



LUMATEK LUMLED014 VF90W LED Fixture Instruction Manual

[Home](#) » [LUMATEK](#) » LUMATEK LUMLED014 VF90W LED Fixture Instruction Manual 

LUMATEK PROFESSIONAL LIGHTING

LUMLED014
VF90W LED Fixture



Manual



Contents

- 1 INTRODUCTION
- 2 PRODUCT DESCRIPTION
- 3 PRODUCT INFORMATION AND SPECIFICATIONS
- 4 SAFETY RECOMMENDATIONS AND WARNINGS
- 5 CONTENTS
- 6 INSTALLATION
- 7 INSPECTION, MAINTENANCE AND REPAIR
- 8 STORAGE AND DISPOSAL
- 9 WARRANTY
- 10 Documents / Resources

INTRODUCTION

Thank you for purchasing the Lumatek VF90W LED Fixture. This manual describes how to install and use the LED fixture; please read this manual thoroughly before attempting to install or operate any Lumatek LED system. If you are not comfortable with the installation of high performance lighting systems, you should seek the services of a qualified installation professional.

PRODUCT DESCRIPTION

The Lumatek VF90W LED Fixture is an electronic horticultural LED fixture using a linear strip design with an intelligent remote LED driver making the fixture externally controllable & dimmable. The VF90W LED Fixture is a high performance grow light with ideal spectral and PPF output for the propagation of seedlings, cuttings and clones and all low PPFD target crops.

The VF90W LED Fixture utilises three 30W LED light bars with 4000K White and 3000K Warm White top bin diodes producing 244 $\mu\text{mol/s}$ PPF and 2.4 $\mu\text{mol/J}$ efficacy. The fixture is versatile and at 1207 x 521 x 20.5mm (L x W x H) it can be fixed to racking for vertical farming applications or hung in other indoor growing environments. The fixture requires a 650W VF LED driver (sold separately) which can be positioned remotely for greater flexibility and can power up to seven VF90W LED fixtures simultaneously.

In this manual the Lumatek VF90W LED fixture will be referred to as: "the LED fixture".

PRODUCT INFORMATION AND SPECIFICATIONS

3.1 General Product Information

PRODUCT NAME	VF90W LED fixture
PRODUCT CODE	LUMLED014
MANUFACTURER	Lumatek Ltd
EAN	5060560031802
PLUG TYPE	UK/EU

3.2 Technical Specifications

INPUT VOLTAGE

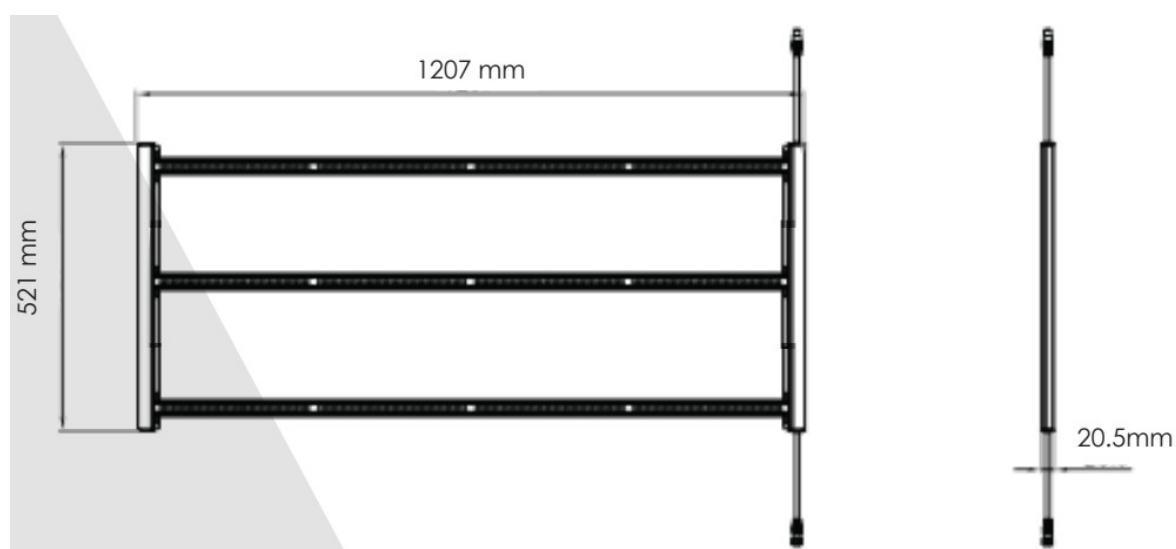
INPUT POWER @ 230V AC (100%)

