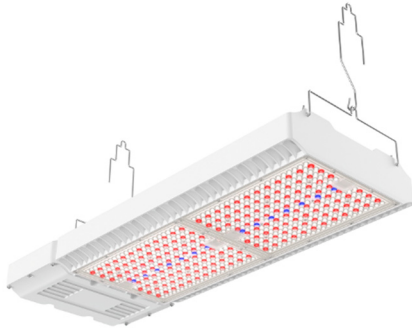


LED OPTIC-DRIVEN GROW LIGHT



Optic Driven Grow Light

Commercial grade system in an ergonomic, easy to install/maintain form factor. High Efficacy 3.0 $\mu\text{mol/J}$ and up to 75% in energy savings. Compact design for easy HPS to LED conversions. Available in 400W-800W configurations.

Built-in or modular external power supply allows for direct or remote power management. Designed to provide uniform coverage, with minimal heat (Max 2728BTU). Suitable for traditional and vertical grow facilities with minimal canopy to fixture distances. Designed for wet/humid environments, reducing electrical and fire hazards. Delivers full-spectrum lighting. Customizable spectrum to achieve specific goals.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

- Horticulture

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Low-profile, rigid, aluminum housing
- Powder coat finish
- Small footprint
- Linkable
- Exceptional heat dissipation
- Weight: 9.8 Kg (21.61 Lbs)
- Fixture can be pressure washed
- Hydroponics system friendly
- Waterproof (IP65) wet/humid environments
- Suspension mounted

Optical Characteristics:

- >90% transmission
- 110 x 140 degree secondary optics
- Secondary optics eliminate need for large and cumbersome lightbars
- Extremely uniform
- PPF Output: 2400 $\mu\text{mol/s}$

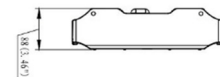
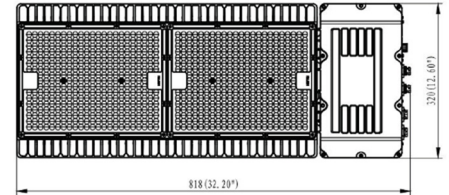
AUTHORIZED BY:

NAME:

DATE:

DIMENSIONS & WEIGHT

L x W x H	WEIGHT
818 x 320 x 88 mm 32.2 x 12.6 x 3.46"	9.8Kg 21.61Lbs



PACKAGING

1085 x 365 x 145 mm 42.72 x 14.37 x 5.71"	12.3Kg 27.12Lbs
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ORDERING INFORMATION

CNX-OPG			
PRODUCT TYPE	SPECTRUM	WATTAGE	FIXTURE COLOR
CNX-OPG		400 – 400 WATTS 800 – 800 WATTS	WHT – White CST – Custom Color
CST	CUSTOM		

PRODUCT OPTIONS

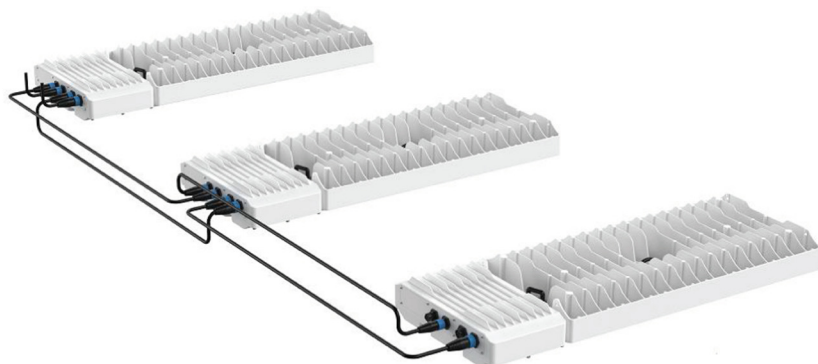
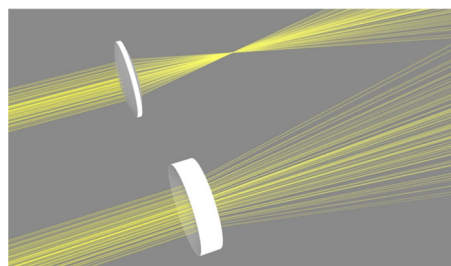
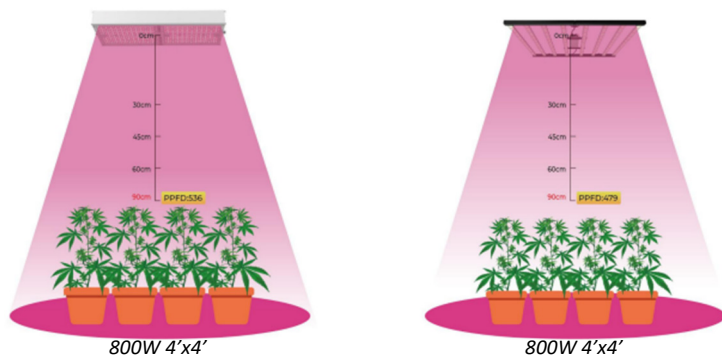
INPUT VOLTAGE	ADDITIONAL SURGE PROTECTION	CONTROL INTERFACE
P1 – 100~277 VAC P2 – 277~480 VAC	20K – 20KV/KA (P2 ONLY) XXX – NO SURGE PROTECTION	DAL – 1-10V DALI XXX – NO CONTROL

ELECTRICAL / TECHNICAL DATA

- Input Voltage: 100 ~ 277 VAC or 277 ~ 480 VAC, 50/60 Hz
- 6.67A @ 120V, 2.89A @ 277V
- Isolation Class: Class I
- 0-10 VDC Dimming
- Power Factor: >0.9 at full load
- Operating Temperature Range: 0 ~ +45C
- Heat Generated: Max 2240 BTU
- System Efficacy: 3.0 $\mu\text{mol/J}$

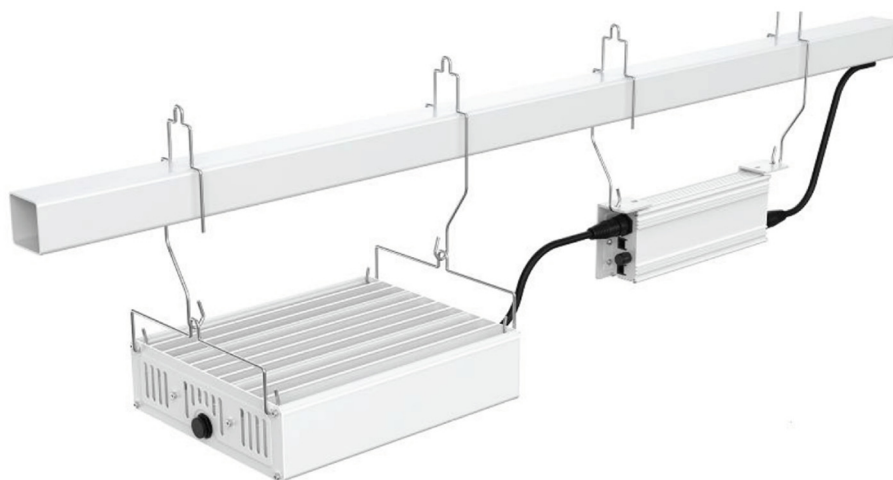
1-to-1 HPS Replacement

Installing LED light bars is cumbersome, complex, and costly. Utilizing low loss, secondary optics, the CNX-OPG family of products can achieve 1-to-1 HPS replacements.



