



– AN IDEAL PARTNERSHIP THAT WORKS FOR YOU!

Two renowned and well respected firms in the horticulture industry have partnered to bring you the best in LED lighting solutions. Philips has extensive expertise and experience in both conventional lighting and state-of-the-art LED lighting technology for horticulture purposes. Combined with Gloeckner's market expertise, we'll be able to offer optimum light recipes to save energy and make plant production more profitable.



Philips LED Lighting – Growth Like Never Before

LED lighting is here now, and promises to be the dominant lighting method sooner than later. And here's why:

- Supplements natural daylight and enhances photosynthesis which drives growth and improves quality of plants in greenhouses
- Controls the light period by extending the natural day length with artificial light
- Replaces daylight with artificial light for maximum climate control
- Energy efficient; long-life; low heat radiation; light and heat can be separately controlled; and more

Call for Expert Consultation and Product Pricing

The best fit light recipe depends on a great many factors, and that's why it's important that you allow us to learn more about your specific needs and to recommend the best lighting solutions. Call us now at 800-345-3787 for dedicated assistance.

GREENPOWER LED TOPLIGHTING

LED Toplighting produces significantly less heat, especially less radiation heat, than conventional HPS lamps, so you can control your greenhouse climate more precisely and grow better crops faster, year-round. Less heat gives you more flexibility to use light more effectively; for example, by increasing light levels, extending lighting periods, or by using light on warmer days without having to ventilate. Less heat also means you can place the light source closer to your plants to reduce light loss even in low-ceiling greenhouses.

- **Improves Production:** Shortens growth cycles; Improves color, shape, and taste; Grow with more control over your climate; Grow year-round in low greenhouses
- **Cut Operational Costs:** Saves up to 42% on energy costs compared to HPS toplighting; Reduces cost of power infrastructure to obtain your light level; Avoid costly remodeling with easy plug and play installation; Lower maintenance costs
- **Long-Life:** Emit at least 90% of their output after 25,000 hours and can last 5 times longer than conventional HPS light sources



Item #	Mfr #	Description	Case Pk	Price (\$)
GreenPower LED Toplighting				
49342	303818	Deep Red/Blue/Low Blue	3	
49344	303842	Deep Red/Blue/Medium Blue	3	
49345	303859	Deep Red/Blue/High Blue	3	
49346	303867	Deep Red/White/Low Blue	3	Call for Price
49347	303883	Deep Red/White/Medium Blue	3	
49348	303891	Deep Red/White VISION/Medium Blue	3	
49349	303909	Deep Red/White/Far Red/Medium Blue	3	
Toplighting Accessories				
49350	303966	End Cap	100	
49351	303925	Mounting Bracket	200	
49999	324061	Jumper Cable (3.3 ft L/1.00m)	15	Call for Price
49352	303933	Jumper Cable (6.6 ft L/2.01m)	15	
49353	304188	Mains Power Cable (pre-assembled w/female connector)	15	

	Application	Crops	Spectrum
Toplighting	Increase winter light levels; Extend lighting hours; Night interruption	Supplemental light for: High-light ornamental; High-light leafy greens; High-wire fruit and vegetable	Tailored for your specific crops
Flowering Lamp	Extend lighting hours; Night interruption	Photoperiodic genera	Blue and red wavelengths vs white-only light
Production Module	Sole-source lighting for: Tissue culture acclimatization; Propagation; Climate cabinets	Leafy greens, ornamental propagation, ornamental production, algae	Tailored for your specific crops
TLED	Sole-source lighting for: Tissue culture	Fruit, vegetable, and ornamental propagation	Blue and red wavelengths vs red-deficient fluorescent light
Interlighting	Below crop canopy lighting for: High-wire crops	High-wire tomato, cucumbers, and peppers; Tall roses	Spectrum specific to stimulate growth

¹ Efficacy of toplighting (efficiency of toplighting can be as much as 50% higher than HPS)

² Efficacy of production module in blue-only spectrum is 1.7 μmol/J; efficacy of all other Philips production modules fall in the range stated above

³ L90 expresses the useful lifespan of an LED indicating the number of hours before light output drops to 90% of initial output at 25 °C / 77 °F.

L70 represents number of hours before light output drops to 70% of initial output

Philips Lighting is now Signify

PHILIPS

LED Horti Partner

Learn About My Recipe for Growth

Jim Iwasaki
Iwasaki Bros., Inc., Hillsboro Oregon

"High-pressure sodium for many years was the gold standard for lighting. HPS lights use a lot of power; they are expensive to operate. Growing under the LED lighting is much more efficient. We have shortened our crop cycle by up to three weeks and we get an extra cycle of plants through the greenhouse. That's very exciting, very profitable. Because proper lighting is very important to our growth and success, we are making the switch to Philips LEDs."

