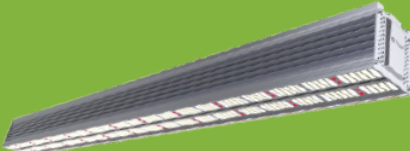


LED LIGHTS FOR HORTICULTURE



Cannabis Cultivation

To replace 1000W H S/CMH light.
USA LED Grow Lights are 70% higher in PPF, 33% lower in power consumption and 33% less in BTU. USALED GRWSH series is especially suitable for vegetation and flowering period.



Cannabis Cultivation in Vegetation and Flowering

Vertical Farming

To replace T5 4ft x 8pcs of 54W Fluorescent Tube light.
USA LED Grow Lights are 35% higher in PPF, 35% lower in power consumption and 50% less in BTU. GRWSY and GRWSYF, GRWSL and GRWSH series are not only suitable for genetics & propagation period of cannabis, but also suitable for lettuce & leaf planting.



Leaf-Vegetable Vertical Farming

Cannabis Cultivation Genetics and Propagation

Greenhouse

To replace 1000W HPS/CMH
USA LED Grow Light GRWSX is 60% higher in PPF, 47% lower in power consumption and 47% less in BTU. GRWSX series is not only suitable for cannabis cultivation in greenhouses, but also suitable for vegetable & flower planting.

2



Flower, Vegetable and Fruit Growing



Cannabis Cultivation

Greenhouse/Container Farming

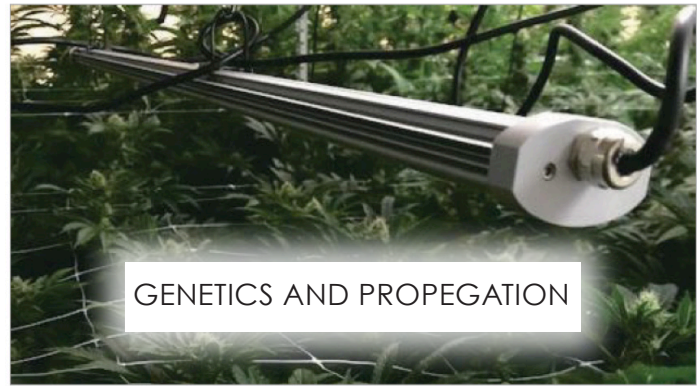
USA LED Grow Lights are 35% higher in PPF, 35% lower in power consumption and 50% less in BTU compared with T5 4ft 8pcs x 54W fluorescent tubelights. GRWS series is suitable for greenhouse growing long-wire plants and the rising container farming industry.



Long-Wire Plants Greenhouse



Container Farming



COLOR SPECTRUM

FSS, FSG, FSM, F9B1, FSMUV

Color Spectrum

Full Spectrum: FSS

With dual-peak spectrum at 630nm and 660nm, FSS is a full spectrum optimized for vegetative and generative phase which can accelerate the growth of plants. Color temperature is 2000K of FSS.

* Application: FSS spectrum provide enough energy for full cycle of plants' growing, especially efficient for vegetaton and flowering phase of cannabis.

Full Spectrum: FSG

The specially deployed full spectrum fills the negligence of the main photoreceptors and pigments outside the 660nm and 450nm range, and it is suitable for reproduction to aging in indoor environments, which increases the radiant energy of red light at 660nm wavelength in white light. The overall color temperature of FSG's full spectrum is controlled at 4000K. FSG spectrum is efficient for rapid growing of cannabis's full phase.

* Application: FSG spectrum is efficient for rapid growing of cannabis full phase

Full Spectrum: FSM

The specially deployed full spectrum fills the negligence of the main photoreceptors and pigments outside the 660nm and 450nm range, and it is suitable for reproduction to aging in indoor environments. The overall color temperature of FSM's full spectrum is controlled at 3200K, which increases the radiant energy of red light at 660nm wavelength in white light. It provides a beautiful working environment and a more realistic color reproduction degree at a CRI level of 85.

* Application: FSM spectrum is efficient for rapid growing of cannabis's full phase, FSM is higher in red spectral content than FSG.

