Why COB LED Grow Lights for CANNABIS

--- Your First Choice for COB LED Grow Lights ---

We are a leading professional grow light manufacturer dedicated to servicing the cannabis industry. We are committed to providing the best LED fixtures for cannabis growers of all scales. We've put a great deal of hard work and dedication into our products resulting in several cutting-edge patented technologies to provide the quality and performance you would expect in an LED solution. Our lights not only promote faster grow cycles but also provide amazing results.

We are striving to be the best LED grow light supplier for the cannabis market by learning from growers and continued research and development.

Why We Prefer COB LED Grow Lights?

The past few years have seen a boom in the cannabis industry and the use of LED grow lighting around the globe; there are many kinds of designs and quality levels available in the market, including Apollo, UFO, Helios, X2 lens, high power 3W or 5W LED, 1W by 3-in-1 encapsulation, SMD5050 series, however users are not always satisfied with the grow results using these lights due to weak color mixing, even though the PPF values may be high.

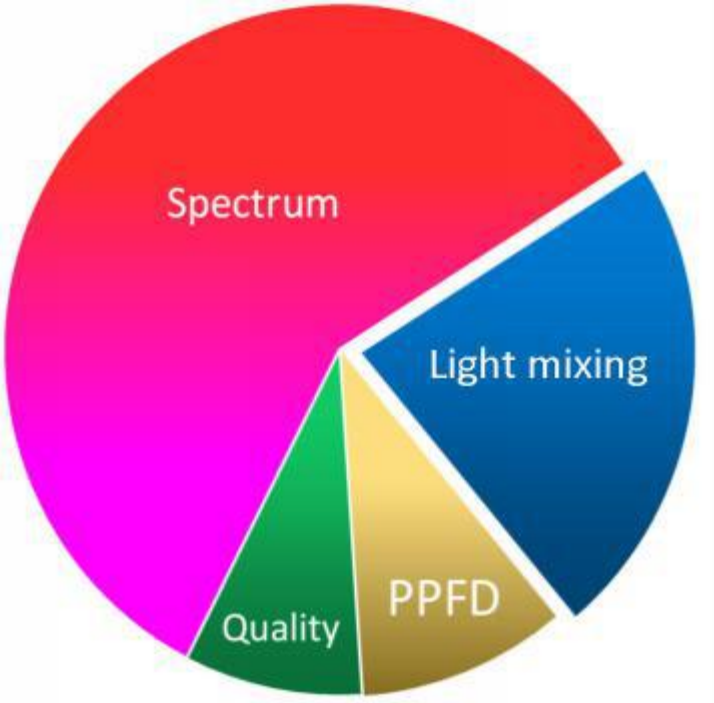
We are committed to providing high quality LED grow lights by adopting revolutionary COB technology. With COB we are able to create the best light efficiency and color mixing for the plant.

In addition, we have designed a better solution for heat-sinking the diodes, thus we are able to ensure reliability and quality assurance, maintaining our products strong reputation around the globe.

With increasing satisfied grow results from the use of COB LED grow lights for cannabis, we are confident in its application for the cannabis market.

Criteria for a good LED Grow Light

Although there are a multitude of LED grow lights available, there are really only four criteria for evaluating them:



Spectrum

Light spectrum is primary in importance, different plants in nature have favored spectrum for the best growth, no matter in vegetative or blooming stage

Light mixing

Not many fully realize that light mixing can be the second most important factor, results indicate that better light mixing can enable a better speed & yield even when spectrum and PPFD are the same

PPFD

When spectrum and color mixing are maximized, then higher more consistent PPFD values can be achieved across the grow, increasing speed and yield

Quality assurance

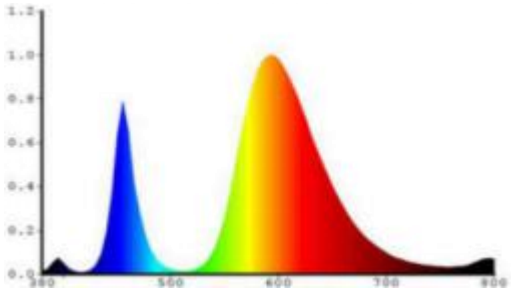
Quality is fundemental to a grow light, only well designed and reliable systems can deliver these values on a consistent basis

