



CALIFORNIA  
LIGHTWORKS

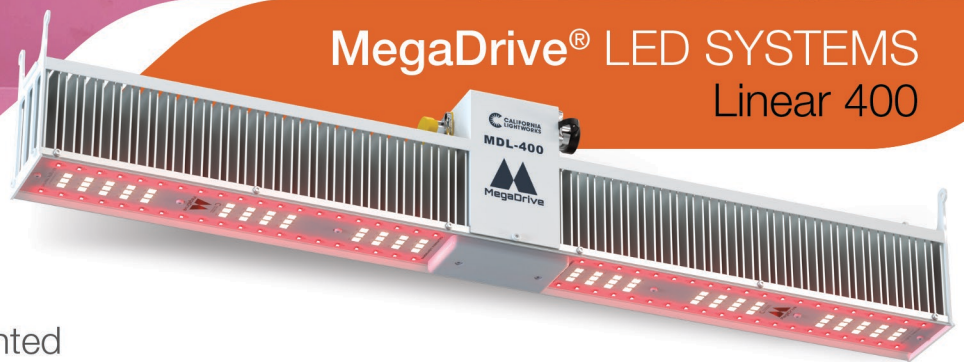
**VIREX**  
HORTICULTURE LED SOLUTIONS

Indoor

Multi-Level

Greenhouse

MegaDrive® LED SYSTEMS  
Linear 400



Horticultural Lighting – Reinvented

# MEGADRIE

CENTRALIZED POWER  
LED SYSTEMS



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# CALIFORNIA LIGHTWORKS

Advanced Design, Engineering and  
Manufacturing of Horticultural Lighting in  
California Since 2008

Since 2008, California Lightworks has been designing, manufacturing, and servicing high quality commercial LED lighting systems for horticulture - all made in our factory in Southern California. From initial light plans and layouts to system designs to installation and after sales service, we handle your lighting project from beginning to end.

Unlike most of our competitors who produce entirely in Asia or merely assemble imported Asian parts, California Lightworks designs and manufactures our own drivers, circuit boards, controllers and fixture components, assuring the highest performance and reliability on the market.

All lighting systems are custom designed for the specific crops and applications based on advanced computer light simulations and layouts.



## DESIGNED WITH YOUR SUCCESS IN MIND

At California Lightworks, we work directly with growers worldwide to provide optimal lighting solutions for increased yield, better quality crops, and lower operating costs.

## NEXT GENERATION LED LIGHTING SYSTEMS

Rather than just producing LED light fixtures, we take a systems approach which tailors each lighting network to the individual application and crop. This includes custom computer-designed light plans, power usage analysis, optimal wiring layouts for each installation, electrical cables, hanging hardware and installation plans. We take a lighting project from beginning to end which includes close coordination with growers, electricians, financing, energy rebates and after sales service support.

## BETTER GROWTH THROUGH TECHNOLOGY

Since our beginning in 2008, California Lightworks has focused on advanced technology to improve performance and reduce costs. This has led to significant advances in variable spectrum control, wireless communications, advanced lighting controls, automated photo sensor controls and our patented MegaDrive Centralized Power Supply LED System.





# Horticultural Lighting Re-Invented

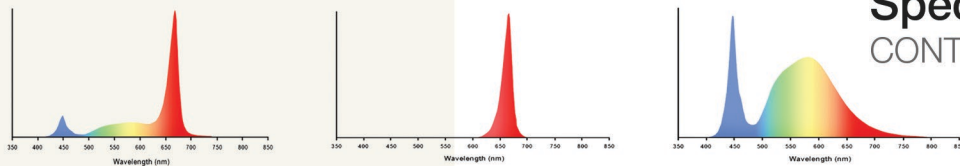
# MegaDrive®

## CENTRALIZED POWER LED SYSTEMS

The new MegaDrive Series from California Lightworks represents a bold new direction in horticultural lighting. We removed the individual drivers from the LED fixtures and consolidated these into a centralized 10,000-watt power supply which can be located outside of the grow space.

