

LUMATEK

PROFESSIONAL LIGHTING



MANUAL

VF650W LED DRIVER

ENGLISH - FRENCH - ITALIAN - SPANISH - GERMAN - CZECH - RUSSIAN



LUMATEK VF650W DRIVER MANUAL

ENGLISH

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1. INTRODUCTION

Thank you for purchasing the Lumatek VF650W LED driver. This manual describes how to install and use the LED driver; 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.

2. PRODUCT DESCRIPTION

The Lumatek VF650W LED driver is control gear for Lumatek VF electronic horticultural LED fixtures. The VF 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 PPF target crops.

The VF650W LED driver can be positioned remotely for greater flexibility and can power from one to seven VF90W LED fixtures or one to five VF120 LED fixtures simultaneously.

The VF650W LED driver can be switched and dimmed using a 0-10V manual dimmer box or lighting controller (sold separately).

In this manual the Lumatek VF650W LED driver will be referred to as: "the LED driver".

3. PRODUCT INFORMATION AND SPECIFICATIONS

3.1 General Product Information

PRODUCT NAME	Lumatek VF650W LED driver
PRODUCT CODE	LUMLED019
MANUFACTURER	Lumatek Ltd
EAN	5060560031826
PLUG TYPE	UK/EU

3.2 Technical Specifications

INPUT VOLTAGE	220-240V AC 50/60Hz	220-240V AC 50/60Hz
INPUT POWER @ 230V AC (100%)	103W for VF90W 130W for VF120W	680W (±20): 7 x VF90W or 5 x VF120W
INPUT CURRENT @ 230V AC	0.45A for VF90W 0.62A for VF120W	3.1A: 7 x VF90W or 5 x VF120W
WATERPROOF/DUSTPROOF	IP65	
DIMENSIONS	230 x 120 x 50mm	
WEIGHT	2Kg	
WORKING TEMPERATURE	-20° -- +40°C	
WORKING HUMIDITY	20% - 90%	
MANUAL DIM/ EXTERNAL LIGHTING	0-10V signal protocol	

3.3 Environment

The LED driver 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.

3.4 Legal

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

4. 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 driver.
- Do not open or disassemble the LED driver as it contains no serviceable parts inside. Opening or modifying the LED driver can be dangerous and will void the warranty.
- Do not use the LED driver when either the LED driver 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 driver 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 driver 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.

5. CONTENTS

1 X VF650W LED DRIVER

**1 X 4M POWER SUPPLY
CABLE WITH PLUG**

**1 X 1.5M POWER OUTPUT CABLE
TO CONNECT DRIVER TO THE FIXTURE**

**1 X 25CM 0-10V DIMMING CONTROL
CABLE TO CONNECT DIMMER BOX/
CONTROLLER TO THE DRIVER**

1 X MANUAL



6. 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 10cm – 30cm from plants.

6.2 Connect & disconnect the LED driver

Position the LED driver 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 4 m power cable, a 1.5 m power output cable to connect to the LED fixture and a 25cm 0-10V 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 to the driver is switched on.

The fixture can be switched ON/OFF using a 0-10V signal dimmer box or lighting controller connected to the Dimming port on the driver.

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 cycle.

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.

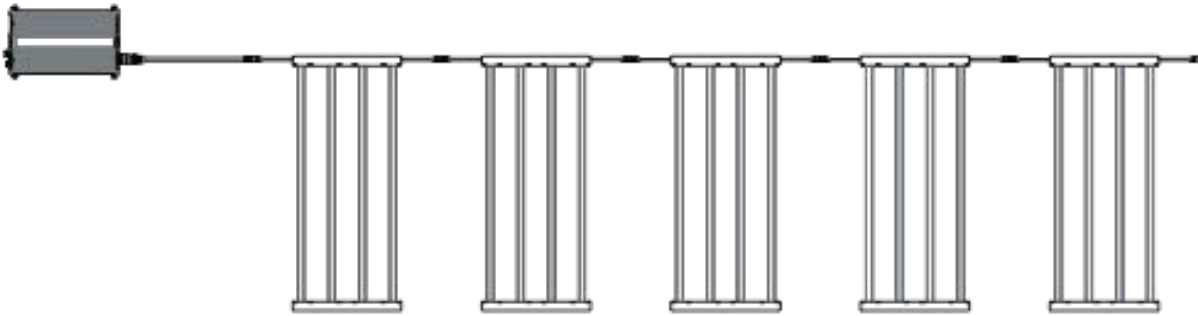
Connect the dimmer box or lighting controller to the driver using the dimming controller cable supplied. Ensure connectors are correctly aligned and then push together until click-locked. To release: turn twist-lock anti-clockwise and pull apart.

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

6.4 Connecting & Powering multiple fixtures in series

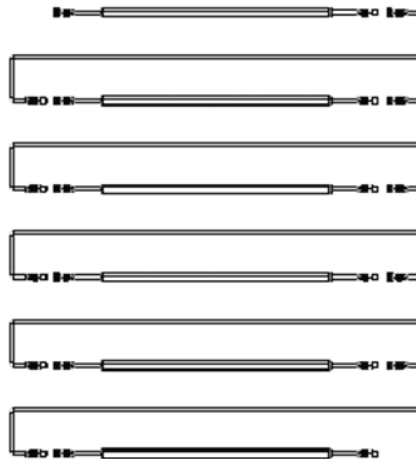
The VF 650W LED driver can be used to power up to seven VF90W or five VF120W fixtures simultaneously. Each fixture has a power input cable (male connector) and a power output cable (female connector). The LED driver power output cable is connected to fixture1 power input cable. Fixture1 power output cable is connected to Fixture2 power input cable. Fixture2 power output cable is connected to Fixture3 power input cable and so on until all 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.

7. INSPECTION, MAINTENANCE AND REPAIR

Warning! Disconnect the LED driver 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 driver, it contains no serviceable parts inside. Opening the LED driver 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 driver for dust or dirt build up. Clean if necessary. Contamination may cause overheating and decreased performance.

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

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

The LED driver features surge protection for safe operation and device protection. In the event of over or under mains voltage fluctuations, open or short circuit and over safe driver temperature; the LED driver will switch off automatically. The driver will operate again when the surge protection parameter values are within safe use range again.

To reset the LED driver; switch off mains power supply and then switch on mains power supply.

8. STORAGE AND DISPOSAL

Store the LED driver 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.

9. 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 five (5) 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. five (5) 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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