Spectrum: R9B1

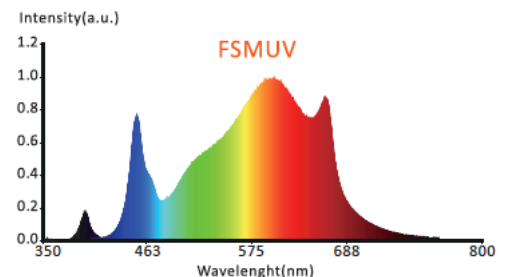
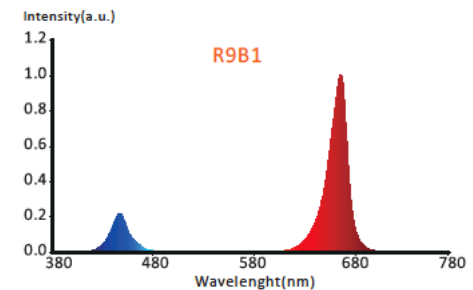
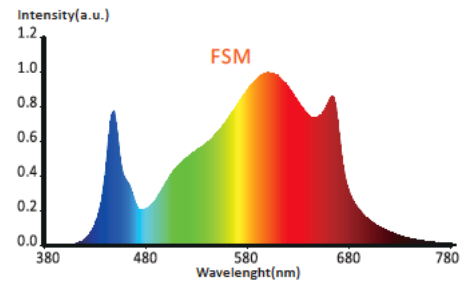
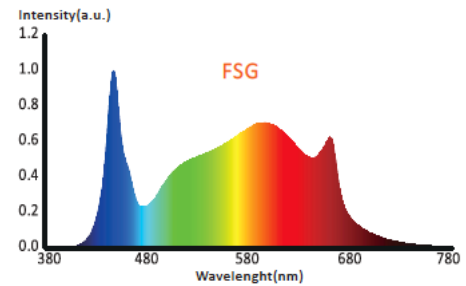
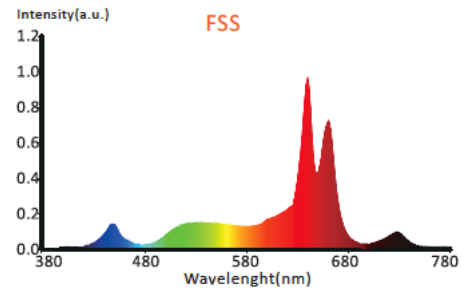
R9B1 use 450nm blue light and 660nm red light with bimodal spectrum, based on the latest academic research, which is the most efficient spectrum in increasing plant anthocyanin, chlorophyll and carotenoid yield.

* Application: R9B1 is mainly applied in tomatoes, strawberries and flowers growing etc.

Full Spectrum: FSMUV

FSMUV is 400nm ultraviolet radiation and full spectrum. Studies have shown that THC content can be increased in cannabis plants if done directly. If improper operation, studies have shown that UV stress will effects light suppression of chloroplasts, the reduction of plant yields and lamina deaths.

* Application: FSMUV spectrum is designed specially for flowering period of cannabis growing.



LED SPECTRUMS

UV and Blue Light Spectrum

Spectrum: UV

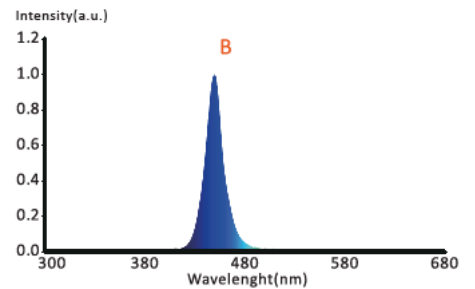
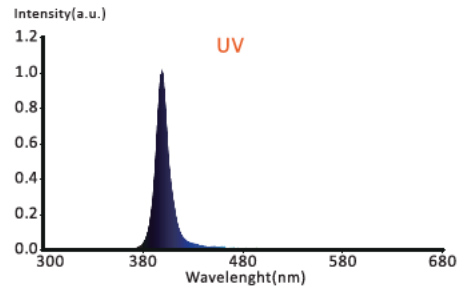
The special spectrum of UV with peak of 400 nm, provide beneficial photomorphogenic responses by creating a mild stress response in plants.

