

Origlite Canada

Dimming, Spectral Tuning LED Plant Grow Light(WINGS SERIES)

Observe irradiance map to insure desired PPFD is being achieved throughout cultivation

**Overall dimming;
3-route spectral tuning
by WIFI, PWM, or computer**

**Full spectrum + deep red 660nm + far red 730nm:
SamSung horticulture white 3500K, 6500K, CRI80
660W, PPF 1500 μ mol/s, efficacy 2.3 μ mol/J**



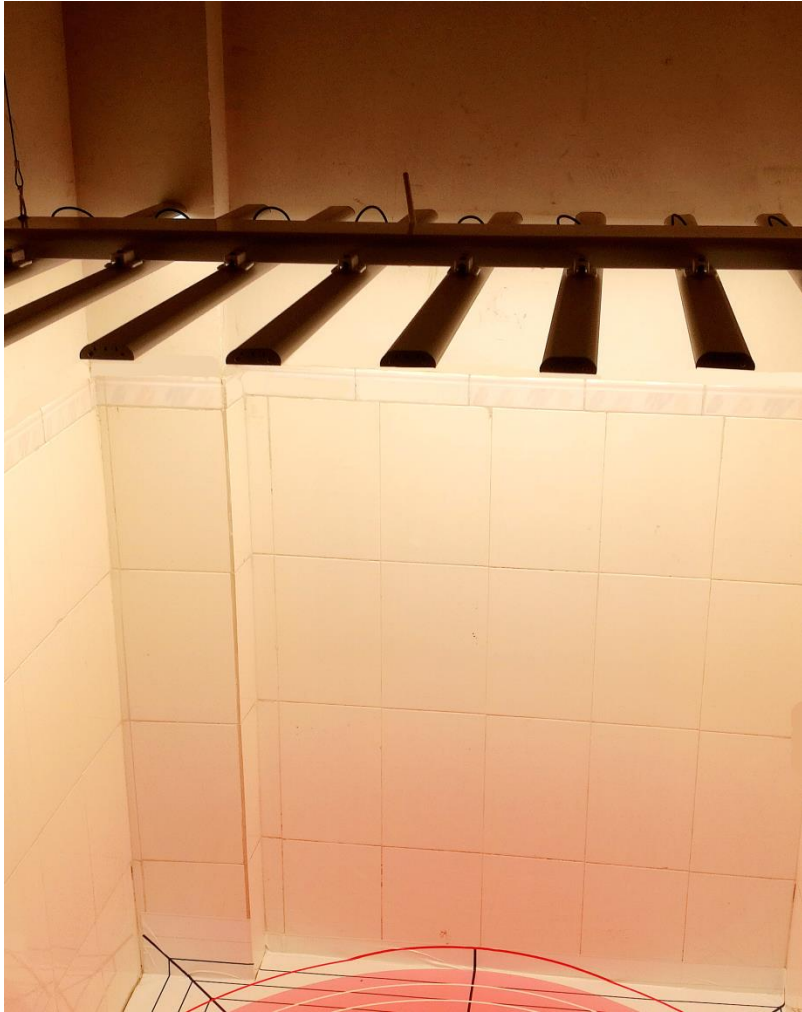
**90-277VAC input, 347-480VAC input,
48VDC output, safety protection
from water spraying**

**Very easy and simply installation with a
push-lock connector for growers'
convenience**

(Fig. 1)



(Fig. 2 Specific for cannabis lighting supplementation)



(Fig. 3 PPFD Test)



(Fig. 4 Cannabis Thriving Growth)

