PlantPhotonics
Advanced Lighting Technology

User Manual

Energy Series Led Grow Lights

Amethyst Energy DS
Stellar Energy FS

Instructions

Your new Energy series led light has been designed to give a lifetime of service. Please read this manual fully before mounting and using your light in order to get the best performance, longest service and to avoid damage to your light.

SERIOUSLY – READ THIS MANUAL!

IMPORTANT!

Do not leave it in an area of elevated temperature such as in a parked car in the sun. Excessive heat will damage your light.

Before changing the spectrum on dual spectrum lights, switch the light off! Failure to do so may result in damage.

Please ensure you leave space around the sides and top of the light to allow air to circulate and keep the light cool. We recommend a minimum of 20cm clearance between the light and the ceiling. Do not mount it so it is touching the top of the grow space!

In the unlikely event of a fan failure, switch off the light and read the "Fault Finding" section of this manual. You can continue to use the light while you wait for a replacement fan but you will need to operate it at reduced power to avoid possible damage, the fault finding section tells you how.

This light is designed for indoor use only.

Do not clean it with harsh solvents such as acetone.

It is **strongly** recommended that you DO NOT use a humidifier in a grow tent or other confined space. If you do use a humidifier YOU MUST NOT use tap water, ONLY use distilled water, de-ionised water or water that has been through a reverse osmosis filter. Tap water contains minerals which can build up on electrical equipment and cause short circuits!

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1. Mounting Your Grow Light

Your light has 4 mounting rings near the corners. How you hang the light is up to you; some suggested methods are thin chain (the mounting rings on the light are split rings so they can be attached easily to the end of the chain) with S-hooks/clips or ropes and pulleys such as our ratcheting pulleys. Remember you will probably be adjusting the height at regular intervals, so choose a hanging system which is easy to adjust!

2. Daisy Chaining

To simplify installation and wiring all Energy series lights can be connected together in a daisy chain so that they only require a single timer and mains plug. It is recommended that you connect a maximum of 450 watts of led draw (example 3 x Energy 150 watt lights) to one mains connection. If you have a large number of lights it is recommended so the timers are set so they do not all come on at exactly the same time, but instead a few seconds (or longer) apart. This is because the power supplies draw a large surge of power in the first fraction of a second. A large number coming on at the same time can trip the circuit breaker for that mains plug.

To daisy chain them connect the mains lead to the first light and then connect it to the next light with a daisy chain cable.

3. Ventilation for Your Light

It is important to leave space between the light and the top of the grow tent to allow for air to circulate and cool the light. Normally you should leave at least 20cm of clearance. Air should also be able to circulate around the sides of the light, especially as most grow spaces have the ventilation system drawing air out from the top.

3. Height Above Plants

Your Plant Photonics grow light is very powerful. With the Amethyst series your eyes do not give you an accurate idea of how bright the light really is as the hyper red (660nm) and royal blue (430nm) leds wavelengths are at the very limits of the range your eyes can see. Even the standard red leds (630nm) operate at a wavelength the human eye is not very sensitive to. To a plant however it is a bright as the sun at mid day! It is therefore important to get the height right, balancing maximizing growth with possible damage (bleaching can occur if the light is too close) to the plants.

For seedlings, clones and small plants it is recommended to keep the light about 50 cm above the top of the plants. For more mature plants 20cm is a good height. A good procedure is to start with the light 50cm above the seedling/clone and let the plant grow until it reaches 20cm from the light and then raise the light as required to maintain the 20cm gap.

4. Cleaning and Maintenance

It is recommended to clean the top of the light and the fan/s after each grow cycle to remove dust which could impair cooling of the light. A new, cheap small paintbrush is ideal for this.

The body of the light and the clear lens can be cleaned with normal glass or multi surface cleaner such as Windex and a soft cloth. DO NOT use any harsh chemicals or products containing waxes or silicons such as Pledge or other furniture polish which will smear the lens.

6. Faults and Problem Solving

All our lights are designed for maximum reliability and lifespan, however a fault may develop over time as nothing is 100% reliable. In the case of a fault your light has been designed to continue operating at reduced power and to be easily and quickly repaired by the owner.