*Application: According to academic research, UV light has a good effect on increasing THC content when used properly.

Spectrum: B

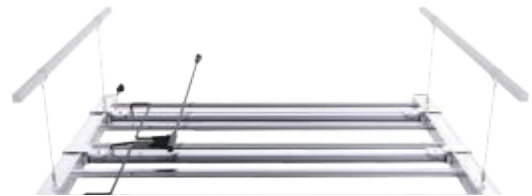
Blue light with peak of 450nm, fits with the absorption peak of chlorophylls, which do photosynthesis to produce sugars and carbon. Sugars and carbons are essential for plant growth, as they are the building blocks for plant cell.

* Application: According to academic research, blue light has a good affect on accelerating growth of leafy greens.

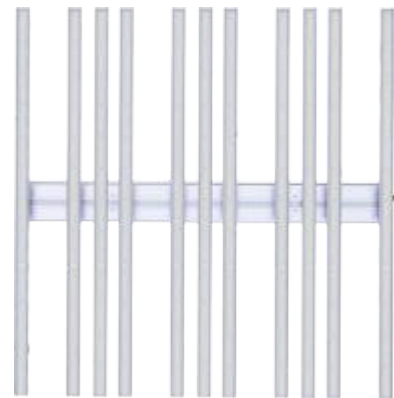


Mix the spectrum by adding supplementary bars

The light can mix the spectrum by Adding Supplementary Bars, which is especially suitable for vegetation and flowering period by accelerating growth and increasing THC content.



4



USA LED GROW

LifeLux™ Standard Series Grow Lights

USA LED GROW

GRWSY
170W/240W



GRWSY
320W/170W



GRWSY
480W



GRWSY
660W/320W



GRWSYF
170W



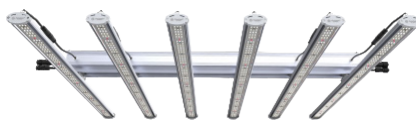
GRWSYF
320W



GRWSX
480W/660W



GRWSX
670W



GRWSX
1000W



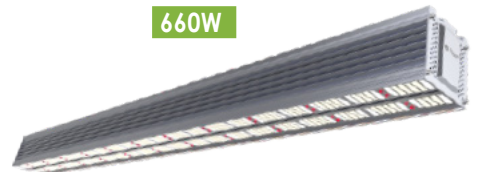
GRWSL
330W



GRWSL
530W



GRWSL
660W



GRWSH
40W



GRWSH
80W



GRWSH
120W





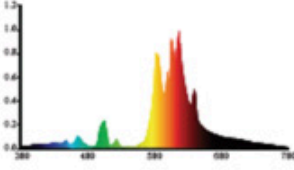
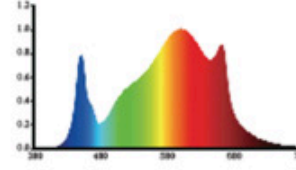
GRWSS
40W



