

PHILIPS

Horticulture LED Solutions

GreenPower LED
toplighting compact



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The easy switch to LED toplighting

As a grower, you are probably familiar with the benefits of using LED lighting in greenhouses. It will bring you higher yield, better quality crop and improved predictability. The Philips GreenPower LED toplighting compact allows you to easily switch to LED lighting, replacing your existing HPS set-up, or when you are building a new installation.

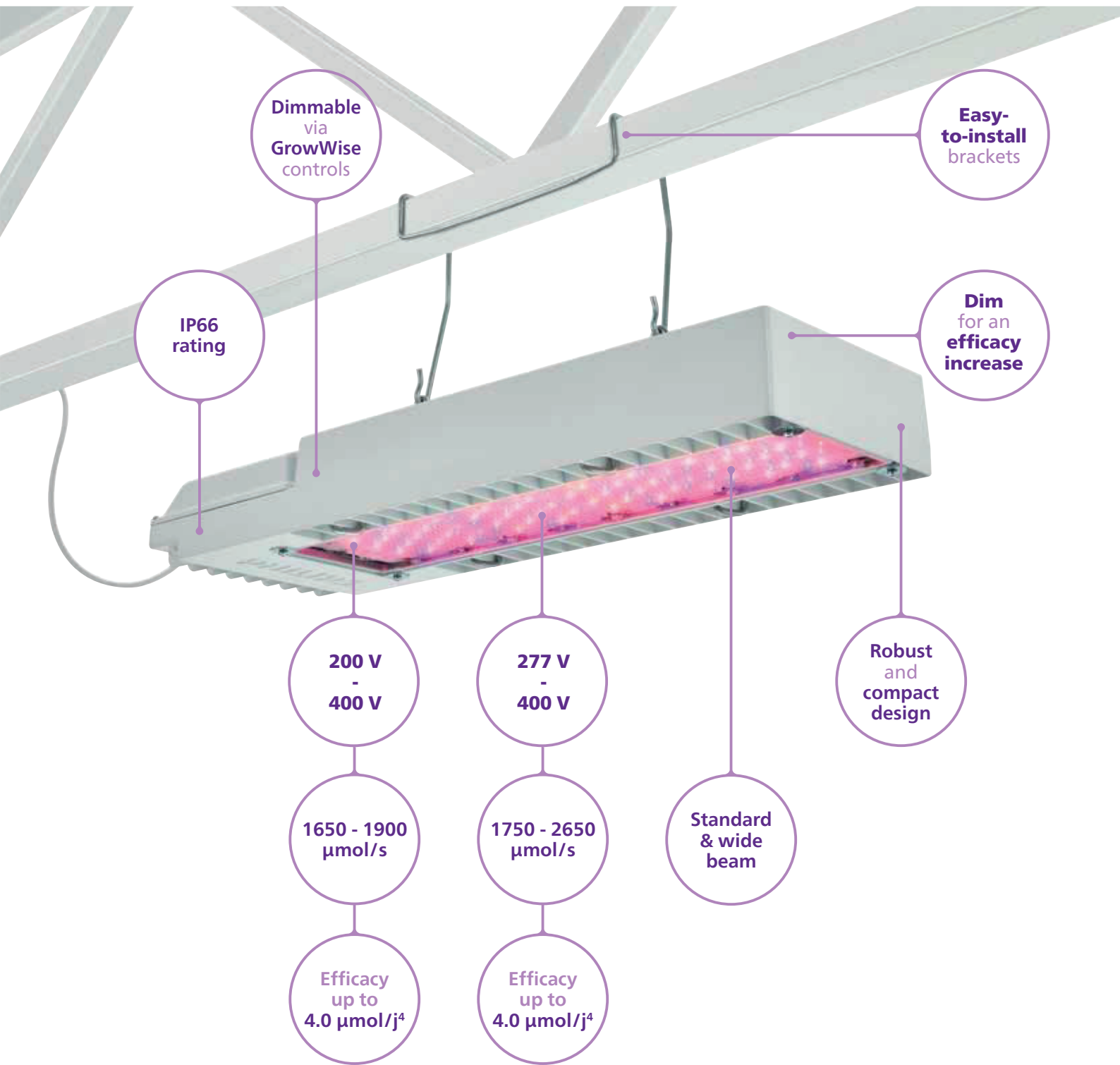
The high light output of up to 2650 $\mu\text{mol/s}$ or high efficacy of up to 4.0 $\mu\text{mol/J}$ helps you effectively optimize crop growth, enhance crop quality and cut operational costs. With a wide beam or standard beam you can cater for any greenhouse height and the dimming possibility allows you to dim the grow lights to 10% of its maximum output to increase flexibility.

