



The leader in smart horticultural lighting.



**“Our decision to go with LumiGrow was based on **cost** and **light quality**.”**

— Casey Seals  
Greenhouse Operations Manager, University of Wyoming



## LumiBulb-Red (660nm) / LumiBulb-Far Red (740nm)

### Red and Far Red Solutions for Plant Growth and Cyclic Control

Replace the incandescent bulbs in your environmental control chambers and greenhouses with LumiGrow's LumiBulb lamps to provide plants with Red (660nm) and Far Red (740nm) while using 75% less energy. Until now, these essential colors were provided by energy-inefficient bulbs and spectral filters. Governments worldwide are banning the use of these wasteful lights, accelerating the need for a cost-effective and energy-efficient replacement.

### Retrofit Your Growth Chambers

The screw-in LumiBulb LED lamps are the ideal replacement to incandescent bulbs, compact fluorescents (CFLs) and spectral filters. Lasting 10-20 times longer than a standard bulb without degradation, the LumiBulb solutions provide years of maintenance-free savings.

### Simple Installation and Operation

The LumiBulb products require no custom configuration and work in existing light sockets (E26 base). Experts at LumiGrow can help you determine your lighting requirements based on factors including crop variety, growing environment, daily light integral and research application. Typical lifetime savings are over 4000 kilowatt-hours of energy per bulb. In addition, they produce no infrared, so cooling requirements are dramatically reduced compared to wasteful incandescent and CFL lights.

### How It Works

LumiBulb LED bulbs provide the action spectrum of light needed for phytochrome responses, efficient photosynthesis and healthy flower induction. The 17-Watts of Light Emitting Diodes (LEDs) provide precise, narrow bandwidths in Red (660nm) and Far Red (740nm) for plant growth and development.

### LumiBulb-Red (660nm)

Supplement fluorescent or metal halide fixtures and replace your incandescent bulbs. Pure concentrated 660nm red light targets plants' primary photosynthetic response. Regardless of the indoor lighting you use now, the LumiBulb-Red will improve your results.

### LumiBulb-Far Red (740nm)

Control your plants' photomorphogenic responses and photoperiods with LumiGrow's pure far red bulb. Research scientists and growers use the LumiBulb-FarRed in a variety of applications that involve cyclic control including:

- Phytochrome Research
- Seed Germination
- Chloroplast Development
- Elongation Studies
- Plant Growth Regulation
- Flower Induction
- End-of-Day Responses
- Leaf Senescence

### Applications

- Growth Chambers
- Greenhouses
- Growth Shelves
- Lab Benches



**Boost healthy crop yields and cut electrical costs.**

Contact **LumiGrow (800) 514-0487** [www.lumigrow.com](http://www.lumigrow.com)

## Key Features

### Maximum Light Density Delivers Concentrated Growing Power

- Coverage: 2-4 square feet
- 5-Watt super-flux LEDs

### Thermal Management Provides Long-Lasting Performance

- Runs 70% cooler than incandescent lighting
- Heat fins keep LEDs running cool
- Operates safely without high voltage

### Energy Efficiency Reduces Your Costs

- Uses 75% less power than the equivalent 100-Watt incandescent bulb
- Energy-efficient. Avoid high heating loads and the associated cooling costs.
- Eligible for energy utility rebates

### Make the Environmentally Responsible Choice

- RoHS compliant
- Mercury and lead free
- Long lasting

### Gain Control at Your Fingertips

- Dimmable with standard dimmers
- Compatible with automated control systems

### Installs and Operates Simply

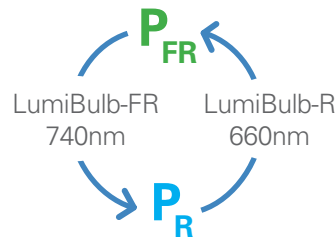
- Simple to retrofit. Screws into existing incandescent light sockets (E26 Base).

### Built to Last

- Solid aluminum cooling fins
- Lasts 10-20 times longer than standard bulbs
- UL, cUL, FCC approved
- 3-year warranty
- Designed and built in USA

## Technical Specifications

Operating Voltage	110 V <sub>AC</sub> (240 V <sub>AC</sub> available)
Operating Frequency	50Hz-60Hz
Typical Energy Consumption	17 Watts
Socket	Edison Type 26 (E26)
Weight	1 lb
Operating Temperature	- 20° C to 60° C (- 4° F to 113° F)
Lifespan	50,000 hours
Lumen Maintenance	Average > 70% at T <sub>a</sub> 25° C (77° F)
Dimensions	120 mm x 120 mm (4.7 in x 4.7 in)



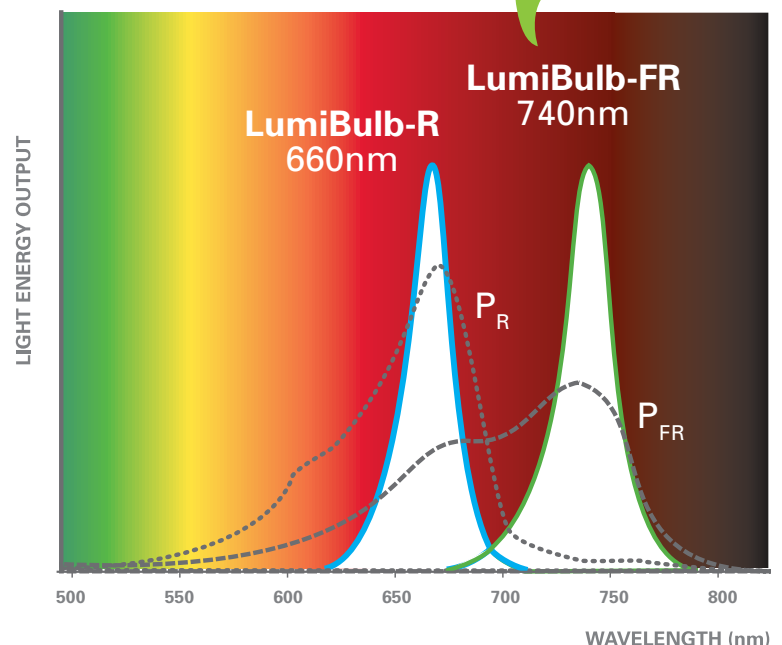
## Phytochrome Cyclic Control

Used together, LumiBulb lamps allow precise control of phytochrome responses between phytochrome red (P<sub>R</sub>) and phytochrome far red (P<sub>FR</sub>).

## Targeted Spectral Output

LumiBulb lamps provide the spectral wavelengths for healthy plant responses without wasted energy and light degradation.

**Boost flowering and control phytochrome responses.**



— LumiBulb-R      ..... P<sub>R</sub> (Phytochrome Red)  
— LumiBulb-FR      - - - - P<sub>FR</sub> (Phytochrome Far Red)



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