LINKABLE
up to 7 fixtures @ 480VAC

ALSO AVAILABLE AS MODULAR SEPARATED COMPONENTS




SPECTRUM ANALYSIS (can be customized for desired response)

<p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, dark red peak is centered at 730nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>720-740nm - With a peak spectrum at 730nm, it is designed to exclusively target phytochrome far red photoreceptors in photomorphogenic lighting applications. This is used to lengthen the dark period to encourage the flowering process in short day plants.</p>
<p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, red peak is centered at 660nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>650-670nm - With a peak spectrum at 660nm, it is designed to exclusively target phytochrome red photoreceptors in photomorphogenic lighting applications. This is used to delay flowering in short-day plants.</p>
<p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, blue peak is centered at 400nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>400nm - With a peak wavelength of 400nm, UV 400nm is designed to provide beneficial photomorphogenic responses by creating a mild stress response in plants. When applied correctly, research shows increased THC content in cannabis plants. When applied incorrectly, research shows UV stress causes photoinhibition of chloroplasts, resulting in lower biomass production, photobleaching and death of leaves.</p>

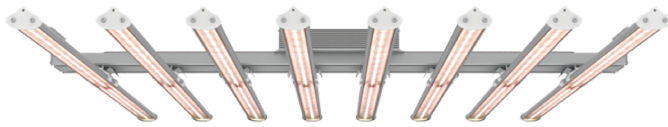
CANNABIS

Cannabis requires light and darkness. This is necessary for inducing flowering. Cannabis will flower only when days are short as the plant's chemical signal begins to accumulate. In nature, we see this happen during the fall. In a controlled production setting, grow lights can be used to manipulate this chemical signaling to better control crop growth rates, yield, and other characteristics.

Regardless of flower, vegetative, or seedling stages, CONXCORP Smart Horticultural LEDs can be used successfully for effective plant growth and yields. Our spectrum maximizes energy output within the red and blue ranges for the most efficient photosynthetic potential, as well, provides better canopy penetration and yield uniformity from the top to the bottom of the plant. Since Cannabis is an especially high-light crop, cultivators will realize major cost savings with up to 75% reduced energy-usage compared to traditional HID fixtures. Cultivators can further increase lighting efficiency by utilizing controls to create precision light schedules, manage multiple grow rooms from a single device, and to easily manage lighting for multiple growth stages in a single grow room.

LEDs may be manipulated to further control the development of the plant beyond just flowering times. Light spectra are important for controlling the plants perception of their environment and how much light they are receiving. The ratio of red to blue light is important for the plant's perception of where its leaves are and how much light they're receiving. If the ratio of blue to red increases, the plant perceives more intense light and will not "stretch" vertically as it grows. This will result in a very tight branching pattern, something that is desirable in some cases. A decrease in the blue to red ratio will have the opposite effect. Changes in light spectra have also been proven to manipulate cannabinoid, and THC levels.

LED DISTRIBUTED GROW LIGHT SYSTEM



Distributed Grow Light System

High Efficacy >2.5umol/J and up to 75% in energy savings available in 240W-800W configurations.

Scalable, commercial grade system designed to provide uniform coverage, with minimal heat. Extremely uniform light distribution suitable for traditional and vertical grow facilities with minimal canopy to fixture distances. Designed for wet/humid environments, reducing electrical and fire hazards. Delivers Full-Spectrum lighting. Customizable spectrum to achieve specific goals.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

- Horticulture

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Extruded aluminum housing
- Exceptional heat dissipation
- High grade thermal paste for optimal PCB to fixture cooling
- Weight: 14.6 Kg (32.19 Lbs)
- Anodic oxidization finish
- IP 65 – suitable for outdoor use
- Hydroponics system friendly
- Waterproof – for wet/humid environments
- Suspended or surface mounted

Optical Characteristics:

- PC lenses
- Wide distribution primary optics (uniformity)
- Customizable spectrum
- Distributed physical footprint to overcome uniformity issues

Electrical Characteristics:

- Input Voltage: 120 ~ 277 VAC or 180-527 VAC, 50/60 Hz
- Power Factor: >0.98 at full load
- THD = <20%
- Operating Temperature Range: -20 ~ +70C
- Built in 10kV protection
- Optional Surge Protection: 20kv/20kA
- 100,000 switching cycles

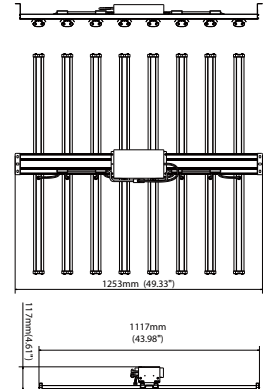
AUTHORIZED BY:

NAME:

DATE:

DIMENSIONS & WEIGHT

PRODUCT LINE	DGR
LENGTH (cm)	125.3
WIDTH (cm)	111.7
HEIGHT (cm)	11.7
NET WEIGHT (Kg)	14.6
PCS / CARTON	1-bracket 8-light bars (2 cartons)
CARTON WEIGHT (Kg)	15.26 (2 cartons)



ORDERING INFORMATION

CNX-DGR		
PRODUCT TYPE	SPECTRUM	WATTAGE
CNX-DGR	467 –	240 – 240 WATTS
	457 –	320 – 320 WATTS
	480 –	480 – 480 WATTS
	600 –	600 – 600 WATTS
	640 –	640 – 640 WATTS
CST –	CUSTOM	800 – 800 WATTS

PRODUCT OPTIONS

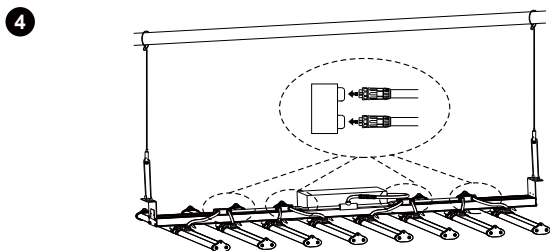
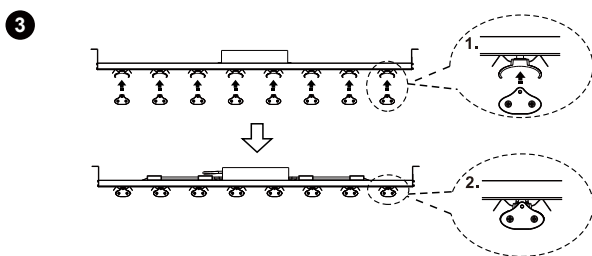
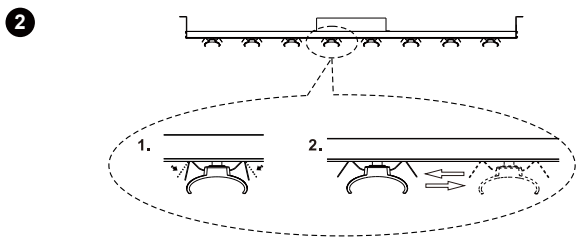
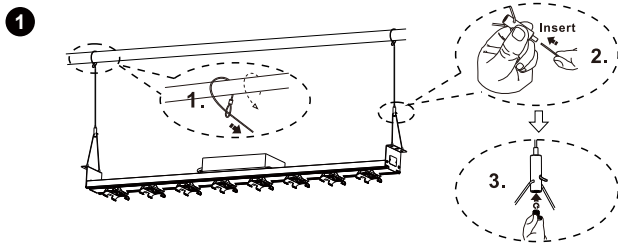
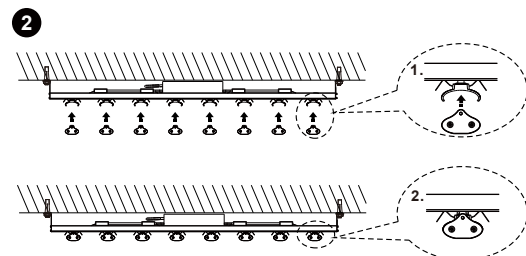
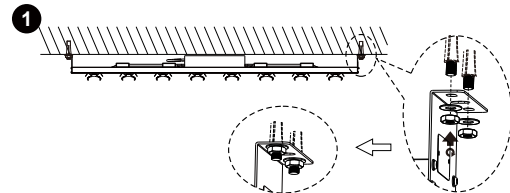
INPUT VOLTAGE	ADDITIONAL SURGE PROTECTION	CONTROL
P1 – 120~277 VAC P2 – 180~527 VAC	20K – 20KV/KA (P2 ONLY) XXX – NO SURGE PROTECTION	CTR – CNX CONTROL DALI – 1-10V DALI ZIG – ZIGBEE XXX – NO CONTROL