The capabilities of the Philips GreenPower LED toplighting compact bring benefits to growers in many different segments:

- Vegetables and fruits like tomatoes, cucumbers, lettuce and strawberries
- Cut flowers and potted plants like roses, chrysanthemums and orchids
- Cannabis

Key benefits

- Go-to product for an easy HPS 1-to-1 LED replacement with a plug and play installation to save time and money
- Light output up to 2650 $\mu\text{mol/s}$
- Efficacy up to 4.0 $\mu\text{mol/J}$ when dimming to 50% to save overall energy costs
- Two beam shapes for desired uniformity or optimal efficacy
- The range comes in 200-400V (520/600W) and 277-400V (645 - 780W) light recipes



Use Philips GreenPower LED toplighting compact for:

- Tomatoes
- Cucumbers
- Lettuce
- Leafy greens
- Strawberries
- Cannabis

Product specifications

Philips GreenPower LED toplighting compact 200 - 400 V specifications

Beam	Spectral version		Deep Red/Blue types (DRB)	Deep Red/White types (DRW)				Vision White		Deep Red/White/Far Red types (DRWFR) ¹		
	Spectral code		LB	LB	2_LB	MB	VS2	EBW	FR_1	FR_RSE	FR_5	
Standard beam	Typical photon flux	μmol/s	1900	1850	1850	1750	1650	1830	1750	1750	1850	
	Power consumption (max)	W	520	510	520	520	600	600	520	520	520	
	Efficacy	μmol/J	3.7	3.6	3.6	3.4	2.7	3.1	3.4	3.4	3.6	
	Efficacy at 50% (dimmed)	μmol/J	4.0	3.9	3.8	3.7	3.0	3.3	3.7	3.7	3.8	
Wide beam	Typical photon flux	μmol/s	1900	1825	1775	1775			1750			
	Power consumption (max)	W	520	520	520	520			520			
	Efficacy	μmol/J	3.7	3.5	3.4	3.4			3.4			
	Efficacy at 50% (dimmed)	μmol/J	4.0	3.8	3.7	3.7			3.7			

Philips GreenPower LED toplighting compact 277 - 400 V specifications

Beam	Spectral version		Deep Red/Blue types (DRB)			Deep Red/White types (DRW)							Vision White		Deep Red/White/Far Red types (DRWFR) ¹				
	Spectral code		LB			LB		2_LB	MB			VS2	EBW	FR_1	FR_3	FR_RSE	FR_5		
Standard beam	Typical photon flux	μmol/s	2650	2400	2275	2600	2420	2200	2500	2550	2350	2125	1750	1925	2300	2050	2150	2300	2500
	Power consumption (max)	W	750	700	645	770	720	645	750	780	730	645	645	645	700	660	700	700	745
	Efficacy	μmol/J	3.5	3.4	3.5	3.4	3.4	3.4	3.3	3.3	3.2	3.3	2.7	3.0	3.3	3.2	3.1	3.3	3.4
	Efficacy at 50% (dimmed)	μmol/J	4.0	3.9	4.0	3.9	3.9	3.9	3.7	3.7	3.6	3.7	3.0	3.2	3.7	3.7	3.5	3.7	3.7
Wide beam	Typical photon flux	μmol/s							2225						2100				
	Power consumption (max)	W							645						645				
	Efficacy	μmol/J							3.4						3.3				
	Efficacy at 50% (dimmed)	μmol/J							3.7						3.6				

