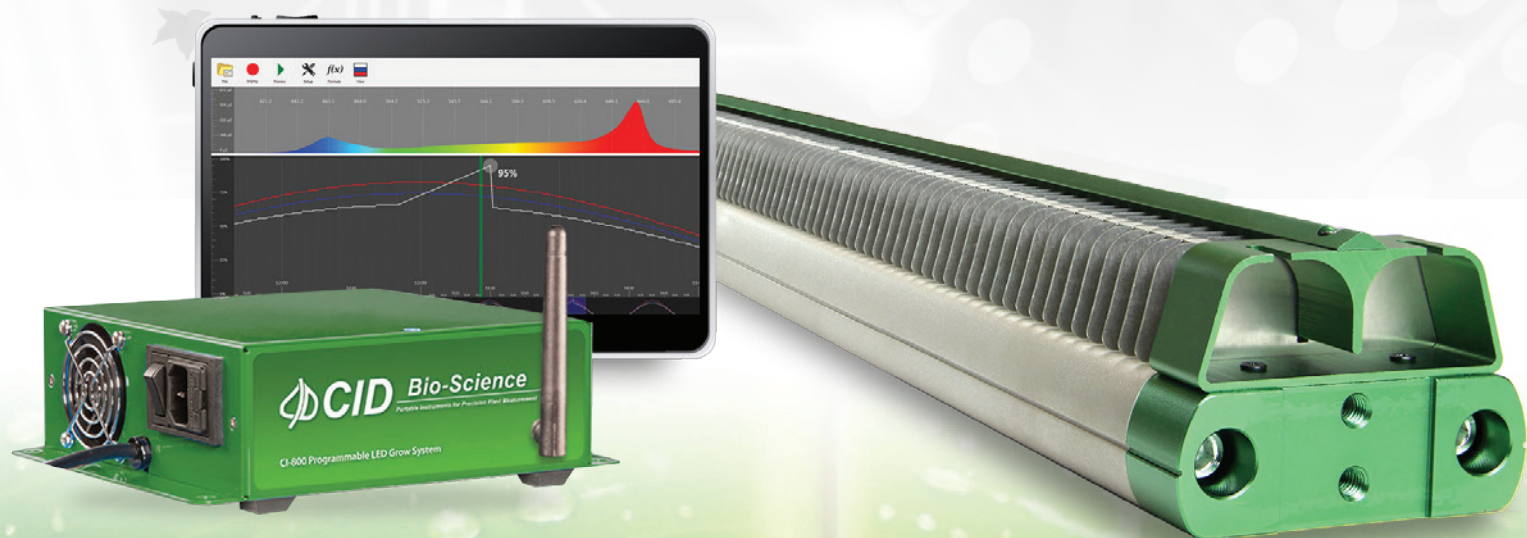


CI-800 Programmable LED Experimentation System



Introduction

The CI-800 is a programmable LED plant growth lighting system. It is typically ideal for use in plant growth rooms, and in retrofits of environmental growth chambers. It replaces fluorescent lighting designed for general illumination rather than plant growth. Strong on blue light, but weak in the critical red region, fluorescent tubes do not deliver targeted light for plant growth.

Photosynthetically Active Radiation (PAR) is supplied by LEDs with spectral output matching the absorption peaks of blue and red photoreceptors. Supplemental white LEDs are also integrated into the light bar. The blue and red intensities can be independently controlled with the supplied LightSnap!© software. Experimental or for routine plant growth light recipes can be uploaded to the control unit via Wi-fi.

✓ Control

Easily schedule light recipes with LightSnap! ©

✓ Efficiency

Consume less energy.
Produce less waste.

✓ Precision

Targeted output and calibrated intensity for Blue (450-474nm), Red (635-660nm), and White (400-700nm) light.

Features

- ✓ Provides stable plant growth lighting for repeatable photomorphogenic responses
- ✓ Programs experiment-specific lighting regimens
- ✓ Bright output: Superior red and equivalent blue output to that of six T5 fluorescents or fourteen T8 fluorescents
- ✓ Mercury free, no hazardous waste disposal
- ✓ Simple, easy to use Wi-fi lighting control interface
- ✓ Durable construction, long-life 50,000 hour solid-state LED's

What's in the Box

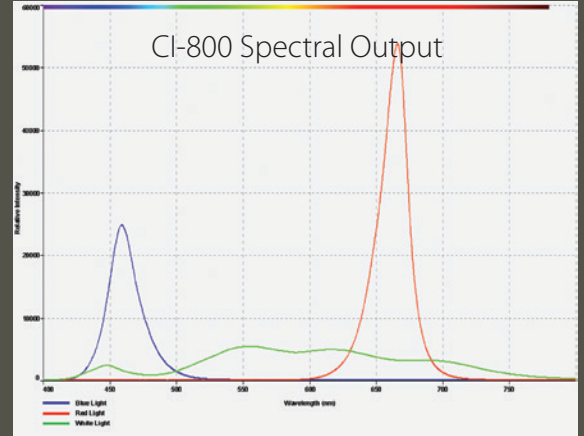
- ✓ LED light bar
- ✓ Wi-Fi control module
- ✓ LightSnap!© software CD
- ✓ Operations manual
- ✓ Quick-start guide
- ✓ Mounting brackets