Please remember that in the case of Amethyst DS lights NOT ALL OF THE LEDS ARE LIT AT ANY TIME! When your Amethyst DS is in Vegging mode an entire row of leds in the center of the light will be turned off and several lone (not in rows) leds will be on. In flowering mode all the rows of leds will be on but the lone leds between rows will be turned off. This is normal operation and is not a fault!

In the case of a power supply failure, the faulty unit can easily be identified. Next to the place where each supply plugs into the circuit board there is a small green led. If this is lit the power supply is working. It may be easier to see if you cover most of the light with a piece of paper or cardboard to block off the light from the main leds.

Problem	Cause	Solution
1.Fan is not operating, all leds are working normally.	Fan has failed.	Immediately unplug your light and leave it for 10 minutes. Following the diagram (Diagram 1) below, disconnect 1 power supply from the mains box. This will reduce the power of the light and therefore the heat, allowing your light to continue working while you wait for a replacement fan. Contacts us and we will send a replacement.
2. Fan is not operating, half of the leds are not lit.	1 power supply has failed.	Contact us for a replacement. Ideally you can swap the power supplies around so the fan will continue operating and cooling the light.
3. Fan is operating but half of the leds are not lit.	1 power supply has failed.	Contact us for a replacement.
4. Light is completely dead.	There is a mains power fault.	Check the mains cable(s) are plugged in all the way, check the timer is operating normally check the fuse or circuit breaker.
5. Leds glow slightly even when the light is switched off.	You are using an extension cord with a power light or lighted switch.	Change your extension cord for one which does not have a power light or lighted switch.

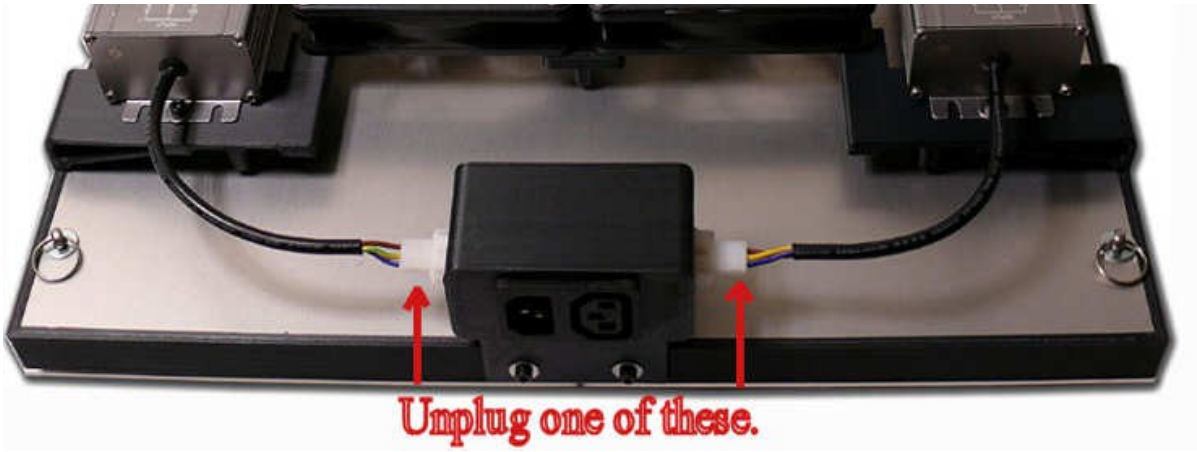

Diagram 1

If your fan has failed but all leds are still on, unplug one of the power supplies from the mains box as shown above. You can unplug either one, it doesnt matter which. This will ensure your light does not overheat while you wait for a replacement fan.

VERY IMPORTANT!

Your new Plant Photonics light can produce **2 spectrum's** which are designed for the **vegging and flowering** stages of your plants life cycle. **YOU MUST SWITCH THE LIGHT OFF BEFORE CHANGING THE SPECTRUM!** Failure to do so may lead to failure of the leds and will void your warranty!