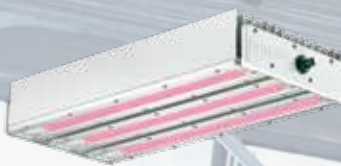


# PHILIPS

Horticulture LED

GreenPower LED  
toplighting force



## Providing maximum light all year round

Cutting down on energy costs used to be a grower's most important goal. Now growers are aware that higher light levels can significantly increase yield—and they require a solution that can provide that.

The Philips GreenPower LED toplighting force (TLF), the ultimate LED grow light for light-loving crops. It creates summer conditions all year round, but without the heat dissipation of high-pressure sodium lights (HPS). Utilizing an existing plug power of 1040 W, growers can achieve a maximum light output of 3600  $\mu\text{mol/s}$  at an efficiency up to 3.7  $\mu\text{mol/J}$ . This allows for 1-to-1 HPS replacement utilizing the same connection, while almost doubling the light levels compared to the newest generation HPS lights. In addition, toplighting force achieves 3.9  $\mu\text{mol/J}$  efficiency when dimmed to 50% of its power and functions with minimal light interception.

Replace connection  
for a double light level increase



HPS  
1800  $\mu\text{mol/s}$



TLF  
3600  $\mu\text{mol/s}$

OR

Half the amount of fixtures  
for the same energy

2 x HPS  
1800  $\mu\text{mol/s}$



1 x TLF  
3600  $\mu\text{mol/s}$



### Key benefits

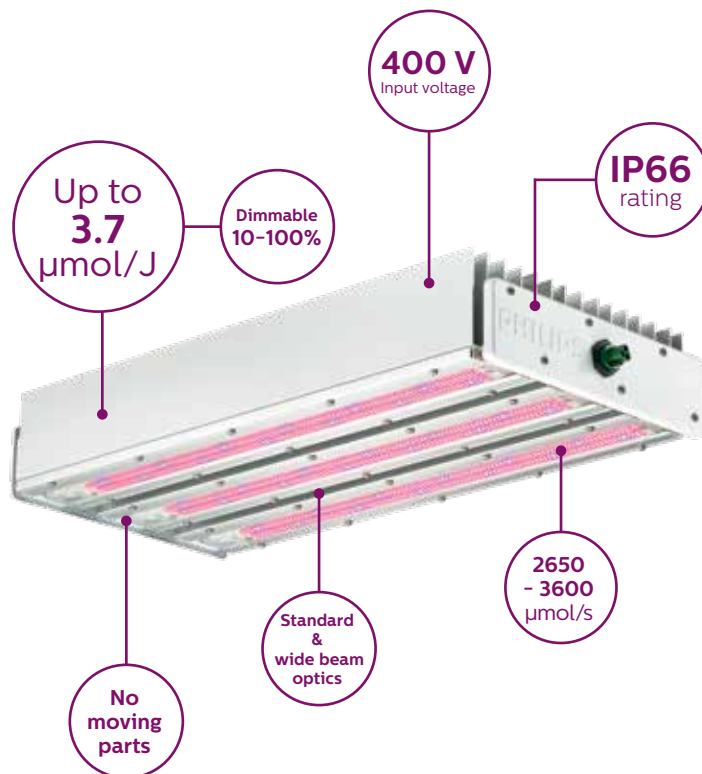
- Replace existing 1040 W HPS light for a double light level increase
- Maximum light output of 3600  $\mu\text{mol/s}$  and an efficacy of up to 3.7  $\mu\text{mol/J}$
- Two beam shapes ensure desired optimal uniformity or highest efficacy
- Dim to 50% and increase efficiency up to 3.9  $\mu\text{mol/J}$
- Minimal light interception

The result is a powerful asset with which you will get the most out of today's horticultural market, including optimally predictable growth, better crop quality and higher yield.

# Optimizing growth predictability, improving crop quality and increasing yield

When you want to generate the highest light level (photosynthetic photon flux) using the fewest grow lights possible, toplighting force is a smart LED investment, whether you're replacing HPS lights on a 1:1 basis or building an installation from scratch. Philips Greenpower LED toplighting force is available in two beam shapes: a wide beam for optimal uniformity in case of limited height to the crop and a standard beam that offers highest efficacy.

By using the Philips GrowWise control system, growers can dim the lights to as little as 10% of the maximum output, stand-alone as well as integrated with a climate computer or greenhouse management system. Dimming boosts light efficacy, allows sunset-to-sunrise mimicking for a smoother temperature build-up and responds to energy management-related load shifts. Signify plant specialists, application engineers and account managers will work with you to customize light solutions tailor-made for your growing conditions.



## Product specifications GreenPower LED toplighting force 400V

Beam	Spectral version		Deep Red/Blue types		Deep Red/White types				Deep Red/White/Far Red types		
	Spectral code		LB		LB		MB		FR_1		FR_RSE
Standard beam	Typical photon flux <sup>1</sup>	μmol/s	3600	2850	3300	2800	3250	2800	3100	2750	3100
	Power consumption (max)	W	1040	780	1000	800	1000	820	950	820	950
	Efficacy	μmol/J	3.5	3.7	3.3	3.5	3.3	3.4	3.3	3.4	3.3
	Efficacy at 50% (dimmed)	μmol/J	3.8	3.9	3.6	3.7	3.6	3.6	3.6	3.6	3.6
Wide beam	Typical photon flux <sup>1</sup>	μmol/s	3500	2750	3200	2700	3150	2700	3000	2650	
	Power consumption (max)	W	1040	780	1000	800	1000	820	950	820	
	Efficacy	μmol/J	3.4	3.5	3.2	3.4	3.2	3.3	3.2	3.2	
	Efficacy at 50% (dimmed)	μmol/J	3.7	3.7	3.5	3.6	3.5	3.5	3.5	3.4	

Light distribution		Standard Beam → beam angle 120° Wide Beam → beam angle 150°
Dimmable <sup>2</sup>		10% - 100%
Input voltage (50-60Hz)	VAC	400V
Dimensions	cm	Length: 69 Width: 31 Height: 11,2
Weight	kg	10,5
Power factor		0.98
Total Harmonic Distortion	%	< 15
Rated Average Lifetime <sup>3</sup>	hrs	36.000 - L95
Ingress protection rating		IP66/ wet locations
Cooling		Passively cooled
Approval marks		CE, ENEC, RoHS
Connector		Wieland RST20i3 Green

### Legend

<b>DR</b> = Deep Red	<b>LB</b> = Low Blue
<b>B</b> = Blue	<b>MB</b> = Mid Blue
<b>W</b> = White	<b>_1</b> = FR Low Blue
<b>FR</b> = Far Red	<b>RSE</b> = Rose Module

- <sup>1</sup> The published value represents the total photon flux from 400 - 800nm.
- <sup>2</sup> In combination with Philips GrowWise control system.
- <sup>3</sup> Lifetime and maintenance values are given at an ambient temperature of 25 °C / 77 °F. All measured lifetimes are industry standard measurements indicating average length of operation and not a performance claim specific to any individual product.



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