◆ OUTPUT WATTS

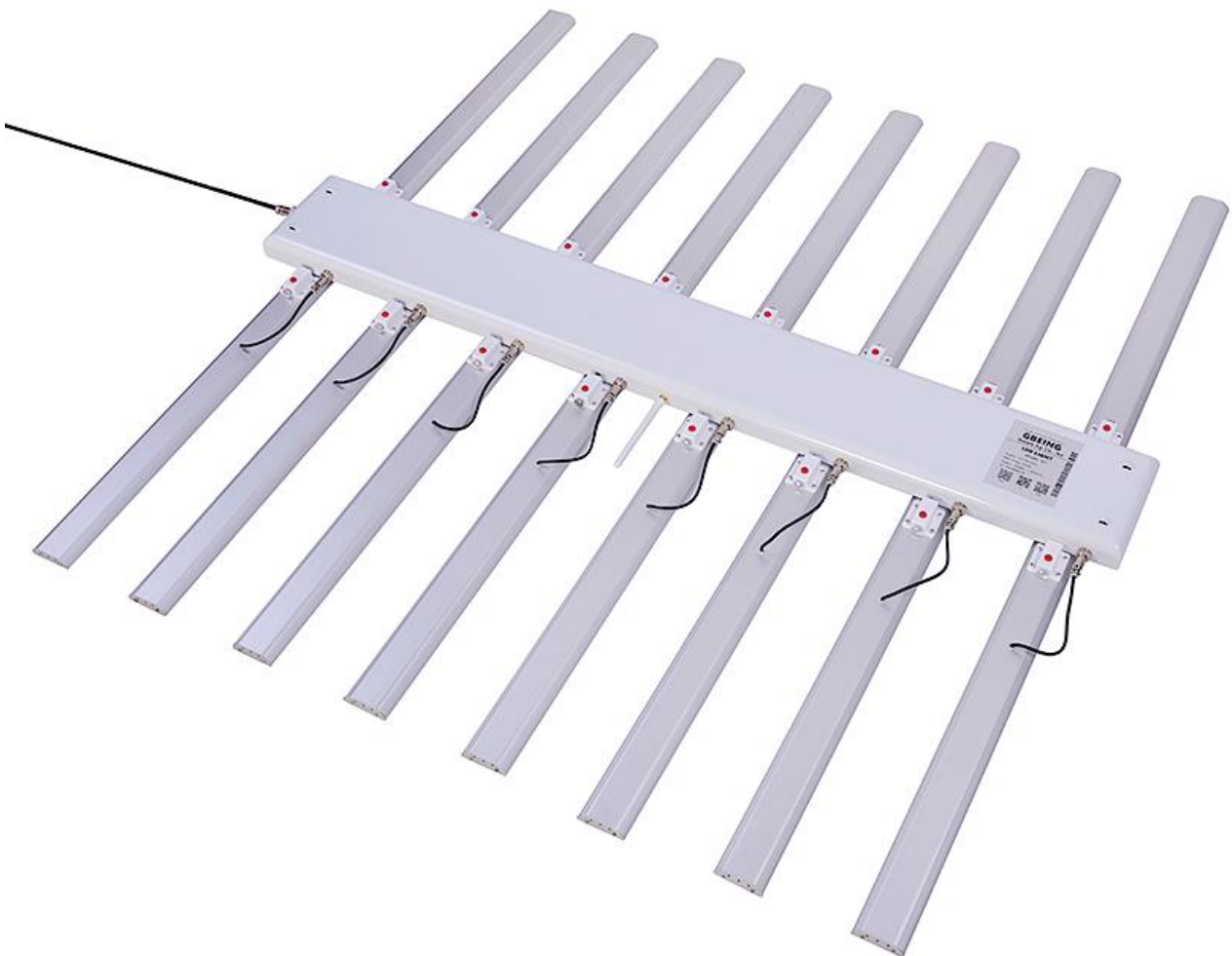
Ranged from 240-660W with each lighting bar of 80W, the power to scale from vegetative growth to higher light intensities in bloom. The exact number of fixtures and model is dependent on your geographic location, crop type and growth goals. Please contact us for a free lighting design consultation.

◆ PPFD & COVERAGE

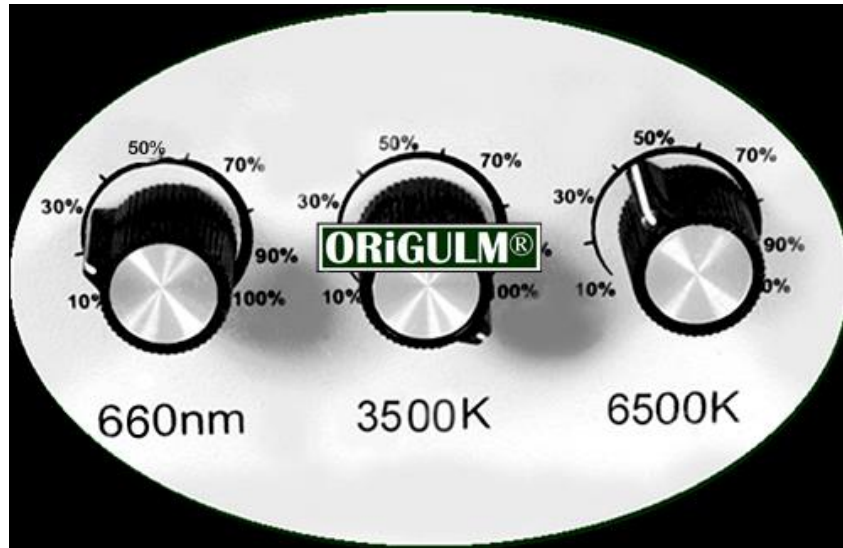
WINGS Series is a full cycle top-lighting solution, designed for controlled environment horticulture applications requiring intense, efficient, and uniform levels of photosynthetic flux density (PPFD), delivering an average of 1000 $\mu\text{mol}/\text{m}^2/\text{s}$ of light over a 4'x4', 6'x 6' area at only 6-12" above canopy.