ELECTRICAL DATA

SYSTEM WATTAGE	EFFICIENCY
240 WATTS	2.5umol/J
320 WATTS	2.5umol/J
480 WATTS	2.5umol/J
600 WATTS	2.5umol/J
640 WATTS	2.5umol/J
800 WATTS	2.5umol/J

DISTRIBUTED SYSTEM

Every environment is different. In addition to varying light level requirements, the physical layout of the facility has a direct impact on light performance. Different surfaces have different reflective properties. Ceiling heights affect light distribution and uniformity. Growing apparatus footprints vary. These and other factors make it difficult to provide effective and uniform light values across the plants grow surface. Even sophisticated secondary optics have limitations. A low-profile, scalable system allows your lighting to adapt to your unique environment. With a larger physical footprint achieved via a distributed system, uniformity issues are avoided, resulting in better and more consistent product yields.

FLEXIBLE & SIMPLE INSTALLATION**SUSPENDED INSTALLATION****SURFACE INSTALLATION**



SPECTRUM ANALYSIS (can be customized for desired response)

<p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, dark red peak is centered at 730nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>720-740nm - With a peak spectrum at 730nm, it is designed to exclusively target phytochrome far red photoreceptors in photomorphogenic lighting applications. This is used to lengthen the dark period to encourage the flowering process in short day plants.</p>
<p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, red peak is centered at 660nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>650-670nm - With a peak spectrum at 660nm, it is designed to exclusively target phytochrome red photoreceptors in photomorphogenic lighting applications. This is used to delay flowering in short-day plants.</p>
<p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, blue peak is centered at 400nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>400nm - With a peak wavelength of 400nm, UV 400nm is designed to provide beneficial photomorphogenic responses by creating a mild stress response in plants. When applied correctly, research shows increased THC content in cannabis plants. When applied incorrectly, research shows UV stress causes photoinhibition of chloroplasts, resulting in lower biomass production, photobleaching and death of leaves.</p>

CANNABIS

Cannabis requires light and darkness. This is necessary for inducing flowering. Cannabis will flower only when days are short as the plant's chemical signal begins to accumulate. In nature, we see this happen during the fall. In a controlled production setting, grow lights can be used to manipulate this chemical signaling to better control crop growth rates, yield, and other characteristics.

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LEDs may be manipulated to further control the development of the plant beyond just flowering times. Light spectra are important for controlling the plants perception of their environment and how much light they are receiving. The ratio of red to blue light is important for the plant's perception of where its leaves are and how much light they're receiving. If the ratio of blue to red increases, the plant perceives more intense light and will not "stretch" vertically as it grows. This will result in a very tight branching pattern, something that is desirable in some cases. A decrease in the blue to red ratio will have the opposite effect. Changes in light spectra have also been proven to manipulate cannabinoid, and THC levels.



LED Grow Light

High Efficacy >2.5μmol/J and up to 75% in energy savings available in 400W-600W configurations.

Replaces 1000-1200W dual-ended HPS and MH fixtures. Designed to provide large and uniform coverage, with minimal heat. Provides the largest coverage area (from an LED fixture) in the marketplace. Designed for wet/humid environments, reducing electrical and fire hazards. Delivers Full-Spectrum lighting. Customizable spectrum to achieve specific goals.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

- Horticulture

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Cold-forged housing (Black)
- Exceptional heat dissipation
- High grade thermal paste for optimal PCB to fixture cooling
- Weight: 12.3 Kg 27.12 Lbs
- Powder coat finish
- IP 65 – suitable for outdoor use
- Hydroponics system friendly
- Waterproof – for wet/humid environments

Optical Characteristics:

- Wide distribution primary optics (uniformity)
- Customizable spectrum

Electrical Characteristics:

- Input Voltage: 120 ~ 277 VAC or 180-527 VAC, 50/60 Hz
- Power Factor: >0.96 at full load
- THD = <20%
- Operating Temperature Range: -20 ~ +70C
- Built in 10kV protection
- Optional Surge Protection: 20kv/20kA
- 100,000 switching cycles

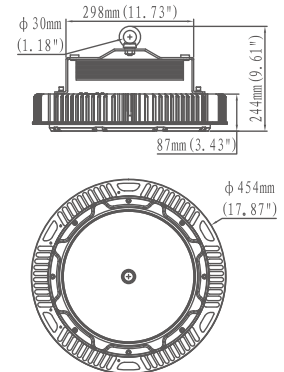
AUTHORIZED BY:

NAME:

DATE:

DIMENSIONS & WEIGHT

PRODUCT LINE	GRW-400/600
LENGTH (cm)	45.4
WIDTH (cm)	45.4
HEIGHT (cm)	24.4
NET WEIGHT (Kg)	9
PCS / CARTON	1
CARTON WEIGHT (Kg)	14



ORDERING INFORMATION

CNX-GRW		
PRODUCT TYPE	SPECTRUM	WATTAGE
CNX-GRW	467 – 457 – 456 – CST – CUSTOM	400 – 400 WATTS 600 – 600 WATTS

PRODUCT OPTIONS

INPUT VOLTAGE	ADDITIONAL SURGE PROTECTION	CONTROL
P1 – 120~277 VAC P2 – 180~527 VAC	20K – 20KV/KA (P2 ONLY) XXX – NO SURGE PROTECTION	CTR – CNX CONTROL DAL – 1-10V DALI ZIG – ZIGBEE XXX – NO CONTROL

ELECTRICAL DATA

SYSTEM WATTAGE	EFFICIENCY
400 WATTS	2.5μmol/J
600 WATTS	2.5μmol/J


SPECTRUM ANALYSIS (can be customized for desired response)

	<p>720-740nm - With a peak spectrum at 730nm, it is designed to exclusively target phytochrome far red photoreceptors in photomorphogenic lighting applications. This is used to lengthen the dark period to encourage the flowering process in short day plants.</p>
	<p>650-670nm - With a peak spectrum at 660nm, it is designed to exclusively target phytochrome red photoreceptors in photomorphogenic lighting applications. This is used to delay flowering in short-day plants.</p>
	<p>400nm - With a peak wavelength of 400nm, UV 400nm is designed to provide beneficial photomorphogenic responses by creating a mild stress response in plants. When applied correctly, research shows increased THC content in cannabis plants. When applied incorrectly, research shows UV stress causes photoinhibition of chloroplasts, resulting in lower biomass production, photobleaching and death of leaves.</p>

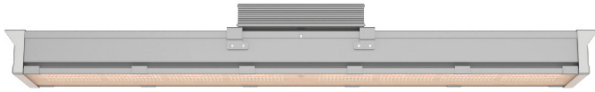
CANNABIS

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LED LINEAR GROW LIGHT SYSTEM



Linear Grow Light System

High Efficacy >2.7 μ mol/J and up to 75% in energy savings available in 400W-600W configurations.