Applications

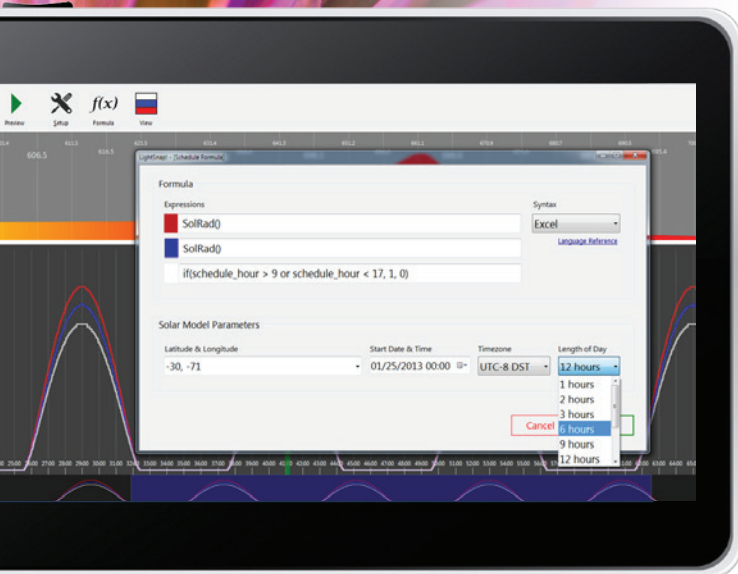
The CI-800 provides consistent, controllable, cool LED lighting for many applications. The bright red and blue LEDs, target photoreceptors that drive photosynthesis and photomorphogenesis. Factorial experiments can easily be programmed with LightSnap!© to characterize responses to daylength, red:blue ratios, light intensity, and their interactions. These experiments yield information about optimal lighting for crop production, time-to-flowering, or yield specific phenotypes.

The CI-800 is also an ideal lighting system for routine plant raising. The light bar is designed to be conveniently installed in multilayer production systems -- such as those used in Arabidopsis growth rooms -- replacing inefficient fluorescent fixtures. Shelving installation is easy with the provided mounting brackets. Lower heat output also will help prevent medium dehydration and water condensation in tissue culture applications. Retrofitting environmental growth chambers with LEDs is also a popular option because of lower heat output and improved lighting characteristics. Seedling propagation and seedling storage are other possible uses for the CI-800.



CI-800 with LightSnap!©

- ✓ Targeted output in the red and blue range of PAR
- ✓ LightSnap!© Software – intuitive and easy to use
 - a. Program the controller from your computer via Wi-fi
 - b. Control Spectral Output (Blue, Red and White)
 - c. Customize lighting recipes
 - d. Simulate solar radiation for specific geographic coordinates and times of year
- ✓ SmartVolt auto-switching and regulating power supply adjusts to appropriate voltage for international use
- ✓ Uniform lighting coverage: 18 x 48 inches (46 cm x 122 cm) of growing surface at one foot (31 cm) above plant height
- ✓ Well suited for the cultivation of Arabidopsis and algae
- ✓ Ideal for touch-screen computers and Windows enabled tablets



Specifications

CI-800 Programmable LED Experimentation System

Operating Voltage	90-264 VAC (auto-switching; 5A max/2.5A max)
Operating Frequency	50 Hz to 60 Hz
Typical Energy Consumption	200 Watts
Weight	7 lbs fixture/3 lbs controller (3.2 kg/1.4 kg)
Dimensions	2-7/8"W x 48-3/4"L x 2-1/2"H
Operating Temperature	-4° F to 140° F (-20° C to 60° C)
Lifespan	50,000 hours
High Power Factor	> 0.95
PAR output	350 $\mu\text{mol} \cdot \text{m}^{-2} \cdot \text{sec}^{-1}$ at one foot (31 cm)
Beam angle	60 degrees
Uniform lighting coverage	18 x 48 inches of growing surface at one foot above the plant material
LEDs	5-Watt rated at 50,000 hours lifetime with a 15-18% drop in spectral intensity



CID Bio-Science, Inc.

Phone: (360) 833-8835
Toll Free: 1-800-767-0119
Fax: (360) 833-1914
Email: sales@cid-inc.com

1554 NE 3rd Ave
Camas, WA 98607 USA
www.cid-inc.com