

LUMATEK

CERAMIC METAL HALIDE



**Lumatek Instruction Manual
for 315W CMH Electronic Ballast**

Lumatek 315W CMH Controllable Electronic Ballast Manual

Thank you for purchasing a Lumatek Electronic Ballast. We are certain you will be more than satisfied for years to come.

The Lumatek 315W Controllable Electronic Ballast has been developed to drive 315 Watt Ceramic Metal Halide horticultural grow lamps only.

Lumatek CMH/CDM/LEC technology uses less energy consumption to create more PAR light (PPF/PPFD) than Traditional HID/HPS/MH fixtures with increased UV-A & UV-B production.

Using microprocessor and software-controlled electronics means that the lamp is continuously supplied with the precise voltage to achieve optimum PAR light output regardless of voltage fluctuations in mains power supply. The new addition of Control capability allows you to smartly monitor your room temperatures, light timing, automation, safety control and dimming. By simply connecting the Lumatek Digital Panel (sold separately) into the TRS "Link" port on your controllable ballast.

Damage to the ballast and electronic circuitry as a result of incorrect installation and use revokes your warranty, so we recommend you read this manual carefully before installing your electronic ballast.

Features:

- High efficiency, energy-saving
- Controllable option via remote Lumatek Digital Controller
- Completely silent and maximum heat dissipation
- RF shielding
- LED status indicator
- Full protection
- Soft start technology
- Random start technology
- Automatic frequency adjustment
- Re-strike system
- 5 years warranty
- CE Certification
- Superior color rendering (CRI), super-high PPF increased Ultraviolet and far red wavelengths

Technical Parameters:

Output Power	315W
Input Voltage	220 - 240V
Input Current(Max)	1.4A
Input Power	334W
Power factor	0.98
Efficiency	95%
THD	<10%
Dimming	50% - 60% - 70% - 80% - 90% - 100%
Lamp	315W CMH
Lamp CCF	<1.6
Operating Frequency	Low Frequency
Dimensions	245 x 114 x 81mm
Weight	2.5 Kg
Protection	Open circuit, short circuit, over temperature, lamp end of life, over voltage, low voltage

Environmental Specifications:

Working temperature	-20°C ~ +40°C
Storage temperature	-40°C ~ +70°C
IP Level	IP20



Installation. Please comply with local installation regulations.

1. Keep distance between your ballasts to insure a free air flow. Keep at least 5 cm distance between individual ballasts. Mount ballasts on a non-combustible material and not on the floor where it could come into contact with water or nutrients. These ballasts are for indoor use only. Optimum operating conditions should not exceed: Max Ambient Temperature: 40C, Min Ambient Temperature: -20C. Max Humidity: 90%

2. Carefully insert the lamp into a suitable reflector with PGZX18 lamp base connection socket, ensuring full contact. We advise using Lumatek 315W CMH Lamps. Ensure ballast wattage matches lamp wattage. Make sure you have dry hands when locating the lamp. We recommend you use a cloth when handling the lamp. Connect reflector cable to ballast output cable ensuring a good connection.

3. If you are not controlling the ballast externally with the Lumatek Digital Lighting Controller; Plug your Lumatek ballast into a lighting contactor relay. To protect timer against the inductive load of the ballast, we recommend plugging the ballast 240V power plug into a lighting contactor relay, which can then be plugged into a timer and then into the mains supply. Do not plug ballast into domestic timer directly. Switch on. If unit fails to ignite lamp; switch off at mains, remove lamp and repeat steps 2. and 3. above. Otherwise contact your retailer.

If you are controlling the ballast externally with the Lumatek Digital Lighting Controller; Ensure ballast is connected to Lumatek digital controller (see controller instructions). Connect ballast to mains and switch on mains power.

This ballast uses a fault indicator LED to help identify problems; If your ballast is being controlled by an external digital controller, please refer to the controller manual for guidance. If your ballast is **not** being controlled by an external Lumatek digital controller please refer to the following table to decode flashing signal;

Condition	LED Status	Description
Ballast Locked	Flash *1	Maximum number of ignition attempts without success
Cycle Error	Flash *2	Lamp stopped for unknown reason
Low Mains	Flash *3	Mains voltage too low
Over Temperature	Flash *4	Maximum driver temperature exceeded
High Mains	Flash *5	Mains voltage too high

When replacing a lamp, always switch off ballast first by removing plug from power supply. Never switch off lamp by removing lamp cable from a live ballast.

Hot re-strike of lamps. It is very important that the lamp is given adequate time to cool down before it is re-ignited (10 min). Hot re-strike causes premature lamp failure and lumen output degradation. Additionally, the lamp should never be turned off before it has reached full intensity. In the event of a power surge or interruption causing the ballast safety system to switch off, to protect lamp and ballast, the Auto-start facility will monitor when the lamp can be reignited.

The Lumatek ballast is tested for EMI (electro-magnetic radiation) and has met the highest standards. To help prevent against EMI, mount ballast as close as possible to the reflector but not in the lamp's direct light (avoid unnecessary heat). The shorter the lead to the lamp, the less chance of EMI. Do not coil excess wiring, particularly the lamp lead. Keep mains lead and lamp lead separated to avoid potential interference signals.

The Lumatek ballast is silent with no noisy fan required and a graduated fin design case to help dissipate heat. There is no serviceable parts inside as the electronics are sealed in a resin and opening the case will invalidate the warranty.

5 Year Manufacturer Warranty

Lumatek warrants its Electronic ballast to be free from defects in materials and workmanship.

The warranty term is 3-years full + 2 years pro-rated beginning on the date of purchase. Misuse, abuse, or failure to follow instructions, are not covered. Any changes or adaptations to the product of any kind will void the warranty.

Lumatek will, at our option, repair or replace products covered under this limited warranty. To request warranty service, you must return the unit with your proof of purchase to your place of purchase, within the warranty period.

If warranty service is required, Lumatek's distribution partner will issue a Return Material Authorization Number.

Lumatek will ship the repaired or replacement products to you freight prepaid. Purchase date is based on the original sales receipt. Please save your receipt as a copy is required for all warranty services.

For more information on Lumatek Electronic Ballasts please visit www.lumatek-lighting.com