Low-profile, shadow-free, commercial grade system designed to provide uniform coverage, with minimal heat. Extremely uniform light distribution suitable for greenhouses, traditional and vertical grow facilities. Designed for wet/humid environments, reducing electrical and fire hazards. Delivers Full-Spectrum lighting. Customizable spectrum to achieve specific goals.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

- Horticulture

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Extruded aluminum housing
- Light weight
- Exceptional heat dissipation
- High grade thermal paste for optimal PCB to fixture cooling
- Weight: 11.6 Kg (25.5 Lbs)
- Anodic oxidization finish
- IP 65 – suitable for outdoor use
- Hydroponics system friendly
- Waterproof – for wet/humid environments
- Suspended or surface mounted

Optical Characteristics:

- PC lenses
- Wide distribution primary optics (uniformity)
- Customizable spectrum

Electrical Characteristics:

- Input Voltage: 120 ~ 277 VAC or 180-527 VAC, 50/60 Hz
- Power Factor: >0.95 at full load
- THD = <20%
- Operating Temperature Range: -20 ~ +70C
- Built in 10kV protection
- Optional Surge Protection: 20kv/20kA
- 100,000 switching cycles

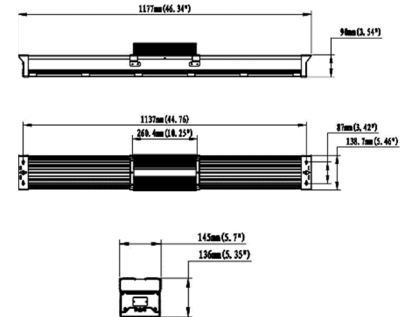
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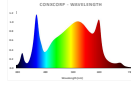
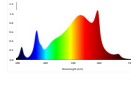
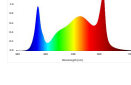

DATE:

DIMENSIONS & WEIGHT

PRODUCT LINE	LGR
LENGTH (cm)	117.7
WIDTH (cm)	13.8
HEIGHT (cm)	9.0
NET WEIGHT (Kg)	11.6
PCS / CARTON	1
CARTON WEIGHT (Kg)	12.68



ORDERING INFORMATION

PRODUCT TYPE	SPECTRUM	WATTAGE
CNX-LGR	 467 –  457 –  456 –  CST – CUSTOM	400 – 400 WATTS 600 – 600 WATTS

PRODUCT OPTIONS

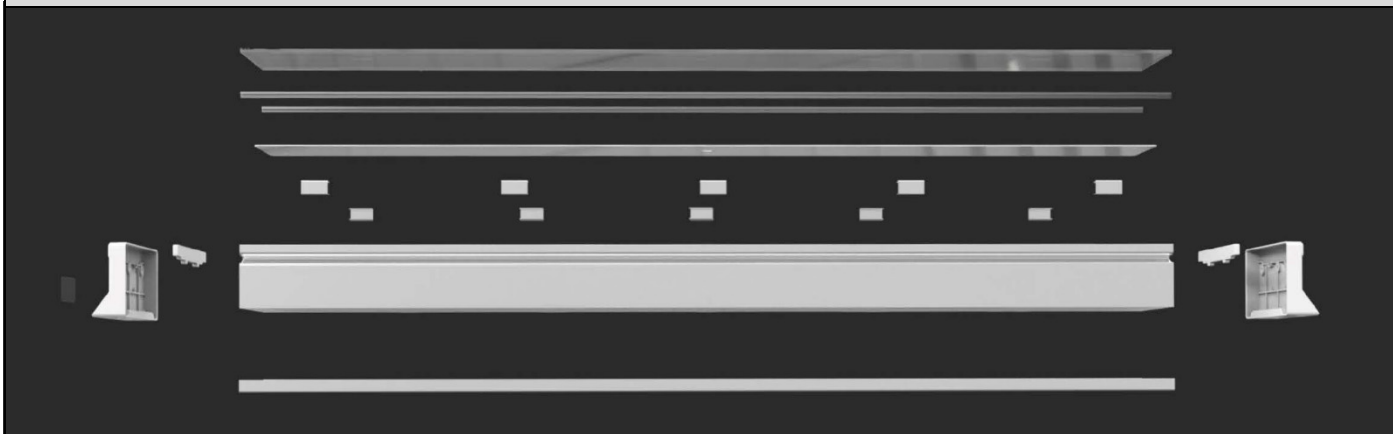
INPUT VOLTAGE	ADDITIONAL SURGE PROTECTION	CONTROL
P1 – 120~277 VAC P2 – 180~527 VAC	20K – 20KV/KA (P2 ONLY) XXX – NO SURGE PROTECTION	CTR – CNX CONTROL DALI – 1-10V DALI ZIG – ZIGBEE XXX – NO CONTROL

ELECTRICAL DATA

SYSTEM WATTAGE	EFFICIENCY
400 WATTS	2.7 μ mol/J
600 WATTS	2.7 μ mol/J



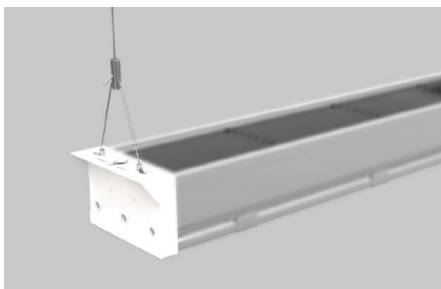
LINEAR SYSTEM



FLEXIBLE & SIMPLE INSTALLATION



BRACKET MOUNT



SUSPENSION MOUNT



SURFACE MOUNT


SPECTRUM ANALYSIS (can be customized for desired response)

<p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, dark red peak is centered at 730nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>720-740nm - With a peak spectrum at 730nm, it is designed to exclusively target phytochrome far red photoreceptors in photomorphogenic lighting applications. This is used to lengthen the dark period to encourage the flowering process in short day plants.</p>
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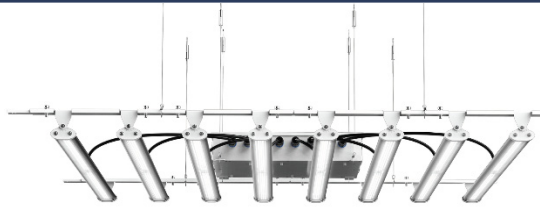
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Cannabis requires light and darkness. This is necessary for inducing flowering. Cannabis will flower only when days are short as the plant's chemical signal begins to accumulate. In nature, we see this happen during the fall. In a controlled production setting, grow lights can be used to manipulate this chemical signaling to better control crop growth rates, yield, and other characteristics.

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LEDs may be manipulated to further control the development of the plant beyond just flowering times. Light spectra are important for controlling the plants perception of their environment and how much light they are receiving. The ratio of red to blue light is important for the plant's perception of where its leaves are and how much light they're receiving. If the ratio of blue to red increases, the plant perceives more intense light and will not "stretch" vertically as it grows. This will result in a very tight branching pattern, something that is desirable in some cases. A decrease in the blue to red ratio will have the opposite effect. Changes in light spectra have also been proven to manipulate cannabinoid, and THC levels.

LED MODULAR GROW LIGHT SYSTEM



Modular Grow Light System

High Efficacy >2.6μmol/J and up to 75% in energy savings. 2 light-bar module available in 75W-100W/light-bar (150-200W/module).

