

8

QUESTIONS YOU SHOULD ASK

Before Buying a
LED Grow Light
& Why



 SpecGradeLED

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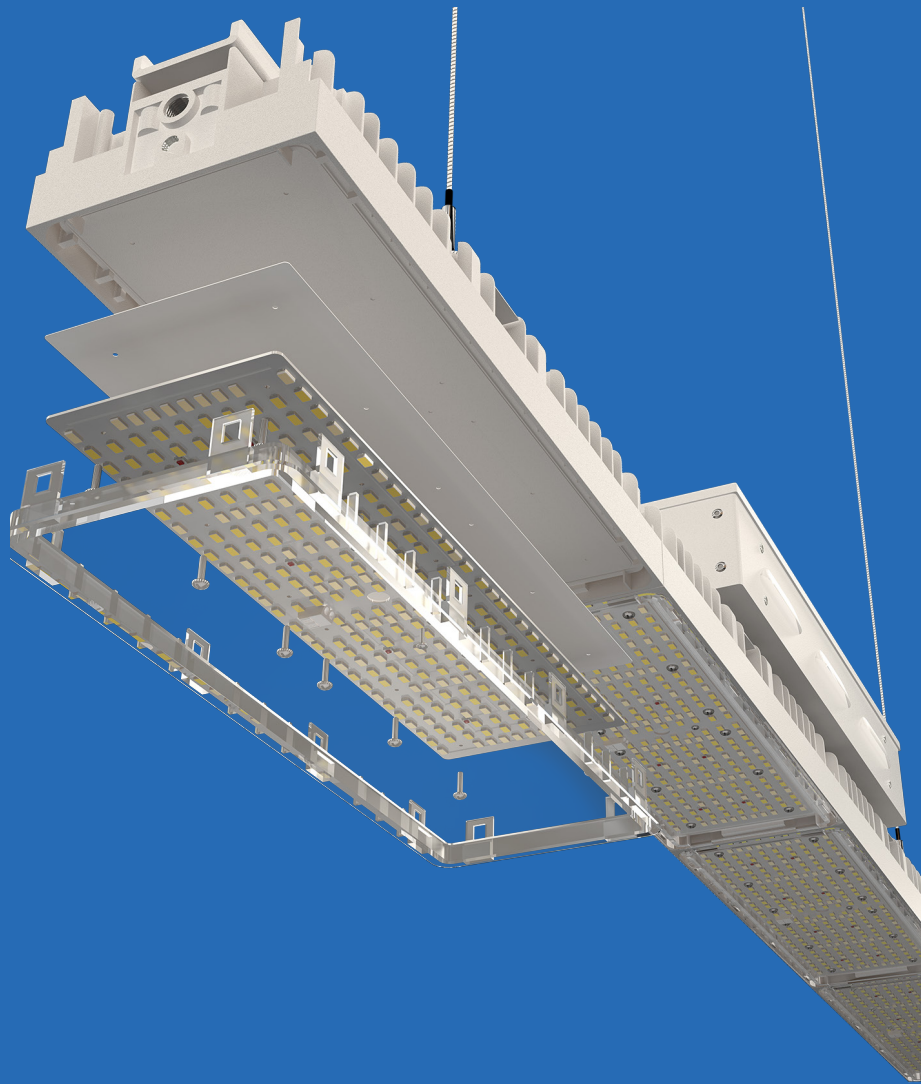
8 QUESTIONS YOU SHOULD ASK BEFORE BUYING AN LED GROW LIGHT & WHY.

Q. ARE THE GROW LIGHTS 100% MODULAR?



Should a grow light fail and you have to send it back to the factory, you just lost about 16 sq. ft of productive real estate.

Modularly designed grow lights enable you to quickly replace any part while it's still hanging. Ask us about SpecGrade's free modular parts program.



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Q. WHAT IS THE WARRANTY?



The warranty is an indicator that the grow light is designed and engineered to stand the test of time. We offer the industry's longest warranty with a standard 10-years on the LEDs and 7-years on the drivers



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Q. WHY IS THE GROW LIGHT'S OPERATING TEMPERATURE CRITICAL?

A. One of the least discussed, but one of the most important issues to consider when buying a grow light is the engineering of heat sink (passive cooling). Not only is it a gauge of the life of the LED itself, but also indicates to what extent your plants are going to be impacted by its radiant heat. SpecGrade engineers almost 5000 sq. in. of heat sinking into the Verta-8 which is designed to throw heat away from the plant while optimizing the life of the LED.

ACTIVE THERMALS:

Most quality LED grow light manufacturers today do not cool their fixtures with fans (active cooling) because they know that the fan is one more possible failure-point. The cost of failing would instantly turn your grow light investment, as well as the real estate your plants are occupying, into an expense.



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Q. WHY SHOULD I PURCHASE A GROW LIGHT WITH A BRAND NAME DRIVER?



It is a well known in the LED industry that the drivers are the weak link of any system. Manufacturers also know that the driver is one of the most expensive components of a grow light. So, in an attempt to cut costs many of them attempt to out-source drivers with inferior components from secondary markets or even make it themselves.

A simple query of social media will uncover other grower's experiences with drivers.



EXTERNAL DRIVER



INLINE DRIVER

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Q. WHY IS THE UNIFORMITY RATIO IMPORTANT



The lack of a uniformed blanket of light over your crop will negatively affect your yield and profitability. As you can see from the photos below the lack of a uniform crop will reduce the quantities of top-shelf colas. Using reputable software a quality LED grow light manufacturer will computer-simulate a grow room's uniformity metric and give you some degree



The Max/Min ratio calculates the uniformity of the area. Quite simply, it averages the highest average PPFd metrics (the numerator) and the lowest average PPFd metrics (denominator). A '1' is perfection which is never attainable with artificial lighting. The sun, for example, would be a '1'. A '2' is excellent. The farther away from '2' indicates less uniformity. Ideally, you always want to have a metric of approximately '2'~'3' or lower.

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Q. WHY IS THE LIGHT LOSS FACTOR IMPORTANT?



■ Light loss factor (LLF) is a metric that factors in the degradation of the light source over time together with dust and dirt accumulation. The LED will never put out the same amount of light as it did when it initially came out of the box. So, beware unscrupulous manufacturers who use a '1.0' LLF. That would be telling you that it is performing over its life at 100% over its entire life span. Consequently, this will give you unrealistic long-term expectations. A .95 or 95% is reasonable for an LED light source given the fact that <90% is considered end of life in the horticulture industry

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Q. WHAT REFLECTIVITY FACTOR ARE YOU USING WHEN CALCULATING THE LIGHT LEVELS IN MY GROW FACILITY?



■ The computer simulation software requires the manufacturer to input a reflectivity factor. This factor essentially drives the PPF levels in a room.

So for example, white paint and highly reflective surfaces, by having more reflective properties than any other colors, can skew the PPF levels if not applied properly. Due to the reflectivity mylar can skew it even further.

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Q. WHY IS THE DLC CERTIFICATION IMPORTANT?



The DLC certification is your assurance that the metrics that are published by the manufacturer are accurate.

The only metric that is not accurate is the LED life. That number is taken off an standard industry LM-21 report which is generated by the LED chip manufacturer. It does not factor in the actual fixture the LED chips are being used in. An LED chip used in a grow light with very little heat sinking will not perform as long as one with more heat sinking.

