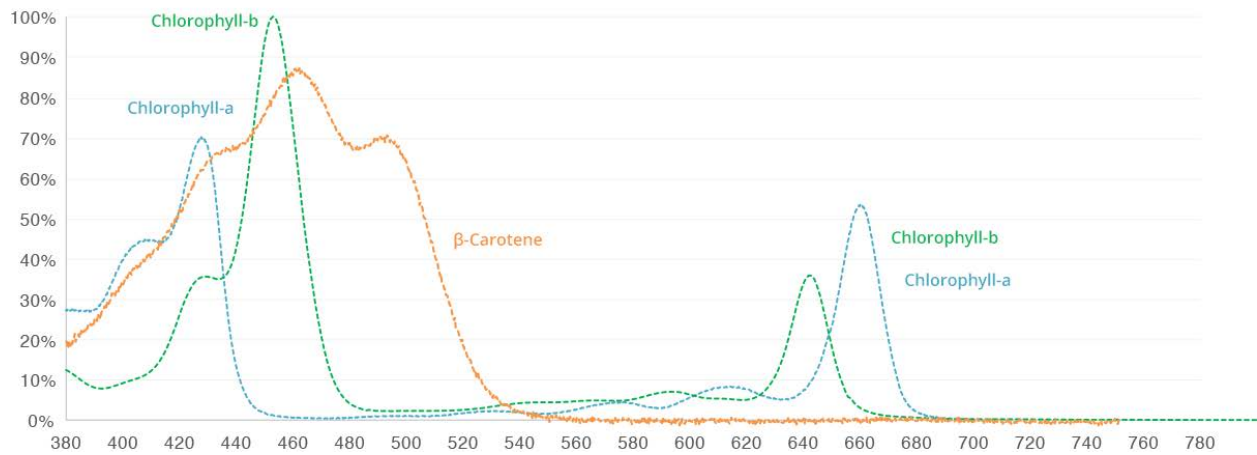


# HD LED Commercial Grow Light

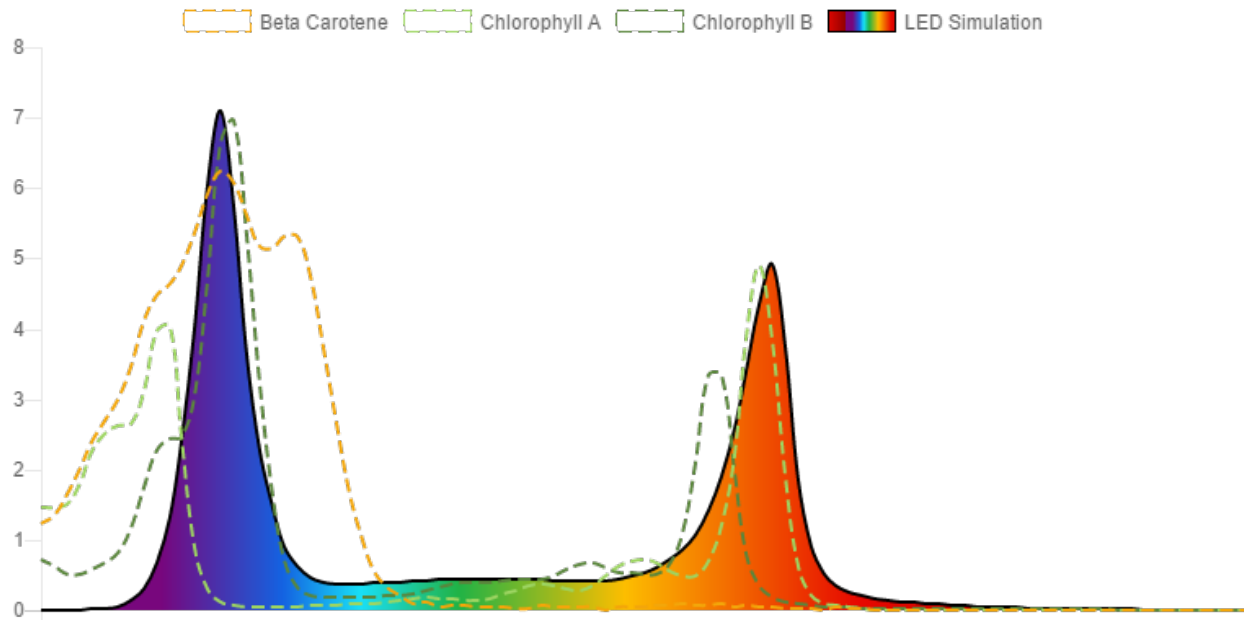
## Features:

- 32 square feet of coverage
- Takes minutes to install
- Grows plants better than natural
- multiple spectrums available
- custom spectrum options available
- Modular and scalable
- Easy to service
- Easy and inexpensive to repair
- Ultra-low maintenance
- ¼ the electricity usage compared to the same wattage in T5's.
- More than twice the usable PPF (PAR) as T5's
- No annual bulb changes – EVER!
- Robust and durable
- Can be adapted for IP compliant weatherproofing
- Optional wireless control
- Optional digital control
- More than a dozen power options available from 110V-480V input.
- Useful LED lifespan estimated at 20+ years.
- UL Listed LEDs, power supply, wiring, and connectors. All other components are UL compliant (they would qualify for the certification if/when tested)
- Superior Technical support and guidance
- Premium German made SunPlus purpose built Horticultural LEDs
- 160° wide beam angle –significantly reduced hotspots at lesser light to canopy height.
- Maximized for photosynthesis absorption peaks for Chlorophyll-A, Chlorophyll-B and Carotenoids
- Ultra high quality, yet one of the lowest priced fixtures on the market.
- Made in USA

## Typical Photosynthesis Absorption



## HD LED Commercial Grow Light Output



Any light that is outside of the photosynthetic absorption response is not absorbed and is completely wasted, decreasing the efficiency of the entire system. By outputting light strictly within the absorption response, we maximize what the plant can absorb and creates an ultra-efficient, highly capable LED system. This is based on our Grow-All Full Spectrum, excellent for almost all plants and an ideal starting point for creating your very own unique spectrum.

## Chlorophyll-a

### **Absorption peaks at 430nm and 662nm**

Chlorophyll-a is the primary pigment for photosynthesis in plants. It exhibits a grass-green visual color. It occurs in all photosynthetic organisms except photosynthetic bacteria.

## Chlorophyll-b

### **Absorption peaks at 453nm and 642nm**

There is usually about half as much chlorophyll-b as the -a variety in plants. Exhibits a blue-green visual color. It occurs in all plants, green algae and some prokaryotes.

## Carotenoids (a/-Carotene, Lycopene, Xanthophyll)

### **Absorption is strong between 420nm and 485nm**

Carotenes are strongly colored red-orange pigments abundant in plants, fruits, vegetables, and whole grains. Xanthophylls are the typical yellow pigments of leaves. Carotenoids contribute to photosynthesis and protects from excessive light damage.

[spectrographs and definitions immediately above credited to Lumileds Holding B.V]

### Technical Specifications:

VAC In – 110-480V

Input Amps – 6.8A@110V, 3.4A@240V, 1.6A@480V

Fixture Total Length – 4X 48” or 2X 96” lights

Output Watts - ~336W (exact output depends on LED spectrum selected)

Operation Duration Limitation – can run 24/7/365 at 100% duty cycle

Total PPF -~550  $\mu\text{mol}/\text{second}$  over 32 sq. ft. – varies depending on spectrum selected

Weight – 22 lbs

Cooling –Passive cooling at 70°F (21°C) above ambient in stagnant airflow, substantially lower with only 1.5 fps (1mph) airflow

Max temp – 257°F (125°C)

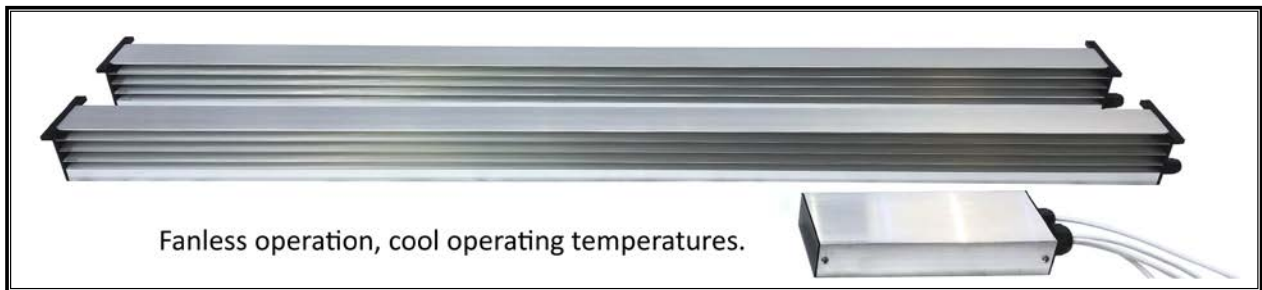
Typical Operating Temp – 140°F @70°F ambient with stagnant airflow

Efficiency – up to 2.28  $\mu\text{mol}/\text{J}$  depending on spectrum selected





Premium Driver Module



Fanless operation, cool operating temperatures.