Scalable, modular, commercial grade system allows for continuous, customizable lengths. Designed to provide uniform coverage, with minimal heat. Extremely uniform light distribution suitable for traditional and vertical grow facilities with minimal canopy to fixture distances. Designed for wet/humid environments, reducing electrical and fire hazards. Delivers Full-Spectrum lighting. Customizable spectrum to achieve specific goals.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

- Horticulture

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Extruded aluminum housing
- Exceptional heat dissipation
- High grade thermal paste for optimal PCB to fixture cooling
- Weight: 5 Kg (11 Lbs)
- Anodic oxidization finish
- IP 65 – suitable for outdoor use
- Hydroponics system friendly
- Waterproof – for wet/humid environments
- Suspended or surface mounted

Optical Characteristics:

- PC lenses
- Wide distribution primary optics (uniformity)
- Customizable spectrum
- Distributed physical footprint to overcome uniformity issues
- Adjustable tilt for light-bars

Electrical Characteristics:

- Input Voltage: 120 ~ 277 VAC or 180-527 VAC, 50/60 Hz
- Power Factor: >0.98 at full load
- THD = <20%
- Operating Temperature Range: -20 ~ +70C
- Built in 10kV protection
- Optional Surge Protection: 20kv/20kA
- 100,000 switching cycles

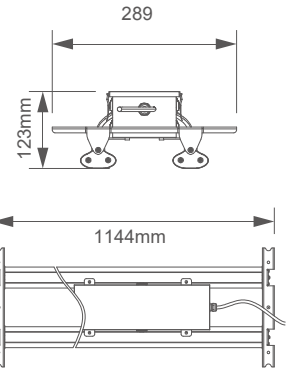
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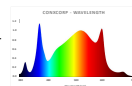
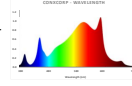
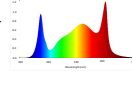
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DIMENSIONS & WEIGHT

PRODUCT LINE	MGR
LENGTH (cm)	28.9
WIDTH (cm)	114.4
HEIGHT (cm)	12.3
NET WEIGHT (Kg)	5
PCS / CARTON	1
CARTON WEIGHT (Kg)	8



ORDERING INFORMATION

CNX-MGR			
PRODUCT TYPE	SPECTRUM	WATTAGE/MODULE	QTY. OF MODULES
CNX-MGR	  	150 – 150 WATTS (75W/light-bar) 160 – 160 WATTS (80W/light-bar) 200 – 200 WATTS (100W/light-bar)	1 – 2 light-bars 2 – 4 light-bars 3 – 6 light-bars 4 – 8 light-bars
CST	CUSTOM		

PRODUCT OPTIONS

INPUT VOLTAGE	ADDITIONAL SURGE PROTECTION	CONTROL
P1 – 120~277 VAC P2 – 180~527 VAC	20K – 20KV/KA (P2 ONLY) XXX – NO SURGE PROTECTION	CTR – CONX CONTROL DAL – 1-10V DALI ZIG – ZIGBEE XXX – NO CONTROL

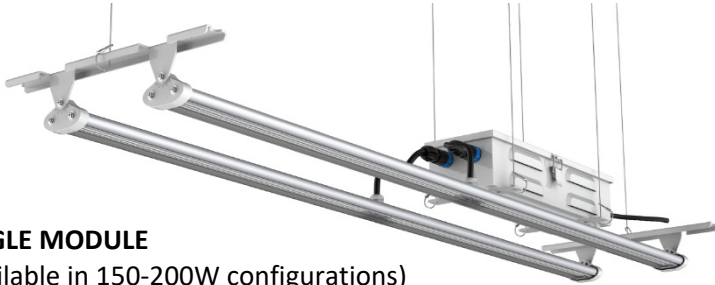
ELECTRICAL DATA

SYSTEM WATTAGE	EFFICIENCY
150 WATTS	2.6μmol/J
160 WATTS	2.6μmol/J
200 WATTS	2.6μmol/J



MODULAR SYSTEM

Every environment is different. In addition to varying light level requirements, the physical layout of the facility has a direct impact on light performance. Different surfaces have different reflective properties. Ceiling heights affect light distribution and uniformity. Growing apparatus footprints vary. These and other factors make it difficult to provide effective and uniform light values across the plants grow surface. Even sophisticated secondary optics have limitations. A low-profile, scalable system allows your lighting to adapt to your unique environment. With a larger physical footprint achieved via a distributed system, uniformity issues are avoided, resulting in better and more consistent product yields. The modular design allows for seamless, customizable, coverage areas.

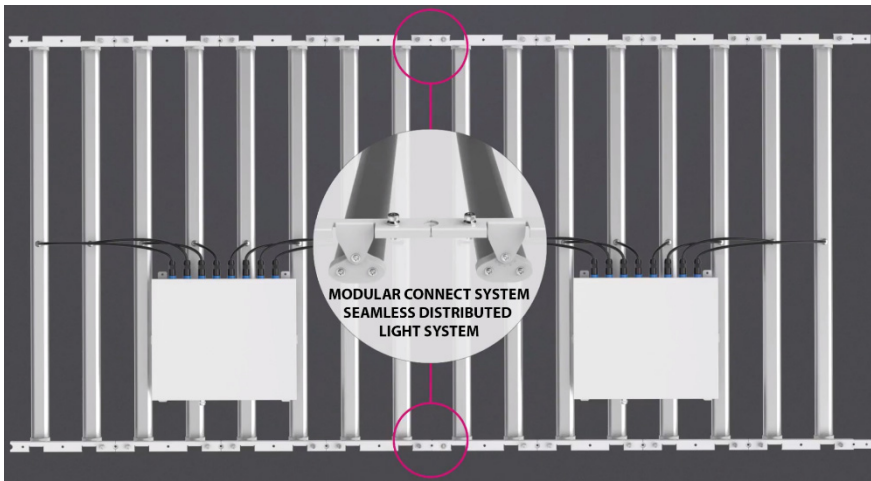


SINGLE MODULE

(available in 150-200W configurations)