Philips
GreenPower
LED Toplighting

GREENPOWER LED INTERLIGHTING MODULE

- The first module that can be positioned between the crops, as a result of the small amount of heat generated by LED lights
- Provides greater control over plant growth, ensuring better results (eg. for tomatoes and roses)

Item #	Mfr #	Description	Case Pk	Price (\$)
GreenPower LED Interlighting Gen 3				
51860	325837	Deep Red/Blue Reg Output (2.5 m)	5	
51861	325845	Deep Red/Blue High Output (2.5 m)	5	<i>Call for Price</i>
51862	325852	Deep Red/Blue Reg Output (2.0 m)	5	
51863	325860	Deep Red/Blue High Output (2.0 m)	5	

Accessories				
51864	327080	Mounting Bracket (171 mm)	250	
51865	327098	Mounting Bracket (271 mm)	250	
51866	325894	Power Cable 5.5.3	6	<i>Call for Price</i>
51867	325902	Jumper Cable 4.5.3	15	
49350	303966	End Cap (Universal)	100	

GREENPOWER LED PRODUCTION MODULE

- Can be used to replace conventional fluorescent lamps (36 or 58W), reduces energy consumption by up to 60%; IP 66 rating makes it ideal for germination rooms and greenhouses (on waterbooms)
- 2 lengths, 120cm (4') and 150cm (5')
- Lifetime 90% output: 25,000 hours

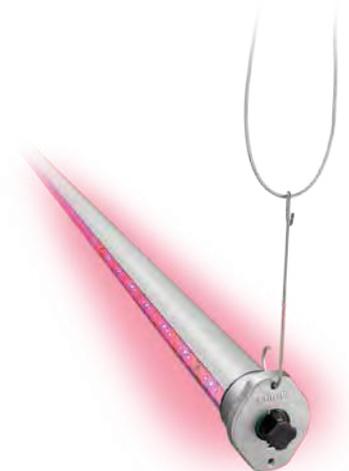
Item #	Mfr #	Description	Case Pk	Price (\$)
GreenPower LED Production Module				
51868	342139	Deep Red/Low Blue 150	6	
51869	342147	Deep Red/Blue/Far Red/Low Blue 150	6	<i>Call for Price</i>
51870	342154	Deep Red/White/Low Blue 150	6	
51871	342162	Deep Red/White/Far Red/Low Blue 150	6	

Accessories				
51872	324277	Power Cable 5.2.2	6	<i>Call for Price</i>
51873	272005	Mounting Bracket	75	

GREENPOWER LED FLOWERING LAMP

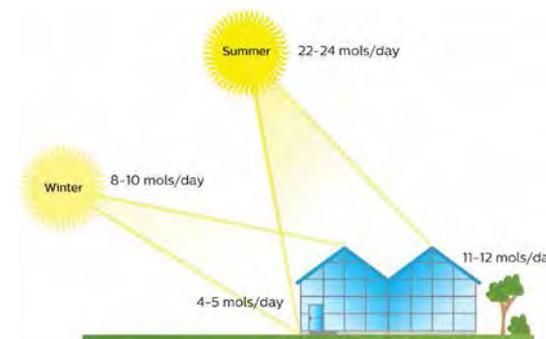
- Extends daylight hours
- Up to 90% energy savings
- Presence of far red (crucial for certain crops)
- Easy to install in your current installation or for replacement of incandescents
- Less sensitive to voltage variations
- No start-up time

Item #	Mfr #	Description	Case Pk	Price (\$)
GreenPower LED Flowering Lamp				
50004	285700	Deep Red/White	8	
50001	285718	Deep Red/White/Far Red	8	<i>Call for Price</i>



Did you know?

Even when it appears to be bright and sunny, your crops may not be receiving a sufficient amount of light due to the position of the sun, condition and cleanliness of your greenhouse, and structural interference. That's why growers benefit from supplemental lighting during the winter growing months.



Did you know?

Did you know that not all light is optimal light? In other words, quality growth is the result of quality light. And quality light is in the blue and red wavelengths of the light spectrum.

Did you know?

When thinking about greenhouse lighting, there are three characteristic to factor into your lighting strategy:

1. Intensity: Rate at which light energy is delivered to a unit of surface
2. Duration: Period of time in 24 hours that plants are exposed to light
3. Spectrum: Band of colors produced when sunlight is passed through a prism (violet, indigo, blue, green, yellow, and red)

Philips LEDs provide you with the intensity, duration, and optimal spectrum plus electrical efficiency.

Did you know?

Philips LEDs provide the right greenhouse lighting spectrum to stimulate quality plant growth and have been demonstrated in various genera* resulting in:

- Compact growth
- Sturdier leaves
- Strong rooting
- Prominent pigmentation
- Faster rooting

**Refer to the published case studies on this page for specific crop benefits.*

Did you know?

Benefits of using supplemental Philips LED lighting include:

- Improved crop production planning and scheduling
- Greater predictability of production times
- Significantly lower energy consumption per fixture
- Light can be controlled independent of heat
- Attractive rate of return