

Flexi-Grow

Tailored to your needs



Product information

Flexi-Grow Toplight has been designed as a replacement for traditional 1000 W High Pressure Sodium lamps. It has an improved efficacy up to $4.0 \mu\text{mol}/\text{J}$ and uses more than 50% less energy and it also offers light level up to $3580 \mu\text{mol}/\text{s}$ therefore fewer LED fixtures may be needed to achieve the required PPFD (photosynthetic photon flux density). Our Toplight modules have standard and special wide beam optics, with which we can ensure the most uniform light distribution for your plants to grow evenly and maximize the yield.

We are flexible in meeting your demands for lighting up your greenhouse. The offer will be based on the main criteria you specify:



Optimized for investment:

If the goal is to keep the initial investment low, choose our investment optimized solution, which balances energy consumption and light output.



Optimized for operational cost:

If the aim is to minimize operating costs, we will be able to power the greenhouse with high efficiency luminaires up to $4.0 \mu\text{mol}/\text{J}$.



Maximized for light output:

If you want to maximize the photons for your crop, our high PPF (up to $3580 \mu\text{mol}/\text{s}$) lamps are the most optimal. You can achieve the best quality, yield and nutritional value with them.

4.0
 $\mu\text{mol}/\text{J}$

Modular
design

3 580
 $\mu\text{mol}/\text{s}$

Customizable
spectrum

Wide beam
Optics

Compact
size

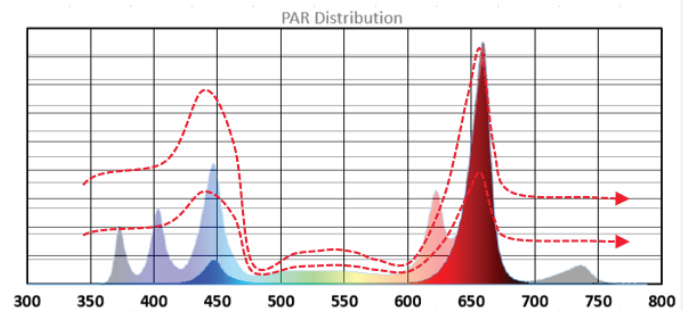
Key product features

<ul style="list-style-type: none"> Modular system - 1,2,3 module options 	<ul style="list-style-type: none"> Standard and wide beam option
<ul style="list-style-type: none"> Small size for minimal shading 	<ul style="list-style-type: none"> Passive cooling - No moving part!
<ul style="list-style-type: none"> Life time L90/B50 50000h (Ta=25°C) 	<ul style="list-style-type: none"> Simple hanging system for easy installation
<ul style="list-style-type: none"> Operating Environment: 0°C to +40°C 	<ul style="list-style-type: none"> 180-528V driver, Pf > 0.9
<ul style="list-style-type: none"> Remote driver 	<ul style="list-style-type: none"> IP66, IK08 rated
<ul style="list-style-type: none"> Dimming options available (1-10 V and bluetooth controlled) 	<ul style="list-style-type: none"> Regulatory approvals CE, RoHS

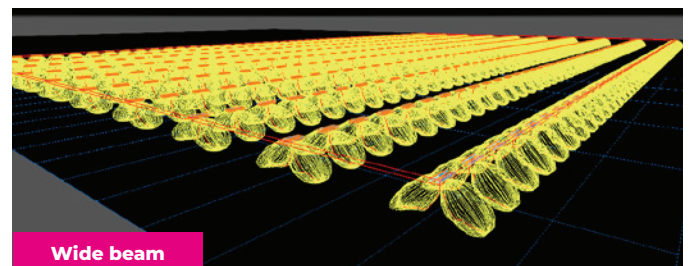
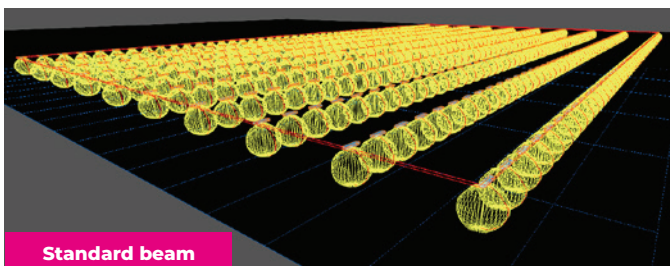
Customizable spectrum

Our crop advisors could help you to choose the most suitable spectrum for your crops and our factory make the lamps accordingly. Exact spectrum may vary between varieties and growth strategies.

