

- **How does the Lumen output compare to other grow lights?** Lumens and Lux are measurements of how bright a light source appears to the human eye. Since the human eye is most sensitive to colors plants don't need, and least sensitive to colors plants prefer, lumens can't be used to accurately compare the plant growing capability of grow lights. If a grow light manufacturer rates the grow light output in Lumens- they are only telling you how bright the grow light will appear to you and light your room, not how well it will grow your plants. The most accurate unit of measurement for comparing grow lights is the microEinstein, which measures how many photons of light strike an area per second. But while this is a much better way to estimate a lamp's plant growing ability than Lumens or Lux, it is still very difficult to directly compare two different types of grow lights. All grow lights except the LED Grow Master grow light emit large amounts of light plants don't use very efficiently, including that light output in a light's plant growing measurement is misleading.
- **What type of soil should I use for my plants?** When gardening under LEDs, it is always best to use a very porous planting medium. A loose soil that doesn't compact will allow more oxygen to reach the roots, increasing plant metabolism and growth. If you have the opportunity to use an NFT or aero type system- we highly recommend you do.
- **How warm should I keep my plant growing area?** The energy efficient LED Grow Master grow bar will not heat your growing area like traditional grow lighting products. In cooler weather you may need to compensate for this by raising the temperature of your growing area to between 70 degrees Fahrenheit and 80 degrees Fahrenheit if you wish to accelerate the rate of plant growth. If you can, monitor the temperature of your plant's root zone as this can also affect the rate of plant growth.
- **Should I water my plants differently when using LED Grow Master grow bars?** Absolutely! Plants grown under the LED plant lighting system use much less water than those grown under conventional (i.e. hot!) grow lights, and so need to be watered less frequently. Be very careful not to over water your plants, and check to see that the soil is drying a bit before watering them again. The time between watering will vary with plant species. Over watering will slow root development, stunt plant growth, and cause nutrient uptake issues.
- **How often and how much should I fertilize?** Your plants will need fewer nutrients when grown under the LED Grow Master Grow Bar. Start with a lower amount of nutrient, approximately 400-600 PPM, or around ½ of the amount recommended by the manufacturer.
- **My plants aren't flowering like I expected, what can I do?** LED Grow Master plant grow lighting is very gentle to your plants. In some cases you may need to introduce some "stress" to help plants bloom. For example, turn your lights on for fewer hours each day, or allow your plants to dry out a little more than usual between watering cycles. If your plants are grown indoors, without supplemental light, some plants such as tomatoes may benefit from the addition of a single 60 watt light placed anywhere in the room with the plants. This provides a small amount of invisible infrared
- **Is it safe to look at the lights in an LED array?** The light emitting diodes (LEDs) used in this product are very high intensity. Never look directly into the light at a close distance, or for long periods of time.
- **Are there any special considerations for commercial growers?** In commercial growing, monitor your CO2 levels. LED lights emit a large amount of absorbed light, which may require slight augmentation of CO2 levels (+300-500 PPM).
- **It looks like one of the LEDs in each cluster isn't working. Is this normal?** If you're using the professional type light bar (Model LGM3 or LGM540) you may notice that one of the LEDs in each light cluster appears to not be lit. This is perfectly normal for this advanced product. Light comes in many wavelengths. People can only see a very narrow range of light wavelengths. The advanced technology used in this product, and in particular the professional type version, uses a very wide spectrum of light output. Over 60% of the light emitted from this light bar is not visible to the human eyes. Plants have a preference for the light that we cannot see. Why do most plants look green to us? It's because the plant is reflecting the components of white light (green and yellow), and absorbing the rest of the light.
- **How many watts of electricity is used by each LGM grow light?** Each LGM3 and LGM545 LED plant light runs on 9 watts of electricity. Packages include a country specific power supply that should plug directly into a standard wall socket and is compatible to alternative energy sources such as solar and wind power.