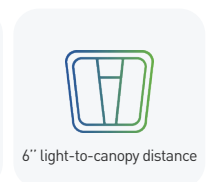
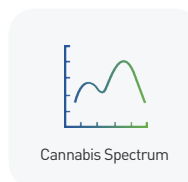
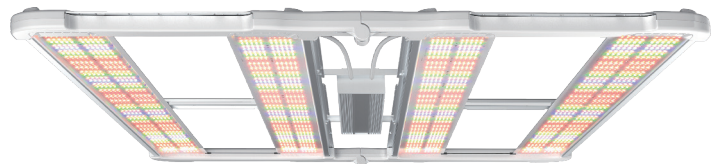




# PHX series

## Horticultural LED Panel for Cannabis

The PHX series is specifically developed and designed for indoor cannabis cultivation coming equipped with industry pioneering spectrum for flowering and vegetative growth. Ultra-thin design allows for maximized plant growth and while providing unprecedented canopy uniformity.



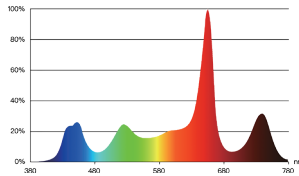
# SANANBIO Cannabis Spectrum

SANANBIO's team of renowned biotechnologist and horticultural lighting engineers developed the spectrum under rigorous years of lab and field research. Understanding the importance of light intensity, optimized spectrum and canopy uniformity in the cultivation of cannabis, the PHX lighting system and platform was born.

## Flowering Spectrum - CS Spectrum

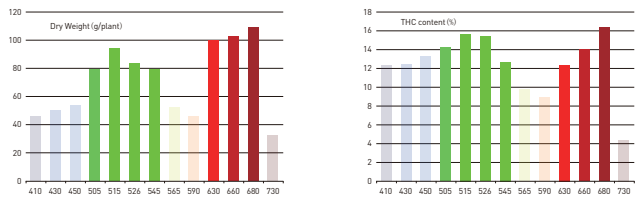


### CS Spectrum



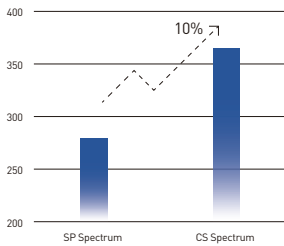
U.S. patent NO.: US16446602

### Monochromatic light results

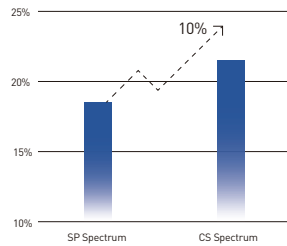


The results show that the 500-550 nm green light zone and 600-700 nm red light zone can significantly increase the amount of cannabis flowers and stimulate the accumulation of THC, CBD and other secondary metabolites.

## Result - Flowering



Dried flower yield per plant (g)



THC absolute content

### Compared to SP spectrum

Bigger flowers

Higher Yield

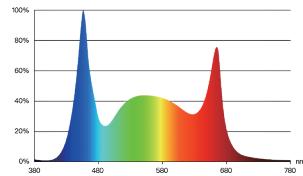


Higher THC content



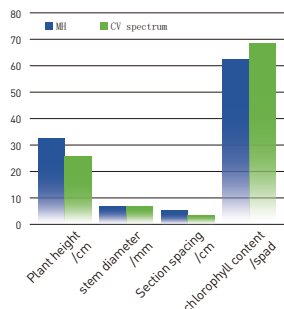
Note: SP spectrum is the most common spectrum (white light + red light), the results of repeated comparative experiments under the same conditions.

## Vegetation Spectrum - CV Spectrum



The combination of 25% and 38% of the photons respectively in the blue and red region of the spectrum ensures that the plants are short and sturdy in the seedling and vegetative period, effectively inhibiting overgrowth; the green region (wavelength 500-599 nm) accounts for 36%, which enhances the penetration of spectrum and improve the photosynthetic efficiency.