This results in many significant advantages over traditional greenhouse lighting systems:

-  Lower Fixture Cost - All expensive electronics are removed from the fixtures
-  Lower Operating Costs - Industry leading efficiency and photo sensor controls
-  Plug and Play Solution - System includes LED fixtures, Electrical Cables, and Hanging Hardware
-  Less Heat - Central power units can be installed outside of the grow area
-  Lower Installation Cost - No power drops over the canopy
-  Water Resistant - Environmentally sealed with no sensitive electronics in the fixtures
-  Better Controls - Two channel dimming and spectrum control - touch screen or wireless controllers
-  Better Reliability - Industrial grade surge protection and fan cooled electronics
-  Less Shadow Effect - Slim linear fixtures and no drivers over the canopy to block the sun



Two Channel  
**Spectrum**  
CONTROL/DIMMING

Run up to  
27 lights  
on a single  
power  
drop



# MegaDrive® Greenhouse Lighting

## A Quantum Leap in Greenhouse Lighting Technology

The New MegaDrive® Linear 400 is specifically designed for supplemental lighting in greenhouses. It features a very small shadow effect yet covers a large area. The Linear 400 is chainable and as many as 27 lights can be run from a single power drop to save on installation costs. It also features wireless two-channel spectrum control and integrates with a wireless photo sensor for automated dimming depending on the amount of sunlight available. The Linear 400 uses passive cooling with no fans and has an IP rating of 65. Draws 380W with up to 3.5  $\mu$ Moles/J efficacy.



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## MegaDrive® Linear 400 Model MDL-400



### NEW PATENTED CENTRAL POWER SUPPLY DESIGN

- No Power Drops Over The Canopy
- Reduced Fixture Cost by 30%
- Reduced Installation Cost by up to 80%
- Multiple Control Options
- Optimal Light Levels
- Reduced Shadow Effect
- Lowest Energy Consumption
- Industrial-Grade Surge & Over-voltage Protection
- Award Winning Support

Remote 10K driver reduces installation cost by 80% and allows for industrial-strength power-quality protection.

2-Channel Sequential Dimming optimizes mixed-light spectrum resulting in increased flower density and shelf appeal

Eliminating the driver in the light fixture reduces the shading coefficient below any light with integrated drivers.





Features minimal shadow effect

Eliminates power drops or electrical wiring over the canopy

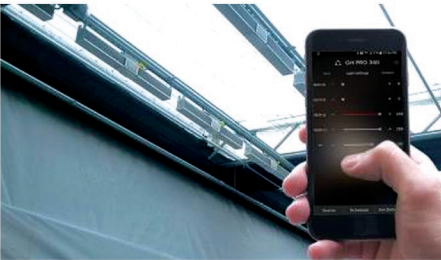
Chainable – As many as 27 fixtures can be chained from a single power drop

Integrates with a wireless photo sensor for automated dimming

Optimal spectrum for maximum yield in flowering crops

## Multi Channel Spectrum Control

Digital two channel spectrum control provides the optimum light levels and spectrum under all growing conditions. MDL400 is optimized for flowering crops with a heavy intensity in deep red which drives maximum yield.



MegaDrive® Linear 400 Dual  
Model MDL-400 Dual



## Chain up to 27 MDL fixtures

Our groundbreaking MegaDrive technology eliminates the need for drivers and electrical power connections over the canopy thus reducing both fixture and installation costs.