GRWSS
40W/60W

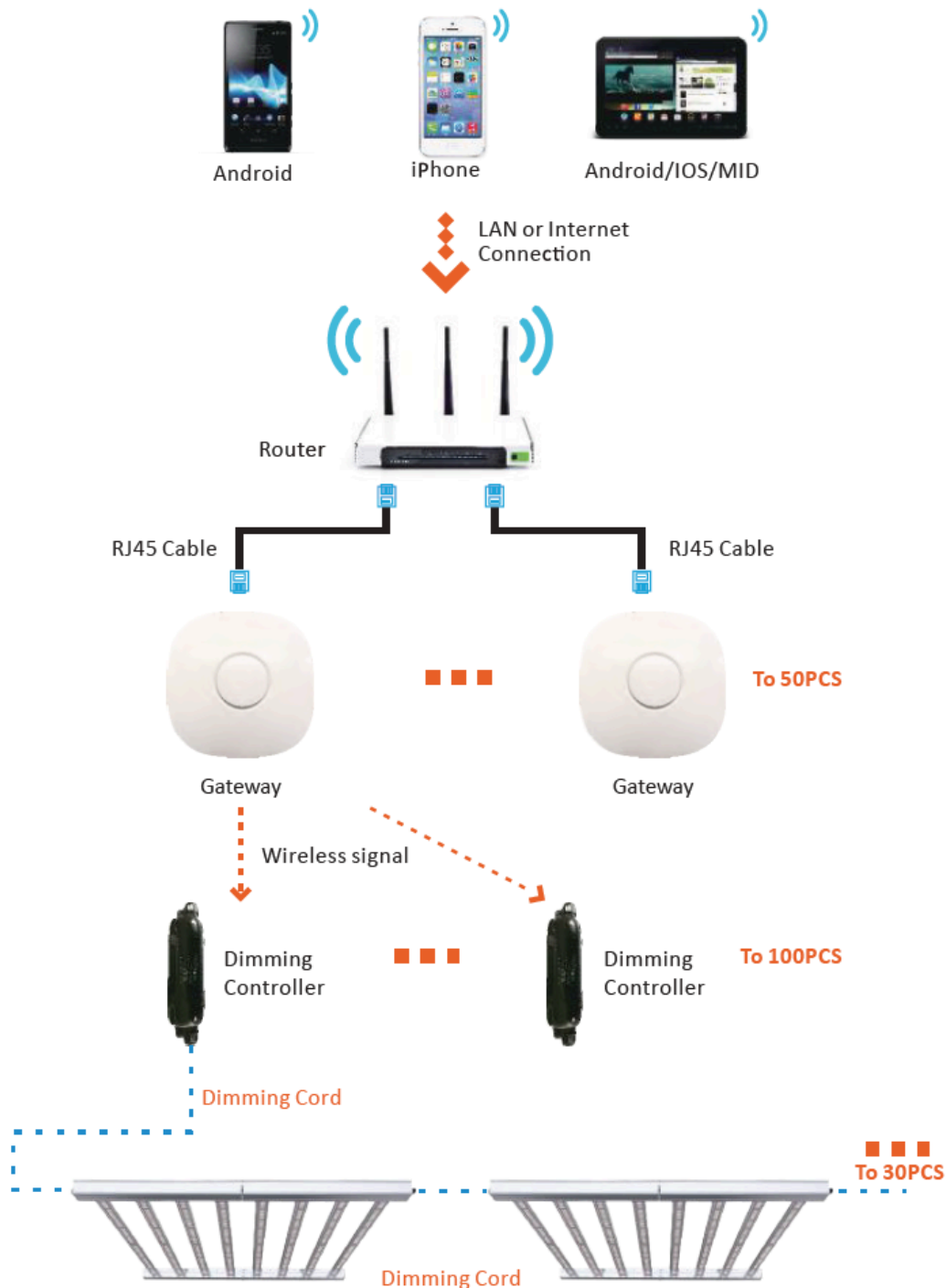


Return of Investment Contrast GRWSY Grow Light with HPS 1000W Light

Items	 1000W HPS	 GRWSY 660W
Spectrum	 Red Wavelength 600nm	 Full Spectrum
Quantity	1pc	1pc
Price	\$ 299	Nominal \$ 999
Bulb replacement cost in five years	\$ 56*5years=\$ 280	\$ 0
Labor cost for Bulb replacement in five years	\$ 20*9times= \$180	\$ 0
Electric cost of air conditioner per Light (15h/day)	\$ 0.2*1.5kw.h*365days*5years = \$547.50	\$ 0.2*0.6kw.h*365days*5years = \$219.00
Electric cost of Light in five years	\$ 3 *365days*5years = \$= 5475.00 (1kw*15h/day*\$ 0.2)	\$ 1.98*365days*5years = \$ 3613.50 (0.66kw*15h/day*\$ 0.2)
Total	\$ 6781.50	\$ 4831.50
Conclusion	Using the GRWSY 660W LED Grow Light, Replacing 1 for 1 Fixture of 1000W you can save \$1950 in 5 years per replacement	

WIRELESS CONTROL OF USA LED GROW LIGHT FIXTURES

USA LED Wireless Control System is composed by APPs, Router, Gateway and Dimming Controller. It is IP65 waterproof and applies to most of 0-10V/1-10V drivers. With this system, users can dim or time the lights remotely by APP software.





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