Connectable in unlimited lengths. Max. of 4 modules/power supply

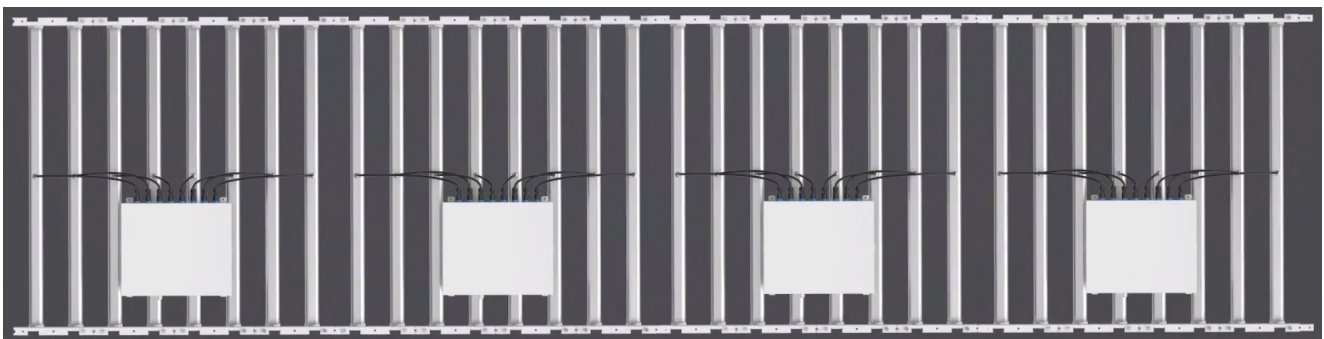
MODULAR LIGHT SYSTEM



QUICK & SEAMLESS CONNECTIONS



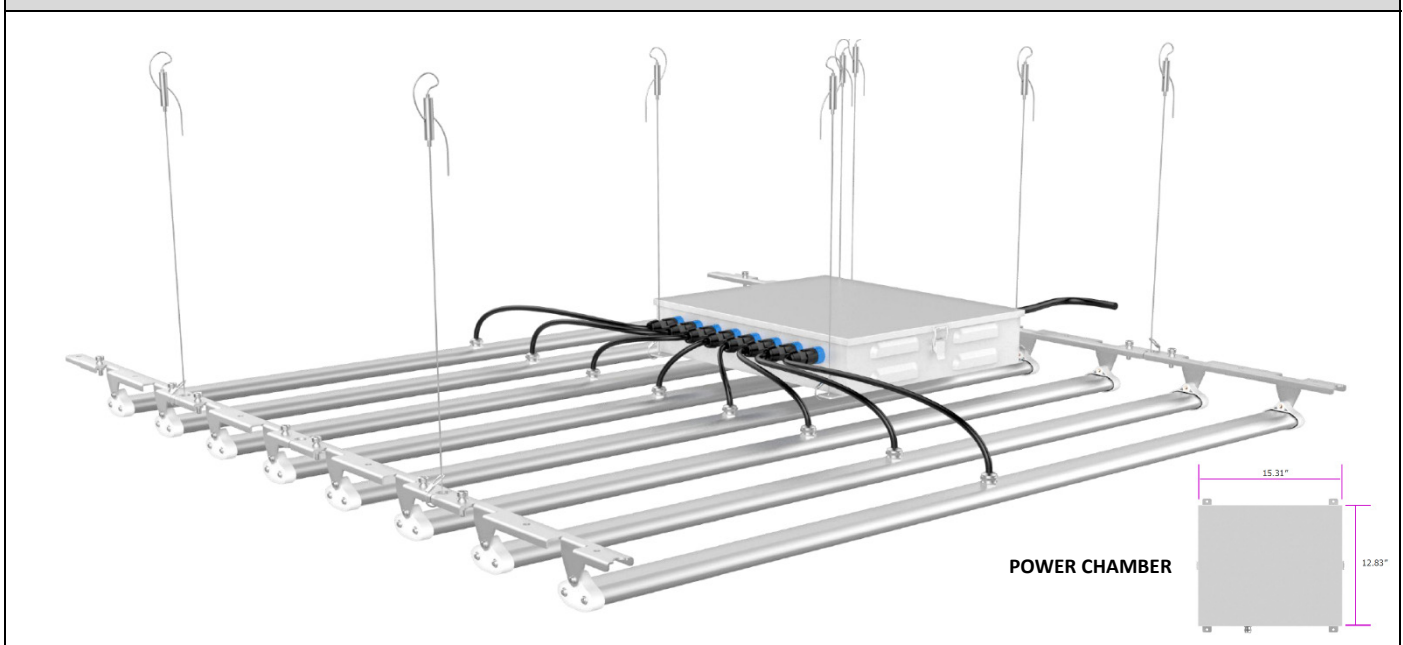
FLEXIBLE & CUSTOMIZABLE CONFIGURATIONS



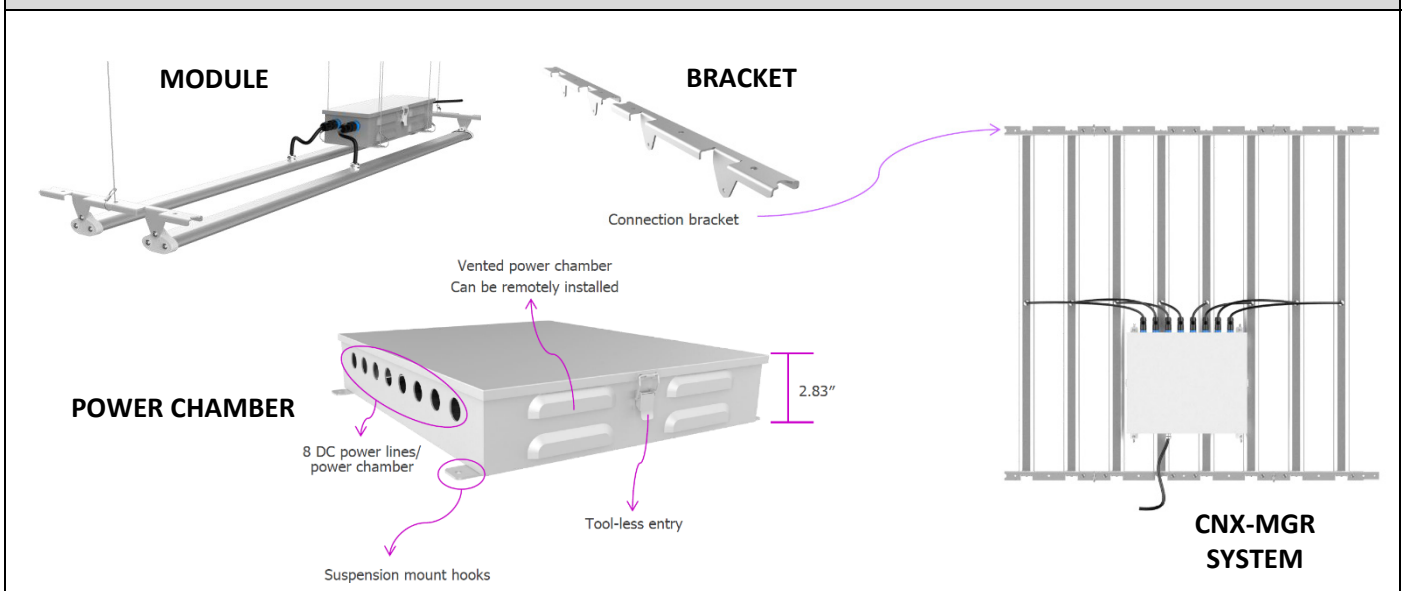
LED MODULAR GROW LIGHT SYSTEM



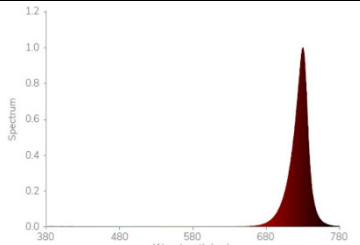
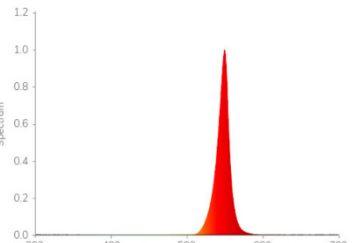
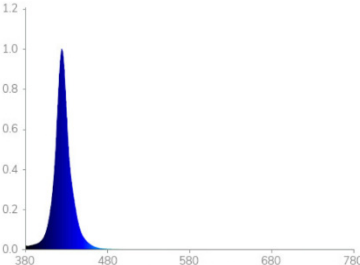
4 MODULE SYSTEM



FLEXIBLE & MODULAR



SPECTRUM ANALYSIS (can be customized for desired response)

 <p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, dark red peak is centered at 730nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>720-740nm - With a peak spectrum at 730nm, it is designed to exclusively target phytochrome far red photoreceptors in photomorphogenic lighting applications. This is used to lengthen the dark period to encourage the flowering process in short day plants.</p>
 <p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, red peak is centered at 660nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>650-670nm - With a peak spectrum at 660nm, it is designed to exclusively target phytochrome red photoreceptors in photomorphogenic lighting applications. This is used to delay flowering in short-day plants.</p>
 <p>A line graph showing the spectrum of light. The x-axis is labeled 'Wavelength (nm)' and ranges from 380 to 780. The y-axis is labeled 'Spectrum' and ranges from 0.0 to 1.2. A single, sharp, blue peak is centered at 400nm, reaching a height of approximately 1.0 on the spectrum scale.</p>	<p>400nm - With a peak wavelength of 400nm, UV 400nm is designed to provide beneficial photomorphogenic responses by creating a mild stress response in plants. When applied correctly, research shows increased THC content in cannabis plants. When applied incorrectly, research shows UV stress causes photoinhibition of chloroplasts, resulting in lower biomass production, photobleaching and death of leaves.</p>

CANNABIS

Cannabis requires light and darkness. This is necessary for inducing flowering. Cannabis will flower only when days are short as the plant's chemical signal begins to accumulate. In nature, we see this happen during the fall. In a controlled production setting, grow lights can be used to manipulate this chemical signaling to better control crop growth rates, yield, and other characteristics.

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LEDs may be manipulated to further control the development of the plant beyond just flowering times. Light spectra are important for controlling the plants perception of their environment and how much light they are receiving. The ratio of red to blue light is important for the plant's perception of where its leaves are and how much light they're receiving. If the ratio of blue to red increases, the plant perceives more intense light and will not "stretch" vertically as it grows. This will result in a very tight branching pattern, something that is desirable in some cases. A decrease in the blue to red ratio will have the opposite effect. Changes in light spectra have also been proven to manipulate cannabinoid, and THC levels.