With these criteria in mind our LED grow lights provide an excellent LED solution with superb cost performance and reliability

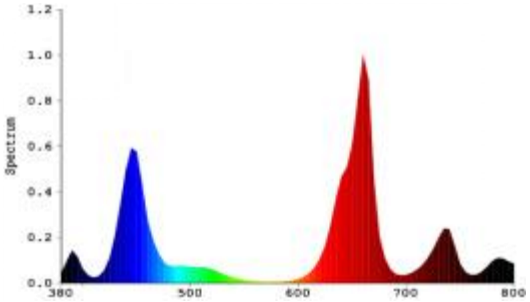
Our Advantages : Optimum Spectrum

Spectrum is one of the most important factors in designing and developing grow lights. Since it is well understood that plants in nature are a little different they each have their own subtle spectrum requirements in vegetative, blooming and fruiting stage. It takes a great deal of time and effort to run tests for determining the optimum spectrum per species.

We work closely with universities and professional cannabis growers to explore optimum spectrum and to realize fast grow speeds, superior yield and high quality output through hundreds of tests and interactions.

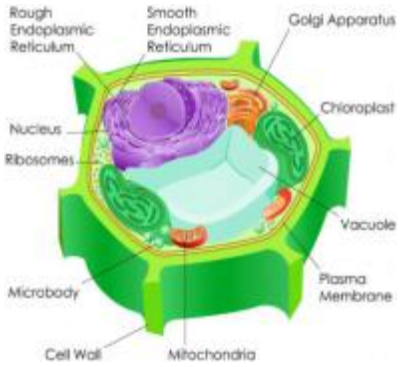


Full Spectrum



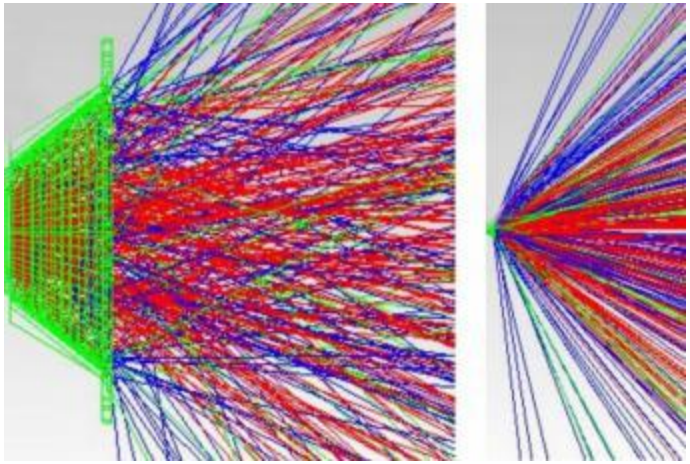
Precision Spectrum

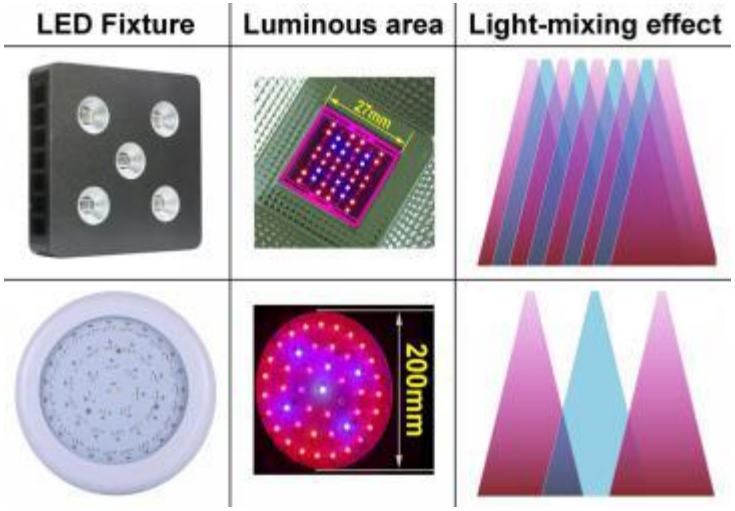
Advantages : Optimal Light-mixing



On the surface of the leaves of plants, there are millions of plant cells (photosynthetic pigment) that need to absorb photons for the photosynthesis in their various growth stages, the plant will grow perfectly only when the plant cells are able to maximally absorb light in the same spectrum, otherwise the growth of the plant will be affected from poor distribution