◆ APPLICATIONS

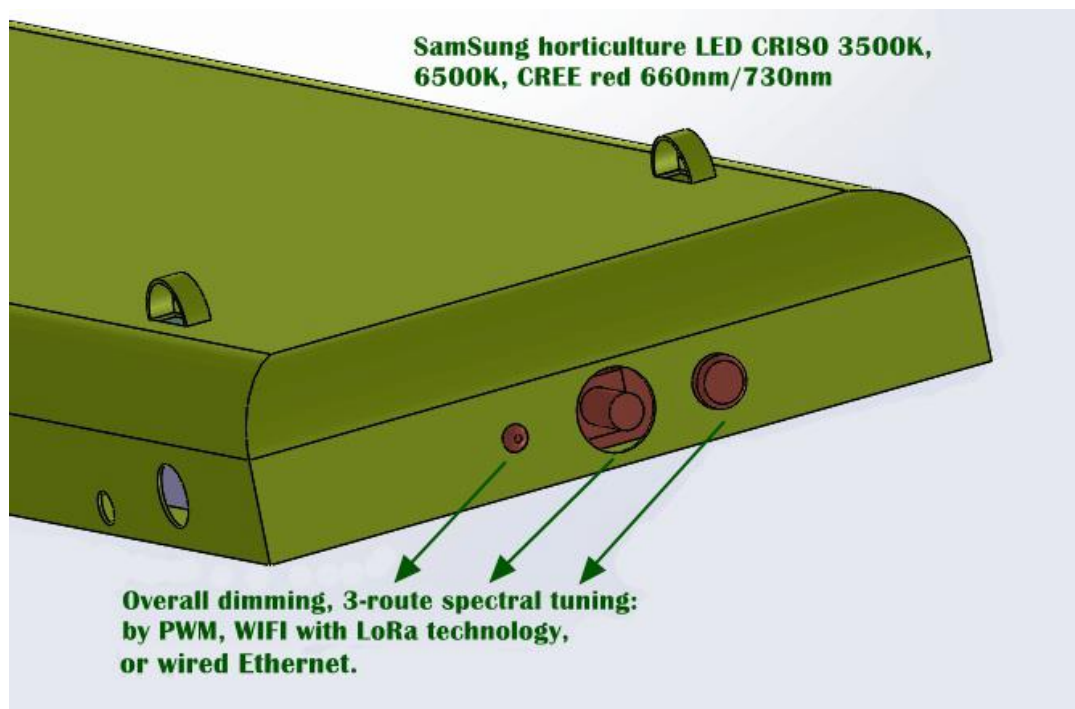
For commercial horticulture cultivation and residential applications, perfect choice for developing light recipes, allowing growers and researchers to improve flavor, nutrition profile and overall production, ideal for both multi and single-tier applications including vertical farms, growth chambers, tables with adjustable aisles, and tents.



(Fig. 5 Side View)



(Fig. 6 Spectral Tune. 3-Route Tuning: White 3500K, 6500K, red 660nm)



(Fig. 7 PWM Tuning)

◆ SPECTRAL TUNING

Tunable LED system with 3 different channels allows digital tuning of spectrum to match any plant type at any stage of growth, from veg. to bloom, or to the Sun's circle, with Spectrum Irradiance Colorimeter for precise control over PPFD, schedules different light treatments throughout photoperiod and/or plant life-cycle, and offers flexibility to instantly accommodate a new crop with varying light requirements.