## Up to 3.5 uMoles/j Industry-leading Efficacy

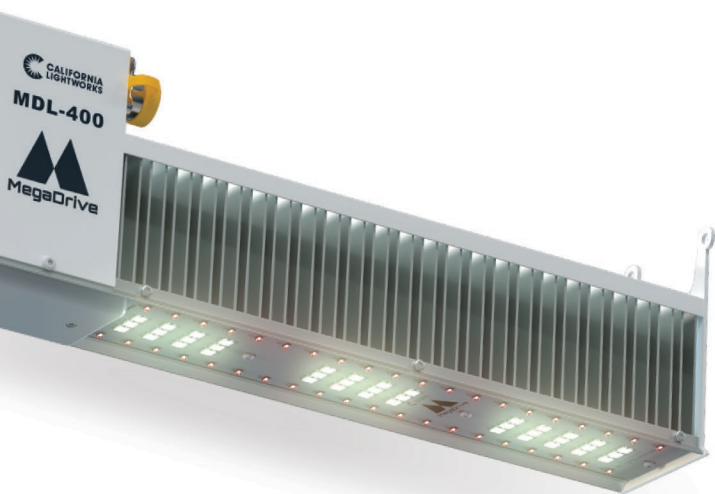
Higher efficiency equals more light with less power – reducing operating costs.





# MegaDrive<sup>®</sup> Indoor Lighting

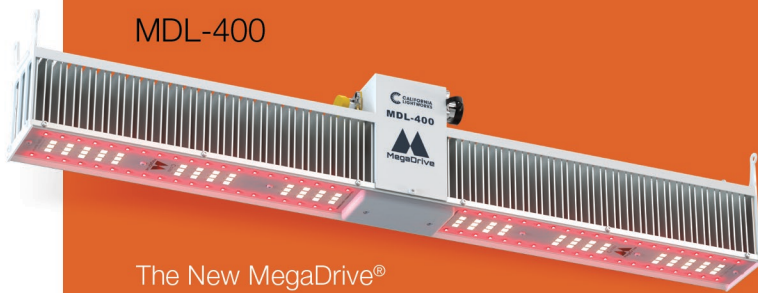
Take Your  
**Indoor Grow** to  
the Mega Level



## MegaDrive<sup>®</sup> LINEAR SERIES

Linear 400

MDL-400



The New MegaDrive<sup>®</sup> Linear 400 is designed to replace HPS lights in indoor applications. The Linear 400 is chainable and as many as 27 lights can be run from a single power drop to save on installation costs. It also features wireless two-channel spectrum control and integrates with a wireless photo sensor for automated dimming. The Linear 400 uses passive cooling with no fans and has an IP rating of 65. Draws 400W with up to 3.5  $\mu$ Moles/J efficacy.

### NEW PATENTED CENTRAL POWER SUPPLY DESIGN

- Reduced Fixture Cost by 30%
- Reduced Installation Cost by up to 80%
- Multiple Control Options
- Optimal Light Levels
- Lowest Energy Consumption
- Award Winning Support



**MegaDrive<sup>®</sup>**  
MDL-400 DUAL  
800 Watts

**27**  
lights

CAN BE RUN FROM A  
SINGLE POWER DROP TO SAVE  
ON INSTALLATION COSTS.









# MegaDrive® Vertical Series

Discover unparalleled results from our groundbreaking MegaDrive technology which eliminates the need for drivers and electrical power connections over the canopy thus reducing both fixture and installation costs. The new Megadrive Vertical Series reduces fixture costs and improves operating efficiencies with up to 3.5 uMoles/J efficacy. Available in 400, 600, or 800-watt versions.

## Take Your Vertical Grow to the Mega Level

The New MegaDrive Vertical Series is designed for multi-level or single-level indoor growing. The Vertical Series is chainable, and as many as 27 lights can be run from a single power drop to save on installation costs and eliminate heat from the grow room. It also features programmable two-channel spectrum control to ensure optimum lighting in all phases of growth. Best of all, the new Megadrive Vertical Series reduces fixture costs and improves operating efficiencies with up to 3.5 uMoles/J efficacy. Available in 400, 600, or 800-watt versions.



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## MegaDrive® VERTICAL SERIES Vertical 400, 600 & 800



The new MegaDrive Vertical Series is designed to replace HPS lights or operate in tight spaces such as on shelves. The vertical series is chainable and up to 27 fixtures can be run from a single power drop to save on installation costs and eliminate heat from the grow space. It also features programmable two-channel spectrum control which allows veg and flower using the same fixtures. The Vertical Series is available in 400, 600 or 800 watts and has an IP rating of 65. High efficiency LEDs – up to 3.5 uMoles/J.”