of different colors of light. So far, grow tests have revealed that improved color mixing is critical to achieve good growth results. The importance of mixing different colors of light is often undervalued or neglected by many grow light designers who usually only choose the diodes in the different wavelengths according to the spectrum they desire, paying little attention to the mixing of different colors of light.

The most effective way to achieve ideal mixing of different colors of light is to gather all the colors in an area as small as possible, thus we chose COB as the light source for our grow lights, enabling us to dramatically improve the mixing of different colors of light that is so important for fast plant growth and maximum yield.



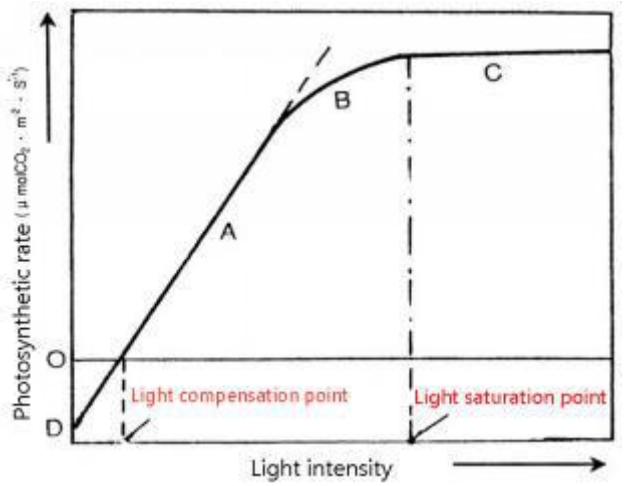


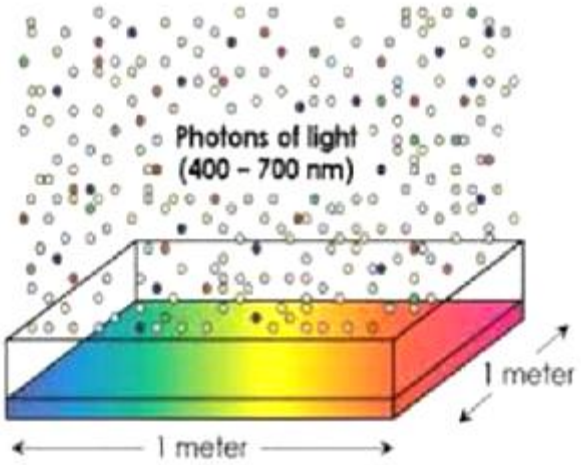
Our Advantages : Good PPF Value

PPFD (Photosynthetic Photon Flux Density) is the primary measurement of light for plants, usually the higher the PPFD, the better grow result. However pursuing high PPF values alone is not best approach, since different kinds of plants have their own light saturation point. When spectrum and color mixing are optimal the light saturation point can be maximized. Therefore spectrum and light-mixing should be placed high on your priorities before other means to increase PPF.