◆ DIMMING & HOW TO TUNE

Spectral tuning operated with one gateway by Wi-Fi, PWM or on computer. For convenience of cultivators' use, each light designed with digital WIFI(overall dimming) or 3-route spectral tuning(white 3500K, white 6500K, red LED 660nm / far red730nm). For overall tuning, 65535PCS lights to be tunable, to the maximum. Advanced software schedules different light treatments throughout photoperiod and/or plant life-cycle. Antenna helps to receive WIFI signal on the Internet, and send signal to gateway.

LoRa technology is used for WIFI and computer control. WiFi communication or wired Ethernet from computer to router. The instructions are sent to the router on the Internet, and the router controls LED grow lights under the instructions. It can make control of 65535pcs lights, to the maximum, around 2-5KM in area.



(Fig. 8)

◆ QUICK AND EASY INSTALLATION

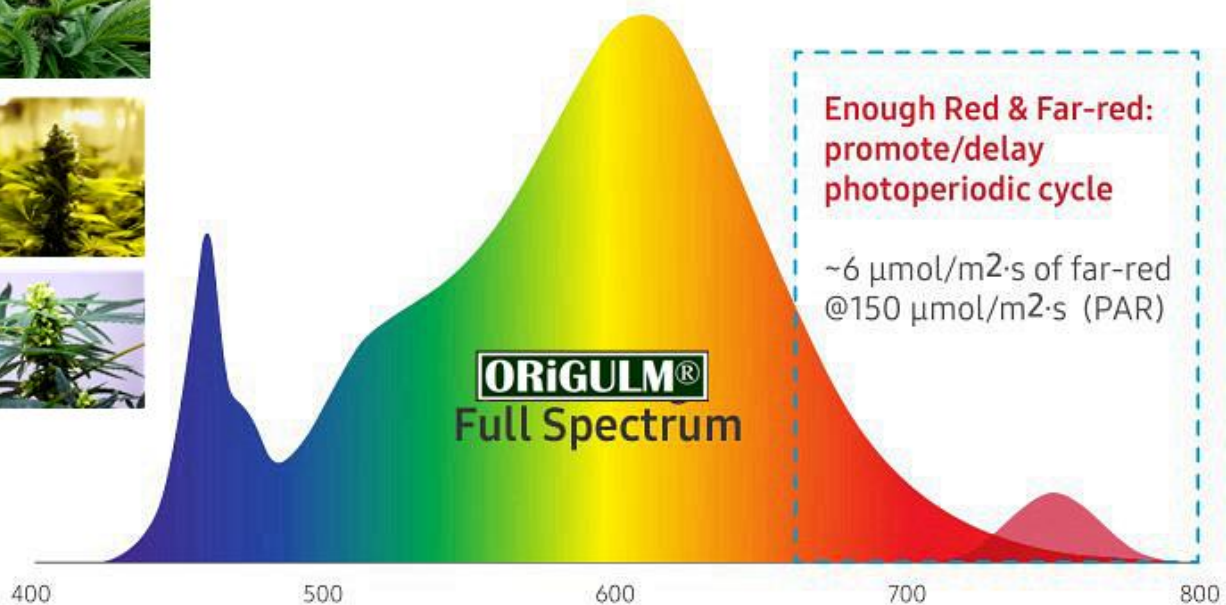
- Each lighting bar is updated with a push-lock connector, snapped together with the brackets
- 2pcs hanging steel cords with pulley for freely raising and lowering the luminaire



(Fig. 9 Hanging Steel Cords)