### NEW PATENTED CENTRAL POWER SUPPLY DESIGN

- Reduces Fixture Cost by 30%
- Reduces Installation Cost by up to 80%
- Best Spectrum for all Grow Phases
- Reduces Heat Over the Canopy
- Lowest Energy Consumption
- Award Winning Support





Remote 10K driver reduces installation cost by up to 80% and allows for industrial-strength power surge protection.

2 channel programmable spectrum control optimizes light levels and maximizes yield and quality.

Eliminating the driver in the light fixture reduces heat in the shelves and in the grow room.

## Multi Channel Spectrum Control

Digital 2 channel spectrum control provides the optimal light levels and spectrum under all growing conditions. The MegaDrive Vertical Series is optimized for flowering crops with a heavy intensity in deep red which drives maximum yield.

## Chainable Design

Our groundbreaking MegaDrive technology eliminates the need for drivers and electrical power connections over the canopy thus reducing both fixture and installation costs. Run up to 27 lights from a single power drop.

## Up to 3.5 $\mu\text{Moles}/\text{J}$ Industry-leading Efficacy

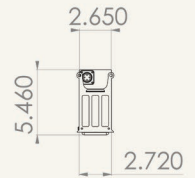
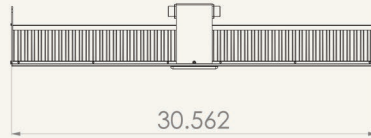
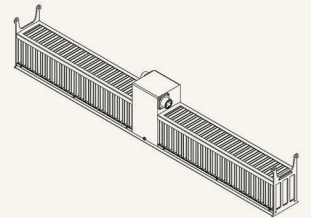
Industry leading efficiency means more light with less energy resulting in lower operating costs and higher returns on investment..

## Replacing HPS

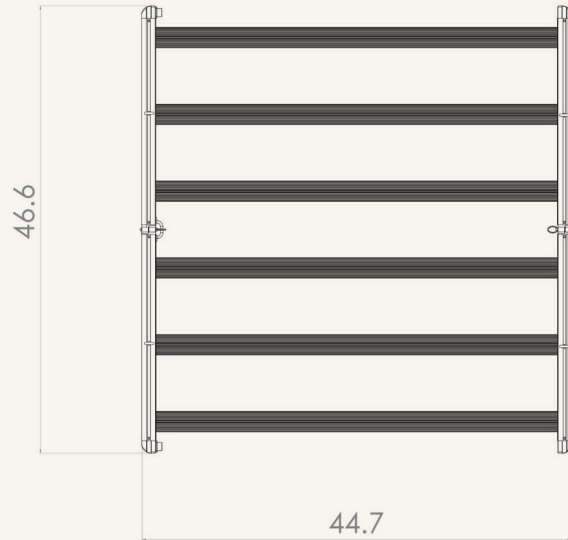
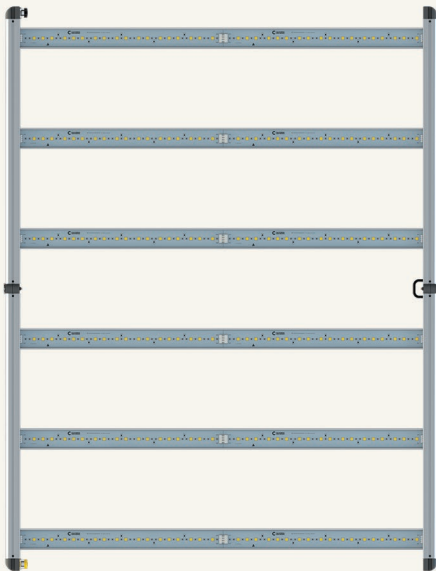
A high efficiency LED system will provide the same amount of light as traditional HPS or MH fixtures with less than half the energy and heat.