INPUT CURRENT @ 230V AC

1 FIXTURE	7 FIXTURES
220-240VAC 50/60Hz	220-240VAC 50/60Hz
103W	680W (±20)
0.45A	3.1A

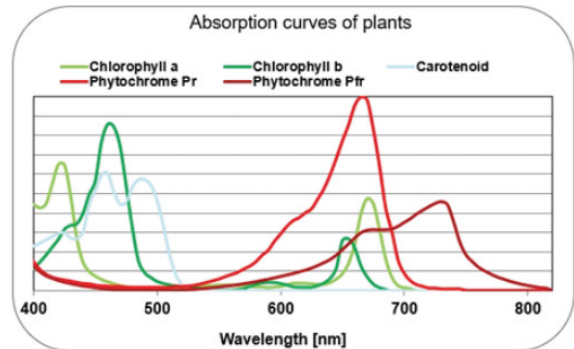
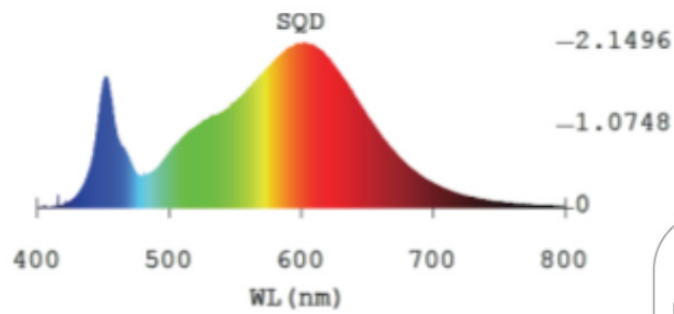
PPF	244 $\mu\text{mol/s}$
EFFICACY	2.4 $\mu\text{mol/J}$
SPECTRUM	Full spectrum P
LIGHT SOURCE	High spec White & Warm White LED
DIMENSIONS	1207 x 521 x 20.5mm
WEIGHT	1.72Kg
LIFE SPAN	60000H
WORKING TEMPERATURE	-20° — +40°C
WORKING HUMIDITY	20% – 90%
WATERPROOF/DUSTPROOF	IP65
BEAM ANGLE	120°
MANUAL DIM/ EXTERNAL LIGHTING	0-10V signal protocol

3.3 Fixture Dimensions

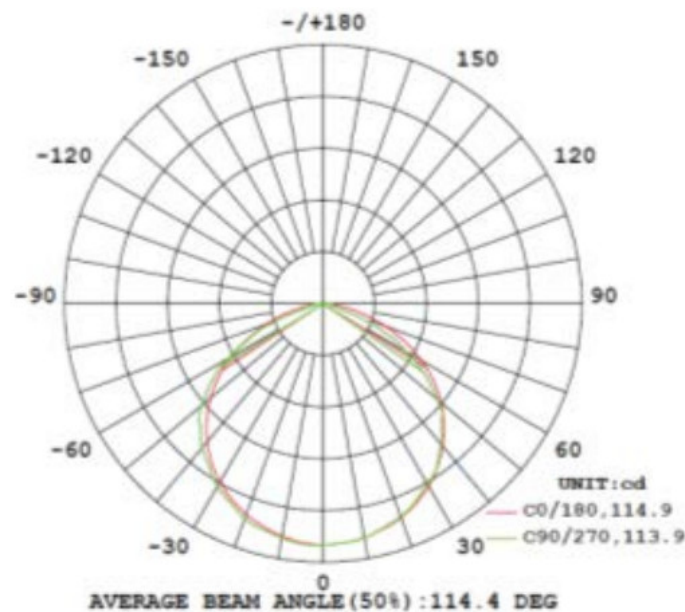


3.4 Spectral Quantum Distribution Graph

The VF fixtures use high spec highly efficient top bin White 4000K & Warm White (3000K) LEDs to create a balanced full spectrum of quality light ideal for photosynthesis.



3.5 Light distribution curve



3.6 Environment

The LED fixture is intended to be used in climate-controlled grow rooms and indoor farms.

The product may be used in damp environments but may not be used in wet environments or outdoors.

The product will operate in ambient temperatures from -10°C to 40°C but will function at optimal level between 20°C to 30°C.

The product will operate in 20% – 90% humidity, non-condensing.

3.7 Legal

This product is UKCA & CE certified compliant with LVD and EMC directive test standards.

SAFETY RECOMMENDATIONS AND WARNINGS

Warning! Carefully read the warnings below before using or working with the product!

- Always adhere to the local rules and regulations when installing or using the LED fixture.
- Do not open or disassemble the LED fixture as it contains no serviceable parts inside. Opening or modifying the LED fixture can be dangerous and will void the warranty.
- Do not use the LED fixture when either the LED fixture or its power cable are damaged. Replace the power

cable with correctly rated cable only.