LED UVA GROW LIGHT



LED UVA Grow Light

High Efficacy UVA supplemental lighting.

Low-profile, shadow-free, commercial grade system designed to provide supplemental UV lighting. Improves resin development and plant potency (typically used in late flowering stages). To protect itself from UV light, cannabis responds with increased resin production and with it, THC and CBD. Extremely uniform light distribution suitable for traditional and vertical grow facilities. Designed for wet/humid environments, reducing electrical and fire hazards.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Extruded aluminum housing
- Light weight + linkable
- Exceptional heat dissipation
- High grade thermal paste for optimal PCB to fixture cooling
- Weight: 1 Kg (2.2 Lbs)
- Anodic oxidization finish + powder coating
- IP 65 – suitable for outdoor use
- Hydroponics system friendly
- Waterproof – for wet/humid environments
- Suspended or surface mounted

Optical Characteristics:

- Quartz glass (up to 95% transference)
- 120 degree primary optics
- 315 ~ 400nm spectrum

Electrical Characteristics:

- Input Voltage: 120 ~ 277 VAC or 180-527 VAC, 50/60 Hz
- Power Factor: >0.90 at full load
- THD = <20%
- Operating Temperature Range: -0 ~ +40C
- Built in 6kV protection
- Optional Surge Protection: 20kv/20kA
- 100,000 switching cycles

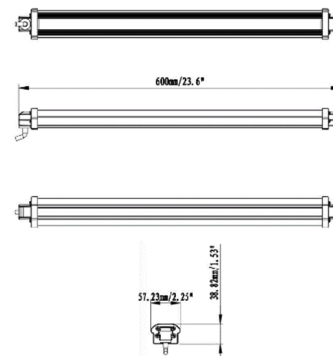
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DIMENSIONS & WEIGHT

PRODUCT LINE	UVA
LENGTH (cm)	60.0
WIDTH (cm)	5.72
HEIGHT (cm)	3.88
NET WEIGHT (Kg)	1
PCS / CARTON	8
CARTON WEIGHT (Kg)	10



ORDERING INFORMATION

CNX	UVA	030
PRODUCT TYPE	SPECTRUM	WATTAGE
CNX –		030 – 30 WATTS

PRODUCT OPTIONS

INPUT VOLTAGE	ADDITIONAL SURGE PROTECTION	CONTROL
P1 – 120~277 VAC P2 – 180~527 VAC	20K – 20KV/KA (P2 ONLY) XXX – NO SURGE PROTECTION	CTR – CONX CONTROL DAL – 1-10V DALI ZIG – ZIGBEE XXX – NO CONTROL

ELECTRICAL DATA & UV RADIATION

SYSTEM WATTAGE	UV RADIATION
30 WATTS	<p>UV-A Irradiance – 14,458 mW UV-B Irradiance – 0 mW UV-C Irradiance – 0 mW Irradiance for 250nm to 400nm – 14,458 mW Irradiance for 380nm to 780nm – 12,307 mW</p>

LED VERTICAL INTERLIGHTING GROW LIGHT SYSTEM



Vertical Interlighting Grow Light System

High Efficacy up to 3.0 $\mu\text{Mol/J}$. Scalable, modular, commercial grade vertical interlighting system. Designed to provide top to bottom, enhanced uniform coverage, for vine crops (tomatoes, cucumbers, peppers, etc.). Ideal for greenhouse, indoor farming, hydroponics and urban farming. Designed for wet/humid environments, reducing electrical and fire hazards. Optimized spectrums incorporating far red wavelengths for improved photosynthesis and yields. Customizable spectrum to achieve specific goals.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

- Horticulture

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Extruded aluminum housing
- Exceptional heat dissipation
- Weight: 1.45kg
- Anodic oxidization finish
- IP 65 – suitable for outdoor use
- Hydroponics system friendly
- Waterproof – for wet/humid environments
- IK07

Optical Characteristics:

- Single or dual sided light output
- Far red spectrum separately controllable
- PC lenses (transmission >90%)
- Wide distribution primary optics (uniformity)
- Customizable spectrum
- Form factor delivers top to bottom coverage
- Fixtures can be cleaned with pressurized water

Electrical Characteristics:

- Input Voltage: 100 ~ 277 VAC or 277-480 VAC, 50/60 Hz
- Power Factor: >0.95 at full load
- THD = <20%
- Operating Temperature Range: 0 ~ +50C
- Built in surge protection
- Optional surge protection up to 20kv/20kA

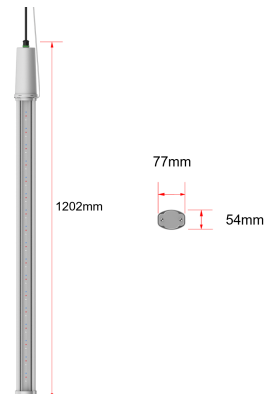
AUTHORIZED BY:

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DIMENSIONS & WEIGHT

PRODUCT LINE	VIG
LENGTH	120.2cm / 47.32"
WIDTH	7.7cm / 3.03"
HEIGHT	5.4cm / 2.13"
NET WEIGHT	1.45kg / 3.2lbs
PCS / CARTON	10
CARTON WEIGHT	20kg / 44.4lbs



ORDERING INFORMATION

CNX-VIG			
PRODUCT TYPE	SPECTRUM	WATTAGE	LIGHT DIRECTION
CNX-VIG	<p>IG1 —</p> <p>IG2 —</p> <p>CST — CUSTOM</p>	<p>40 – 40 WATTS</p> <p>CST – CUSTOM</p>	<p>SNG – SINGLE SIDED</p> <p>DUA – DUAL SIDED</p>

PRODUCT OPTIONS

INPUT VOLTAGE	FAR RED CONTROL	CONTROL
<p>P1 – 100~277 VAC</p> <p>P2 – 277~480 VAC</p>	<p>RCT – CONTROLLABLE</p> <p>XXX – FIXED</p>	<p>CTR – CNX CONTROL</p> <p>DAL – 1-10V DALI</p> <p>ZIG – ZIGBEE</p> <p>XXX – NO CONTROL</p>

ELECTRICAL DATA

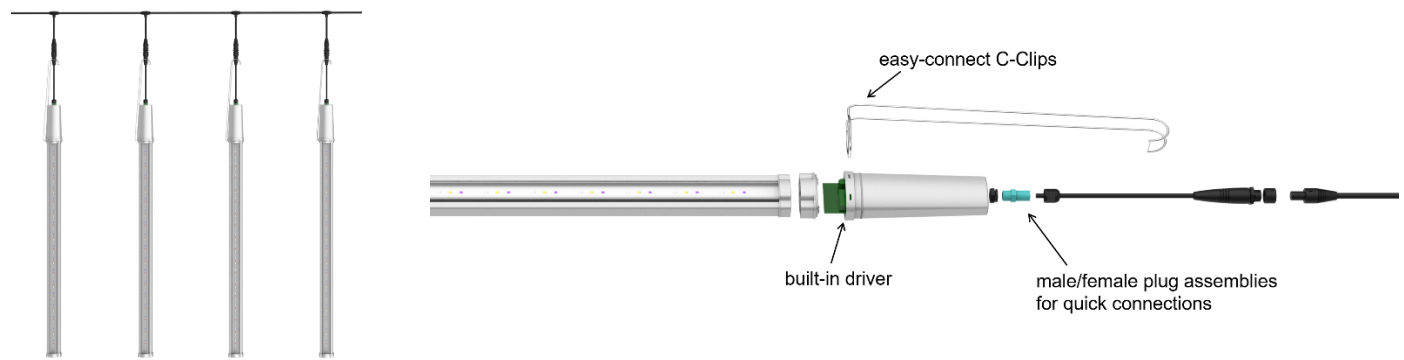
SYSTEM WATTAGE	EFFICIENCY
<p>40 WATTS</p> <p>36W (FULL SPECTRUM)</p> <p>4W (Far Red)</p>	<p>Up to 3.0$\mu\text{mol/J}$</p>