◆ **FULL SPECTRA: 3500K + 6500K + 660nm + 730nm**

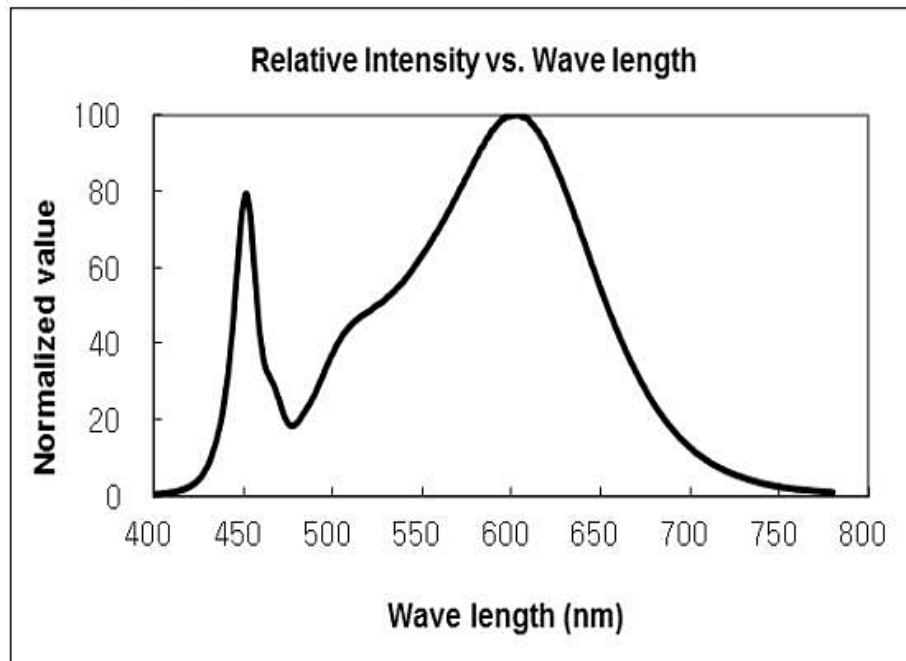
SamSung White LEDs 301B V2(Luminous Efficacy: 223 lm/W, 3500K and 6500K) + SamSung Red LEDs 351H-C(PPF: 2.32 $\mu\text{mol/s}$ @ 350mA, Efficacy: 2.32 $\mu\text{mol/J}$)



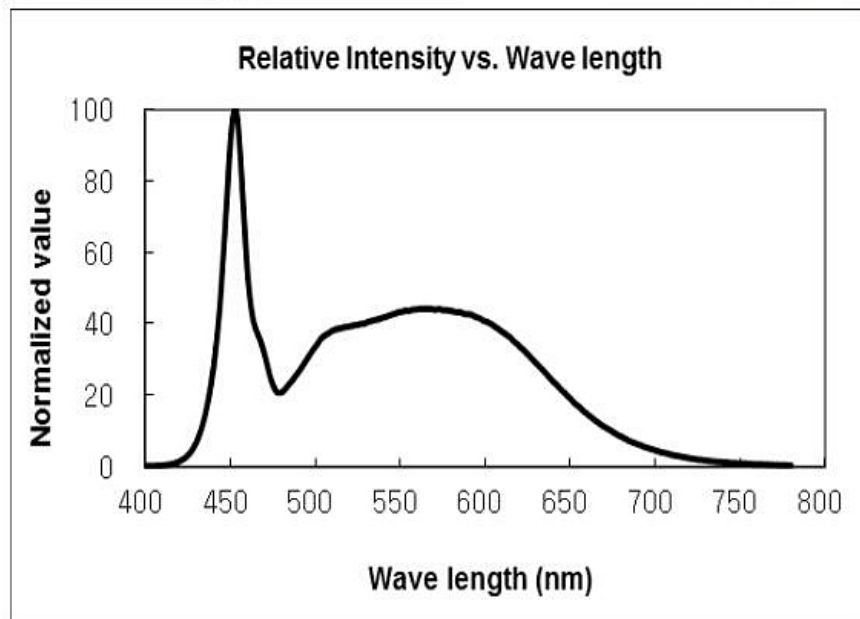
The newly designed Origlite Horticulture Lighting for signaling effects are white-based, and uses full spectrum to allow sufficient red and far-red light. Our approach goes beyond the standard of horticulture lighting by providing the highest efficacy of 2.74 $\mu\text{mol/J}$, a dramatically extended non-yellowing lifetime and better PPFD uniformity. Furthermore, Our Horticulture LED has a full line-up of these - with high efficient blue, deep red, and far-red packages. You can apply this Horticulture Lighting virtually anywhere such as in greenhouse and indoor farming, where dynamic growth lighting is needed.

LEDs			
White (2700~6500K)	Blue (450nm)	Deep Red (660nm)	Far Red (730nm)

CCT : 3500K (80 CRI)



CT : 6500K(80 CRI)



(Fig. 10 Spectrum of SamSung White CCT3500K, 6500K, 80CRI)

660W LED Grow Light, PPF1500 μ mol/s, Distribution of PPFD2.3 μ mol/J



(Fig. 11 PPFD Distribution)

