

Common Misconceptions about LED Plant Lighting.

- ***Since the lights do not get hot I can put them right on the top of my plants.***
 - Although you cannot burn your plants with the LEDs, the LGM550 must be placed a minimum of 18" from the top/side of your plants. The LGM3 needs a minimum of 12". Further is almost always better. We have clients who use the bars up to 6' from the plant canopy. Because the LED Grow Master bars use the wavelengths of light that are most efficiently absorbed by plants, the light source is extremely potent. Putting the bars too close can result in the same symptoms you would see by moving an indoor plant into direct sunlight outdoors. Remember, plants will survive periods of low light but too much light may cause permanent damage. If lights *must* be mounted closer- contact your supplier and ask about diffusers.
- ***I can use LEDs to replace the HPS in my indoor garden and expect equal growth.***
 - In a greenhouse situation or room where plants have access to sunlight, this is true. If growing indoors, without the use of any sunlight, LEDs are best used in a hybrid system. There are several options for configuring this system. For instance, instead of running 1,000 watts of HPS for the entire photoperiod, you would run the HPS for one hour in the morning, one hour in the afternoon, and one hour before the lights go off (or 30 minutes every 3 hours) then run the LEDs for the entire photoperiod. The advantages in this situation lie in the ability to reduce electrical use by over 70%, eliminate overheating of the grow space, and increase the lifetime of your HPS. This isn't to say that you cannot grow indoors with LEDs only. Using only LEDs you will see natural growth rates but most indoor gardeners are able to at least double these rates with a hybrid system.
- ***If there is not a high lumen rating, they can't grow plants.***
 - 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.
- ***NASA studies show that red and blue LEDs are what are needed to grow plants.***
 - The NASA studies didn't really use only red and blue light sources. They used red LEDs, which were readily available at the time, plus a small amount of fluorescent lighting to provide the blue component. Why? Because blue LEDs hadn't yet been invented. The true result of the early NASA experiments was that using red LEDs along with fluorescent lighting, which contains many colors of light, provided reasonable plant growth, but not that plants will grow well using only red and blue light. The LED Grow Master line is the only LED grow light using 6 different wavelengths (or colors) of light.