- Modifications to the cables can lead to unwanted electromagnetic effects which may make the product not comply with legal requirements.
- Do not expose the LED fixture to:
Condensing humidity, heavy mist or direct spray;
Ambient temperatures outside the specified range;
Dust and contamination;
Direct sunlight during use or HID light that may heat up the driver.
- Always disconnect the LED fixture from mains before performing any maintenance.
- Always allow for a cool down period of at least 20-30 minutes before touching the LED light bars. Touching the LED bars when the fixture is lit or immediately after may result in burns!
- Natural convection removes heat away from the heatsink. In order for the system too properly cool itself, at least 5cm of space is required between the fixture and the roof of your grow area. Do not use abrasive materials or aggressive cleaning agents to clean the LED fixture as this may damage the secondary optics. Instead use a clean dry fabric/cloth.
- Do not use the LED fixture near flammable, explosive or reactive substances. The LED fixture can reach temperatures of 40°C.
- Do not use sulphur vaporizers or water misters.
- The installation and use of the LED fixture is the responsibility of the end user. Incorrect use or installation can lead to failure and damage to the LED fixture. Damage to the LED fixture and electronic circuitry as a result of incorrect installation and use revokes the warranty.

CONTENTS

1x USER MANUAL
1 X VF90W
LED FIXTURE



INSTALLATION

Warning! Mounting and installing the LED fixture must be in accordance with the applicable local laws and regulations.

Warning! The installer is responsible for correct and safe installation.

Warning! Ensure the local cabling can support the voltage and current requirements of the LED fixture.

Warning! Avoid coiled cables and keep mains leads separated to help prevent electromagnetic interference.

Warning! Do not connect or disconnect the LED fixture under load.

6.1 Fixture assembly & installation

Warning! Mount the system to something that can hold the weight of the LED fixture.

The fixture has fixing holes in each frame end and can be attached directly to vertical farm racking or hung with light hangers.

Secure the fixture in required position and height.

For optimal performance; position fixture horizontally at 15cm – 40cm from plants.

6.2 Connect & disconnect the LED driver

Position the LED driver (sold separately) appropriately ensuring it is not in direct Sun or HID light so as to avoid overheating and not directly on the floor where it might contact water or nutrients.

The LED driver is shipped with a 4m power supply cable, a 1.5m power output cable to connect to the fixture (5m extension cable is available to purchase separately) and a 25cm dimming control cable to connect dimmer box/controller to the driver.

To connect the LED driver to the fixture;

Correctly align the driver power OUTPUT cable connector with the driver output socket and push together until click-locked.

Connect other end of driver Output cable to the Fixture Input cable.

To disconnect; turn twist-lock connector anti-clockwise to unlock and pull apart.

6.3 Switching & connecting the manual dimmer or external lighting controller & adjusting light intensity (dimming)

If there is no dimmer box or controller connected to the driver; the LED fixture will switch ON at 100% power when mains power is switched on.

The fixture can be switched ON/OFF using a 0-10V signal dimmer box or lighting controller.

The LED fixture's light intensity can be adjusted without changing spectrum or losing efficiency. This means that PPF can be adjusted to the correct level for growth cycles.

The LED driver can be connected to a 0-10V manual dimming controller or a Lumatek Control Panel Plus/universal lighting controller (all sold separately) for switching and dimming control.

Connect the dimmer box or lighting controller to the driver using the dimming controller cable supplied.

Ensure connectors are correctly aligned and then push together until click-locked. To release: turn twist-lock anti-clockwise and pull apart.

Light intensity (PPF level) can be adjusted between 20% – 100% light output.

6.4 Connecting & Powering multiple fixtures in series

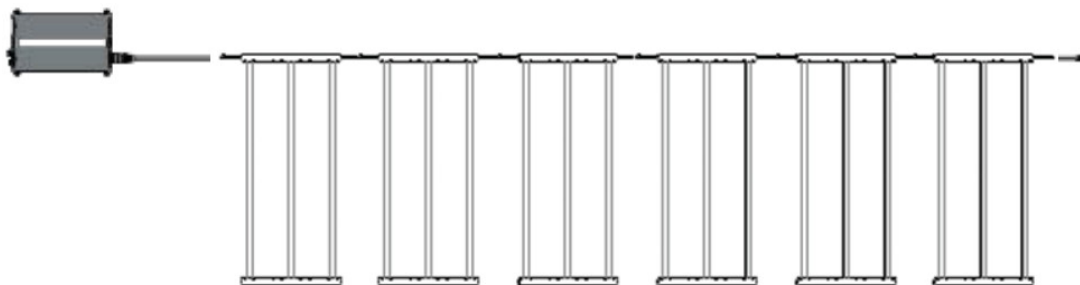
The VF 650W LED driver can be used to power up to seven VF90W fixtures simultaneously. Each fixture has a power input cable (male connector) and a power output cable (female connector).

The LED driver power output cable is connected to fixture1 power input cable.