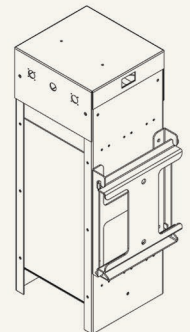
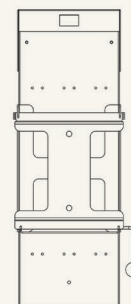
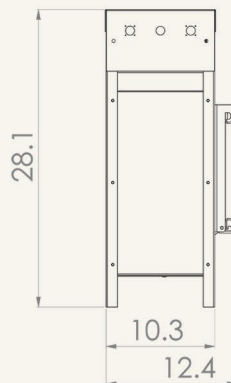
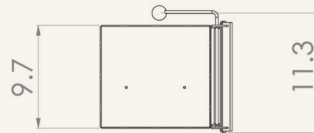
**MegaDrive® Linear 400**  
Model MDL-400



**MegaDrive® Vertical Series**  
Model MDV-400, 600 & 800



**MegaDrive® Power Unit**  
MDP-10KW





# Specifications

## FIXTURES

### Linear 400

Model	MDL-400	MDL-400 DUAL
Nominal Wattage Per Fixture	400	800
Operating Temperature	0-40° C (32-107° F)	
Dimensions	30.6" X 3.1" X 5.5"	30.6" X 10" X 5.5"
Weight	7.2 LBS	14.4 LBS
LED Lifetime Rating (L90)	>100,000 HOURS	
Warranty	5 YEARS	
Thermal Management	PASSIVE	
Dimming	0-100%	
Spectrum Control	2 CHANNEL 0-100%	
Light Output (PPF)	1050 µMoles/s	2100 µMoles/s
Efficacy	Up to 3.5 µMoles/J	
Heat Output	1365 BTU	2730 BTU
Safety Compliance	UL 8800, CAN/CSA-C22.2 No. 250.13	
Fixtures Per Power Supply	12-27	6-13

### Vertical Series

Model	MDV-400	MDV-600	MDV-800	MDV-800 XL
Nominal Wattage Per Fixture	400	600	800	800
Operating Temperature	0-40° C (32-107° F)			
Dimensions	46.5" x 45" x 1.25"	46.5" x 45" x 1.25"	46.5" x 45" x 1.25"	56" x 45" x 1.25"
Weight	14.9 lbs	14.9 lbs	14.9 lbs	18 lbs
LED Lifetime Rating (L90)	>100,000 HOURS			
Warranty	5 YEARS			
Thermal Management	PASSIVE			
Dimming	0-100%			
Spectrum Control	2 CHANNEL 0-100%			
Light Output (PPF)	1,050 µMoles/s	1,850 µMoles/s	2,470 µMoles/s	2,470 µMoles/s
Efficacy	Up to 3.5 µMoles/J			
Heat Output	1,365 BTU	2,040 BTU	2,720 BTU	2,720 BTU
Safety Compliance	UL 8800, CAN/CSA-C22.2 No.250.13			
Fixtures Per Power Supply	12-27	8-16	6-12	6-12

## MegaDrive® POWER UNIT

MEGADRIVE 10KW POWER SUPPLY	480V	347V	240V	240V	208V
	3 PHASE	SINGLE PHASE	3 PHASE	SINGLE PHASE	3 PHASE
Total Power Supply Watts	<b>10,000</b>				
Maximum Current	12.25A	29A	25A	45A	28.3A
Chainable # of Fixtures	8 to 27				
Power Factor	> 0.95				
Frequency	50-60 Hz				
Operating Temp	0-40°C (32-107°F)				
Dimensions	32" X 10" X 10.5"				
Weight	62 LBS - 72 LBS				
Warranty	5 YEARS				
Thermal Management	ACTIVE				
Safety Certifications	UL, cUL E519648: UL 8800, CAN/CSA -C22.2 No. 250.13, CE				
Data Connection	0-I0V, RS-232				
Spectrum Control	2 CHANNEL 0-100%				
Service Life	> 50,000 Hrs				





Greenhouse

Multi-Level

Indoor



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