LED VERTICAL INTERLIGHTING GROW LIGHT SYSTEM

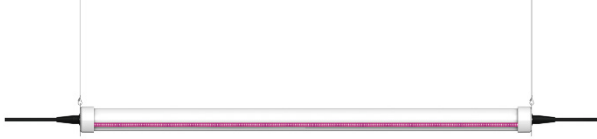


LIGHT DIRECTION		
		DUA – DUAL SIDED
		SNG – SINGLE SIDED
FORM-FACTOR CONSIDERATIONS		Horizontal interlighting Limited top-to-bottom light coverage
		Vertical interlighting Enhanced top-to-bottom light coverage

SPECTRUM ANALYSIS (can be customized for desired response)	
	IG1 - This spectrum is designed to nurture and support flowering. Red and far red wavelengths promote reproduction and flowering in vine crops. Spectrum peaks at 730nm, target phytochrome far red photoreceptors. This spectrum is used in photomorphogenic lighting applications, and lengthens the dark period to encourage the flowering process in short day plants.
	IG2 - This spectrum offers an enhancement in the 450nm peak wavelength to ensure the fastest vegetative growth results. The increased blue light promotes chlorophyll concentrations, total flavonoid concentration, and antioxidant capacity. Blue light also promotes primary and secondary metabolites in microgreens and baby leafy greens. Red light promotes plants flowering and producing fruit. It's also essential to a plant's early life for seed germination, root growth, and bulb development.



LED HORIZONTAL INTERLIGHTING GROW LIGHT SYSTEM



AUTHORIZED BY:

NAME:

DATE:

Horizontal Interlighting Grow Light System

High Efficacy up to 3.0 $\mu\text{mol}/\text{J}$.

Scalable, modular, commercial grade interlighting system allows for continuous, customizable lengths. Designed to provide uniform coverage, for vine crops (tomatoes, cucumbers, peppers, etc.). Ideal for greenhouse, indoor farming, hydroponics and urban farming. Designed for wet/humid environments, reducing electrical and fire hazards. Optimized spectrums incorporating far red wavelengths for improved photosynthesis and yields. Customizable spectrum to achieve specific goals.

Additional plug-ins available for data-mining & analytics.

APPLICATIONS

- Horticulture

PRODUCT SPECIFICATIONS

Construction Characteristics:

- Extruded aluminum housing
- Exceptional heat dissipation
- High grade thermal paste for optimal PCB to fixture cooling
- Weight: 3Kg (60W) / 6.8Kg (120W)
- Anodic oxidization finish
- IP 65 – suitable for outdoor use
- Hydroponics system friendly
- Waterproof – for wet/humid environments
- IK07

Optical Characteristics:

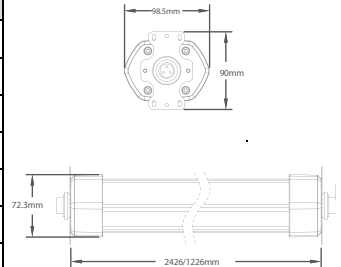
- PC lenses (transmission >90%)
- Wide distribution primary optics (uniformity)
- Customizable spectrum
- Dual-sided light output
- Fixtures can be cleaned with pressurized water

Electrical Characteristics:

- Input Voltage: 100 ~ 277 VAC or 277-480 VAC, 50/60 Hz
- Power Factor: >0.92 at full load
- THD = <20%
- Operating Temperature Range: 0 ~ +50C
- Built in 10kV protection
- Optional Surge Protection: 20kv/20kA

DIMENSIONS & WEIGHT

PRODUCT LINE	HIG
LENGTH (cm)	122.6/242.6
WIDTH (cm)	9.85
HEIGHT (cm)	9.0
NET WEIGHT (Kg)	3/6.8
PCS / CARTON	6/3
CARTON WEIGHT (Kg)	20/23



ORDERING INFORMATION

CNX-HIG			
PRODUCT TYPE	SPECTRUM	WATTAGE	POWER CABLE
CNX-HIG		<p>060 – 60 WATTS</p> <p>120 – 120 WATTS</p>	<p>PLG – STANDARD PLUG</p> <p>LNK – LINKABLE PLUG</p>

PRODUCT OPTIONS

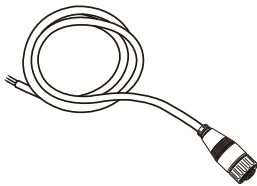
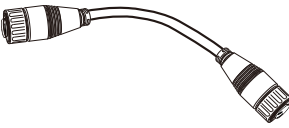
INPUT VOLTAGE	CABLE END	CONTROL
<p>P1 – 100~277 VAC</p> <p>P2 – 277~480 VAC</p>	<p>SNG – SINGLE END</p> <p>DUL – DUAL END</p>	<p>CTR – CNX CONTROL</p> <p>DAL – 1-10V DALI</p> <p>ZIG – ZIGBEE</p> <p>XXX – NO CONTROL</p>

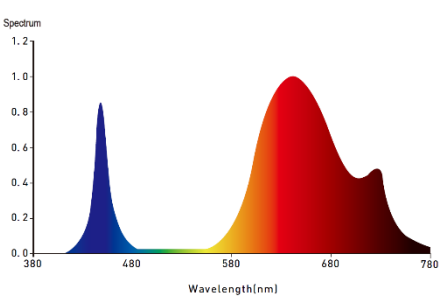
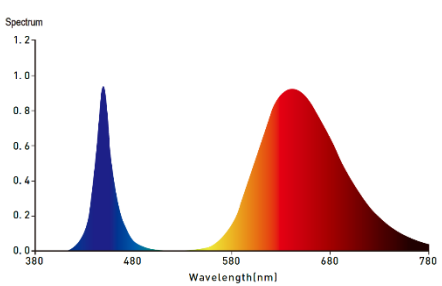
ELECTRICAL DATA

SYSTEM WATTAGE	EFFICIENCY
60 WATTS	Up to 3.0 $\mu\text{mol}/\text{J}$
120 WATTS	Up to 3.0 $\mu\text{mol}/\text{J}$

LED HORIZONTAL INTERLIGHTING GROW LIGHT SYSTEM



POWER CABLE OPTIONS	
	SNG – SINGLE ENDED
	LNK – LINKABLE PLUG

SPECTRUM ANALYSIS (can be customized for desired response)	
 <p>The graph shows a blue peak at approximately 430nm and a red peak at approximately 660nm. The x-axis is Wavelength(nm) from 380 to 780, and the y-axis is Spectrum from 0.0 to 1.2.</p>	<p>IG1 - This spectrum is designed to nurture and support flowering. Red and far red wavelengths promote reproduction and flowering in vine crops. Spectrum peaks at 730nm, target phytochrome far red photoreceptors. This spectrum is used in photomorphogenic lighting applications, and lengthens the dark period to encourage the flowering process in short day plants.</p>
 <p>The graph shows a blue peak at approximately 450nm and a red peak at approximately 660nm. The x-axis is Wavelength(nm) from 380 to 780, and the y-axis is Spectrum from 0.0 to 1.2.</p>	<p>IG2 - This spectrum offers an enhancement in the 450nm peak wavelength to ensure the fastest vegetative growth results. The increased blue light promotes chlorophyll concentrations, total flavonoid concentration, and antioxidant capacity. Blue light also promotes primary and secondary metabolites in microgreens and baby leafy greens. Red light promotes plants flowering and producing fruit. It's also essential to a plant's early life for seed germination, root growth, and bulb development.</p>