Fixture1 power output cable is connected to Fixture2 power input cable.

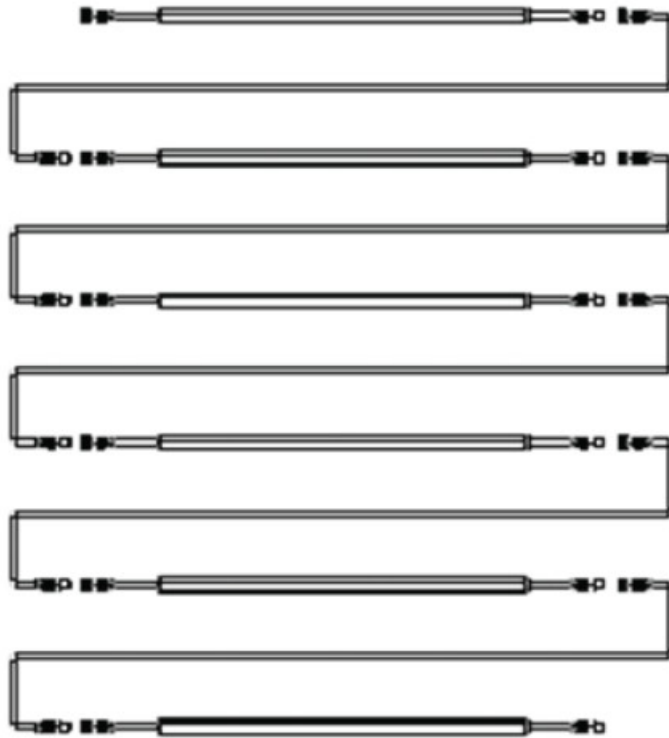
Fixture2 power output cable is connected to Fixture3 power input cable and so on until all seven fixtures are connected.

Example of horizontal connection plan:



For alternative light plans and greater flexibility, extension connecting cables are available to purchase separately.

Example of vertical connection plan with extension connecting cables:



6.5 Connecting the LED fixture to the mains

Warning! Make sure mains power is switched off.

Warning! Ensure the power supply cable is not coiled and does not touch any hot surfaces.

Warning! Connect the cables according to local rules, safety regulations and electrical code.

Warning! If not using an external lighting controller ensure external switching gear can cope with the inrush current of the LED fixture. Always use a timer contactor suitable for switching a capacitive load. Never use household timers to switch the LED fixture!

Warning! Do not connect or disconnect the LED fixture under load.

Ensure the LED driver power supply cable self-locking female connector is correctly aligned to the corresponding male connector on driver and push together until click-locked. To disconnect; turn twist-lock connector anti-clockwise to unlock and pull apart from driver.

Connect mains power plug to switching gear/power supply.

Switch on mains power.

INSPECTION, MAINTENANCE AND REPAIR

Warning! Disconnect the LED fixture from mains before performing any maintenance or repairs.

Warning! Do not connect or disconnect the LED fixture under load.

Warning! Do not open or disassemble the LED fixture, it contains no serviceable parts inside. Opening the LED fixture can be dangerous and will void the warranty.

Warning! Always wait 20 – 30 minutes for the LED light bars to cool down before handling.

Caution! Do not clean the LED fixture with detergents, abrasives or other aggressive substances.

Regularly check the LED fixture for dust or dirt build up. Clean if necessary. Contamination may cause overheating and decreased performance.

Clean the outside of the LED fixture using a dry or damp cloth.

Regularly check the cables of the LED fixture to ensure it is undamaged.

STORAGE AND DISPOSAL

Store the LED fixture in a dry and clean environment, with an ambient temperature of -25°C to 55°C.

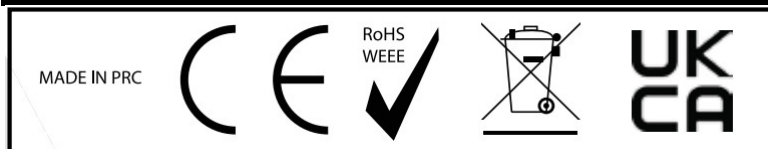
The product must not be discarded as unsorted municipal waste but must be collected separately for the purpose of treatment, recovery and environmentally sound disposal.

WARRANTY

Lumatek warrants the mechanical and electronic components of their product to be free of defects in material and workmanship if used under normal operating conditions for a period of three (3) years from the original date of purchase. If the product shows any defects within this period and that defect is not due to user error or improper use Lumatek shall, at its discretion, either replace or repair the product using suitable new or reconditioned products or parts. In case Lumatek decides to replace the entire product, this limited warranty shall apply to the replacement product for the remaining initial warranty period, i.e. three (3) years from the date of purchase of the original product. For service; return the product to your shop with the original sales receipt.

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