SN	Rated Power	250W	330W	410W	490W	570W	660w
1	Mains Voltage(VAC)	Autosensing 90-277 V AC, 347-480V AC 50/60 Hz					
2	AC Input Current(mA)(120/220VAC)	/	/	/	/	/	/
3	DC Output Current(mA)						
4	Power Supply	Built-in integral(self-ballasted LED-module), Meanwell, IP65 rating, stability and multi-security protections: over current, short circuit, over voltage, over temperature					
5	Mean Time Between Failure(MTBF)	≥190.7K hrs(MIL-HDBK-217F)					
6	Driver Failure Rate	0.05% per 5000 hours					
7	Dimming & Spectral Tuning	Overall Dimming; 3-channel Spectral Tuning: (White LED 3500K, 6500K, deep red 660nm / far red 730nm) By Wi-Fi, PWM(10-100%, individually per LED channel), or wired Ethernet					
8	Networking	Wi-Fi or Wired Ethernet					
9	LED Light Source	SamSung White LEDs 301B V2(Luminous Efficacy: 223 lm/W, 3500K and 6500K) + SamSung Red LEDs 351H-C(PPF: 2.32 μmol/s @ 350mA, Efficacy: 2.32 μmol/J)					
10	Qty of LEDs(PCS)						
11	Efficacy(μmol/J)	2.3					
12	PPF(μmol/s)	590	780	960	1150	1350	1530
13	CCT(K) & nm	White 3500K, 6500K, Red 660nm, Far Red730nm					
14	Beam Angle	110°					
15	CRI(Ra)	≥Ra 80					
16	Maintenance of Lumen Output	> 87% at 60000 hours min L80B10 at Ta 25 °C					
17	IP Rating	Ip54, IP65; Dust-penetration protected; All weather protection					
18	Protection	Mech. Impact Protection, IK08; Vandal Protected					
19	Operating Tempt.	Outdoor: -40 - +45 °C; Indoor(ceiling): -40 - +45 °C; Driver Box IP67: -40 - +45°C					
20	Colour of Housing	Matt White					
21	Net Weight(G)	7.65G	8.4G	8.99G	9.7G	10.4G	11G
22	Materials	Housing: anodized, extruded aluminum alloy chassis with integrated heatsink for longevity and passive, natural convection thermal management (no fans or moving components); mounting bracket: iron; hanging wire: stainless steel					
23	Lighting Bars	3pcs	4pcs	5pcs	6pcs	7pcs	8pcs
	Accessories	1.1m-length lighting bars, 1pc 1.1m-length assembly bracket, 2pcs hanging steel cords with pulley, 1pc antenna					
24	Connection	Luminaire Electrical Connection: push-in terminals for American / European 3-core wires 3×0.75m², ø7mm, 39.37 inches in length					
25	Maintenance	Access by opening the rear heat sink, no internal cleaning required					
26	Life Span & Warranty	50000 hours, 3-year limited warranty					

◆ ADDITIONAL INFORMATION

(1) Deployment

- Recommended mounting height 6"-12" from top of canopy for optimal light uniformity, penetration and flux density above a 4'x4', 6'x6' canopy.
- Suitable for operation in still air ambient temperatures from -40°C(-40°F) to 35°C(95°F) when suspended and up to 30°C (86°F) when surface mounted. Operating temperature ranges between 25°C(77°F) to 30°C(86°F) above ambient.
- Recommend at least one ft³/S of airflow to ensure efficient cooling. Proper air flow will also increase the maximum suitable operating temperature and help extend lifetime of system.

(2) Construction

Anodized, extruded aluminum alloy chassis with integrated heatsink for longevity and passive, natural convection thermal management (no fans or moving components).

(3) Electrical

- Meanwell branded power supply, 90-277VAC, 347-480VAC. Built-in integral (self-ballasted LED-module). IP54 / IP65 rating. Isolation resistance. Stability and multi-security protections: over current, short circuit, over voltage, overload, over temperature. Driver Failure Rate: 0.05% per 5000 hours. Safety Standards: UL60950-1, BSMI CNS14336-1 approved.

(4) Life Span & Guarantee

Mean Time between Failure (MTBF) ≥200K hrs min (MIL-HDBK-217F). All WINGS systems are guaranteed against manufacturing defects for three years with projected lifetime of 50,000 operating hours to 70 percent of initial flux.



Best Replacement of HPS and HID – Low working temperature, 70.8°C; Large Coverage, 4'x4', 6'x6' area at only 6-12" above canopy; Illuminance uniformity > 0.836; Full spectrum or mixing spectrum (R, G, B, IR, UR) for varied plants