## Result - Vegetation



### Compared to MH

Versatile scenarios

Thick stem and robust figure

Reduce the height of crops

Increase chlorophyll level and shorten the growth cycle

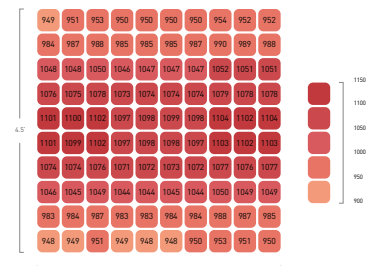
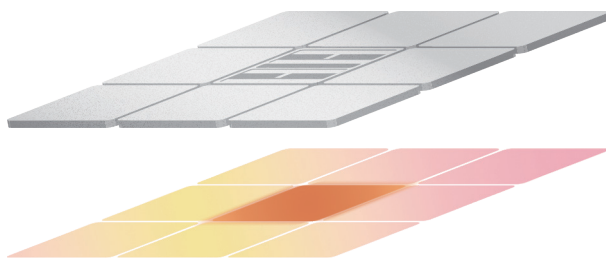
# PHX Series Specifications

Product Type	PHX 3	PHX 6
Model	ZK2-PL300-CV01/A	ZK2-PL600-CS01/C
Stage	Vegetation	Flowering
Spectrum	CV	CS
Power	330 W	650 W
Efficacy	2.6 $\mu\text{mol}/\text{J}$	2.6 $\mu\text{mol}/\text{J}$
PPF	860 $\mu\text{mol}/\text{s}$	1700 $\mu\text{mol}/\text{s}$

Dimension	L 48.3" * W 42.9" * H 2.6" L 1227 * W 1090 * H 67 mm
Weight	< 23.0 lb (10.5 kg)
Light to Canopy Distance	6" - 36" (0.15 m - 0.9 m)
Voltage	120 - 277 V
Dimming	0 - 10 V
Dimming Range	0 / 10 - 100%
Beam Angle	120°
Power Factor	> 0.95
THD	< 10%

Frequency	50 / 60 Hz
Heat Dissipation	Passive
Operating Temperature	-20 to 45 °C / -4 to 113 °F
Max. Temperature	55 °C / 131 °F
IP Rating	IP65
Warranty	5 years
Certification	ETL / FCC / DLC
Life Time	> 36000h
Mounting	Four Point, Suspended

Note: SANANBIO also provide customized services with other spectra and power levels on PHX platform. Please consult the sales for details.

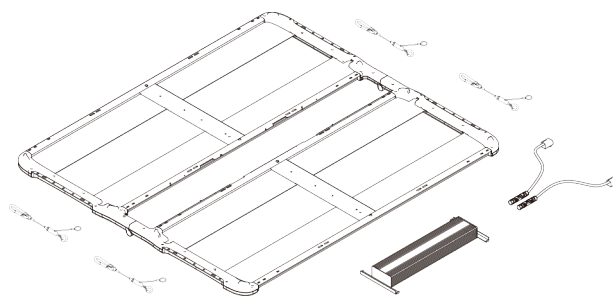
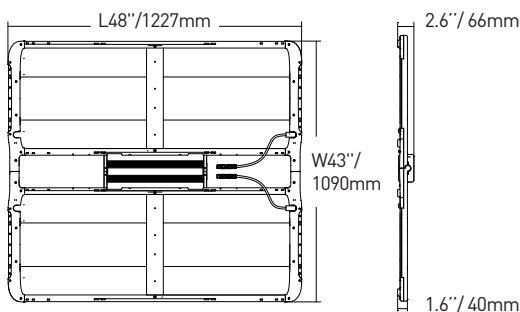


\* In commercial scenarios, the average PPF of the plant canopy in the central area is 1028  $\mu\text{mol}/\text{m}^2/\text{s}$  with the uniformity > 0.92.

Testing model: ZK2-PL600-CS02/C,

With mass planting and 4.5'x4' measuring range of the central area, the uniformity  $U_0 = \text{Min.PPF}/\text{Avg. PPF}$ , The result may vary depending on different conditions, voltages and gauges.

Average PPF of: 1028  $\mu\text{mol}/\text{m}^2/\text{s}$   
Uniformity  $U_0 > 0.9$   
Light to canopy:



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**SANANBIO**  
Vertical Farming | Horticultural Lighting

Subject to change without prior notice;  
Tolerance  $\pm 10\%$