PC Application manual. The RainDrop™ Fixture itself is not fitted with a human user interface or display features.

### 2.6 DMX Control parameters

DMX	Parameter	Value	Intensity	Value	Intensity
Ch1.	Red	0	0%	255	100%
Ch2.	Green	0	0%	255	100%
Ch3.	Blue	0	0%	255	100%

## Appendix 1: Maintenance

### A1.1 Housing

Clean the exterior housing with a slightly moist, lintfree, cloth.

Do not use abrasive cleaning agents.

### A1.2 Light Source

This product uses High Power LED's. During normal use, within the conditions as specified, replacement of the light sources may be required after 50.000 hours of use. Replacement of the lightsources must be performed by qualified personnel only.

For color calibration any Raindrop™ fixture must be returned to your local Xilver™ dealer

### A1.3 Servicing

**Do not** open this unit.

Doing so will void warranty and might present a risk.

Servicing must be performed by qualified personnel only. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug being damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Always contact your local Xilver™ dealer for instructions to obtain service.

## Appendix 2: Specifications

### A2.1 Optical

Beam Angle	360 x 170 deg
Light Source	3x LumiLed Rebel
Average Source Life	50.000 hours

### A2.2 Mechanical

Size (physical), WxHxD	80 x 58 x 80 mm
Weight (physical)	0,175 Kg
Ingress protection rating	IP65

### A2.3 Electrical

Input voltage	48V DC
Power consumption	6 Watt (max)

### A2.4 Environmental specifications

Operational Temperature	0-45 deg. C
Storage Temperature	-10 – +60 deg. C
Humidity	10-90% (non condensing)
Operational Altitude	2400m max
Storage Altitude	6000m max

## Appendix 3: Wiring Chart

The Xilver™ Power and Data structure uses a proprietary IP65 rated 8-pin locking connector, connector specified at max. 5 amperes.

Pin	Wire Color	Signal
0	Grey	0 Volt
1	White	0 Volt
2	Blue	Data - In
3	Brown	Data + In
4	Red	Data - In
5	Pink	Data + In
6	Green	+48 Volt DC
7	Yellow	+48 Volt DC

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