Light distribution		Wide beam: beam angle 150° Standard beam: beam angle 120°
Dimmable ²		10% - 100%
Input voltage (50-60 Hz)	VAC	200 - 400 V 277 - 400 V
Dimensions	cm inch	L: 72 28.4 W: 24 9.5 H: 9 3.5
Weight	kg lb	10.5 23.1 (incl. module brackets)

Notes

- ¹ The published value represents the total photon flux from 400-800nm
- ² All TLC product are prepared to work with GWCS (Coded Mains) protocol CMv1 / CMv2. This means that no control wires are needed. The modules will operate in combination with Standard and High Output GWCS transformers/transmitters.
- ³ • Efficacy typical and electrical characteristics are defined @Ta=25°C/77°F 2
• Driver Lifetime is based @ Tc max 85°C, Flux maintenance guaranteed @Ta Max 40°C. All measured lifetimes are industry standard measurements indicating average length of operation and not a performance claim specific to any individual product.
- ⁴ The published value represent the efficacy at 50% (dimmed).

Power factor		0.98
Total Harmonic Distortion	%	< 15
Rated Average Lifetime ³	hour	36.000 - Q95
Ingress protection rating		IP66
Cooling		Passively cooled
Approval marks		CE, ENEC, UL/CSA, RCM, PSE, EAC
Connector		Wieland RST20i3 Green

Legend

- | | | | |
|------|---------------------------|---------|-------------------------|
| LB | = Low Blue | EBW | = Efficient Broad White |
| 2_LB | = White 2_Low Blue | FR_1..5 | = Far Red recipes 1..5 |
| MB | = Medium Blue | FR_RSE | = Rose Module |
| VS2 | = Vision - White spectrum | | |



...and:

- Chrysanthemums
- Cut roses
- Potted roses
- Lysianthus
- Orchids

More light, less heat, better control

New greenhouse or renovation

Due to our broad assortment and dimming opportunities, you will be able to install any light level in a new greenhouse connecting 2, 3, or 4 Philips GreenPower LED toplighting compact on a trellis or use C-profiles instead. You can opt for a 645 to 780W grow light with an optimized performance, balancing light output and efficacy. Or you can choose one of our 520W solutions, utilizing half the power consumption of an HPS system.

Philips GreenPower LED toplighting compact has been designed for easy installation. Specific snap brackets are available for safe operation distance from your screens. Philips GreenPower LED toplighting compact has no inrush current when switched on, this simplifies installation of the electrical cabinet. The high powerfactor of 0.98 reduces the load on cabling and transformers.

1-to-1 HPS replacement

Philips GreenPower LED toplighting compact fits seamlessly in existing HPS infrastructure and trellis constructions; even between sprinklers. There are two smart options: either you choose to replace your existing HPS installation with a similar light output and consume 50% less power, or you choose to utilize the maximum CHP power available and increase your light output to 150% compared to current light level. In all cases you can make the easy switch to full LED toplighting or create a hybrid LED and HPS lighting system on your current set-up.

Philips GreenPower LED toplighting compact comes in a standard and wide beam. It provides optimal efficacy and excellent light distribution and uniformity in most greenhouse configurations including high wire-crops. The passively cooled grow light produces much less radiant heat, putting you in control over your greenhouse climate. The compact, white housing intercepts little sunlight and comes with an IP66 ingress protection rating.

GrowWise Control System enables dimming

Philips GreenPower LED toplighting compact can be dimmed to 10% of its maximal photosynthetic photonflux in combination with the GrowWise Control System to improve the efficacy. This allows growers to dim the lighting for reasons of additional energy saving during peak hours or to mimic the dusk to dawn interval and enhance results for specific crops.

Dimming will work reliable without the need of specific control cables. The GrowWise Control System can be used standalone or can be connected and controlled via your climate computer.



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HORTICOOP
SCANDINAVIA A/S

Tlf: +45 87 36 99 00
E-mail: info@horticoop.dk
www.horticoop.dk