These important points are usually considered for getting the suitable PPF value for the growth of the plant:

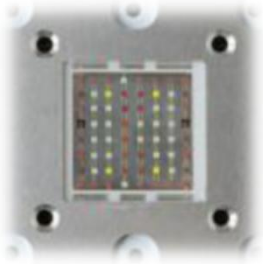
- **Light saturation point** *to confirm how much PPFD is advisable to reach*
- **Light spectrum** *to explore before confirmation of any kind of light source*
- **Power wattage** *with consideration of energy-saving and cost efficiency in the target investment of return*
- **Light-mixing** *should be ensured before the PPFD we would like to have*





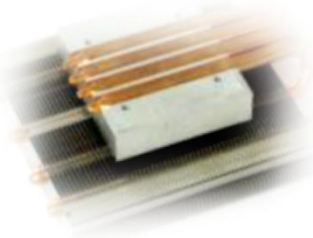
Our Advantages : Quality Assurance

A high quality and reliable grow light should be foremost. Through some technical breakthroughs involving the light source, ventilation system, heat-sinking, drivers, cabling connections as well as careful material selection we have been able to ensure high quality, performance and a long lifespan.



Patented COB with excellent heat-conduction maintain diode health

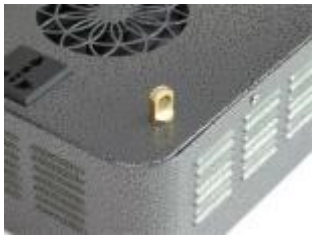
Isolated LED driver with quality standard components



The most effective heat-sinking module supports maximum 150W/COB (**optional**)

The most reliable cooling fan with dual-bearings to ensure long life

High quality cables with pure copper supports safe daisy-chain connection



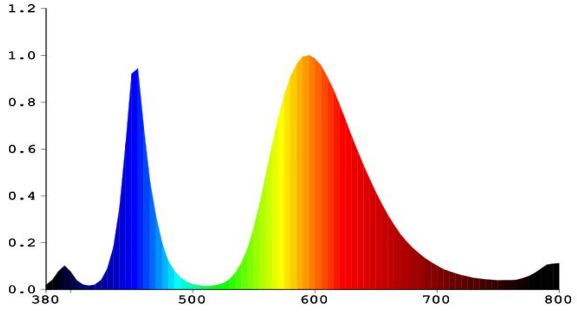
Case finished to guard against corrosion

LED Grow Light VS HPS

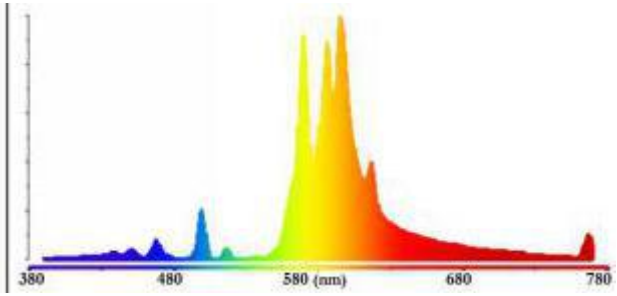
HPS still comprises the majority of the market share due to its cost and well understood performance and yield, however it is a huge consumer of power also emitting a great deal of heat resulting in a greater amount of resources dedicated to electricity and cooling to maintain the environment. LED grow lights offer a perfect solution over HPS at each of these levels of concern.

Spectrum

LED is able to provide precise spectrum through specific bands(UV, blue, red and FR) which are perfectly suited for growing cannabis, offering shorter grow cycles with involved yield; In the comparison below it is apparent that HPS is short of blue and red color, it mainly relies high lumen output for the growth of plant, but it also produces too much heat and demands a lot of electricity



Spectrum of LED grow light



Spectrum of HPS

LED Grow Light VS HPS

Power consumption

Compared to HPS, LED grow lights generally consume less power, typically the result of a 450W LED grow light is equal to a 600W HPS; HPS is able to provide high lumens but is big on power consumption resulting in higher daily usage costs.

HPS also puts out too much heat, making it more difficult to control the environment requiring expensive equipment for cooling. High temperatures can easily damage the surface of the plant leaves. LED emits less heat making it possible to put the light closer to the plant to improve growth speed.

Lifespan & Maintenance

LED has a longer life than HPS, the average life of a well well designed LED grow light is over 50,000 hours, the average lifespan of HPS is usually less than 15,000 hours. Considering the longer life, maintenance, performance, and energy consumption LED offers a much more economical solution to growers compared with HPS.

Our LED grow lights have a modular design making maintenance easy.