We can customize the spectrum based on what the buyer or an independent crop advisor or our own crop adviser suggests.



Choice of beam angles for ideal light distribution and penetration into the canopy

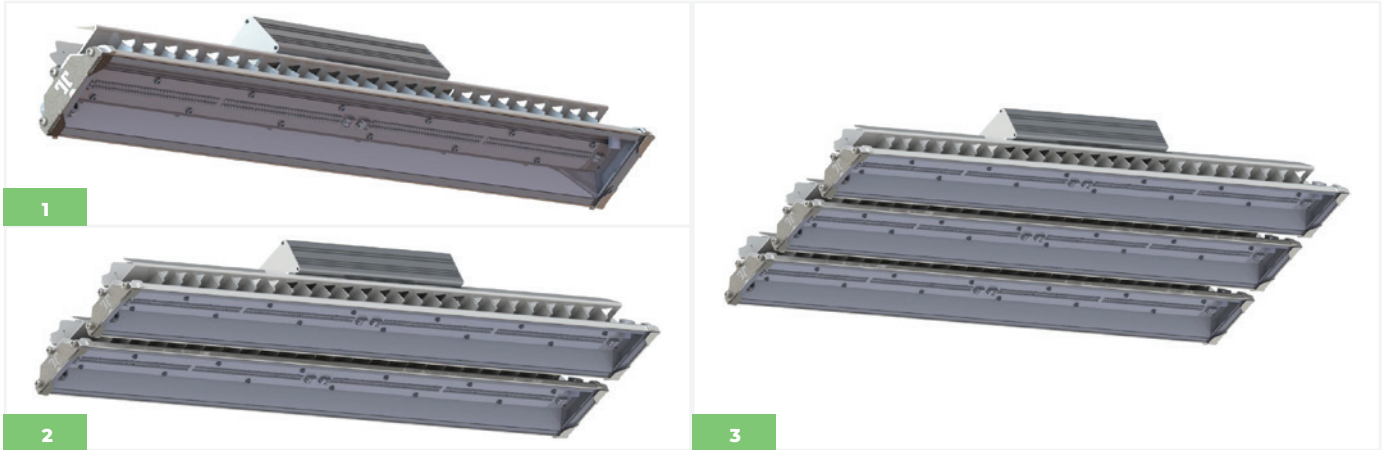


Uniform light distribution

Fewer fixtures, lower investment cost

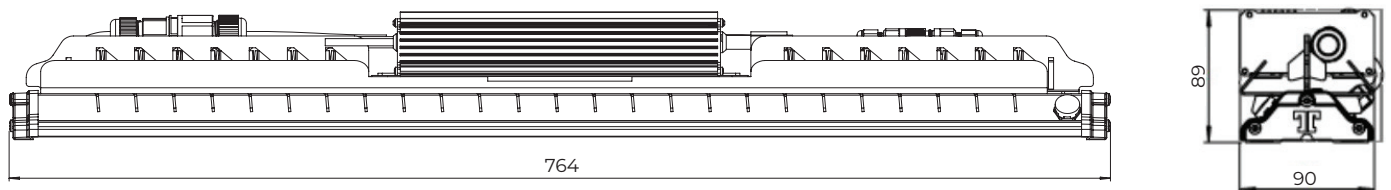
Equal light for all plants, stable yield

Modular system



Dimensions (mm) - Single module

Weight: ~ 3.5 kg per module



Mounting options

Various hook or bracket system options available for the installation and connection of this product. On request individual mounting solutions may also be worked out



Ease of installation

Extra light weight
~ 3.5kg per module

Less shading

Product Specifications for our different product types

With our products, any spectrum can be produced, thus can be requested, so beyond the below range, the actual number of product varieties is infinite and depends only on the needs of our customers and their plants.

Lowest initial investment

Specification	Investment Optimized					Specification	Investment Optimized				
Growth Spectrum	HR LB					Growth Spectrum	HR LB G FR				
Lamp type	Single module	Double module		Triple module		Lamp type	Single module	Double module		Triple module	
Beam type	Standard	Standard	Wide	Standard	Wide	Beam type	Standard	Standard	Wide	Standard	Wide
P (W)	306	612	612	918	918	P (W)	303	606	606	909	909
PPF $\mu\text{mol/s}$	1005	2010	1970	3015	2955	PPF $\mu\text{mol/s}$	970	1940	1900	2910	2852
Efficacy ($\mu\text{mol/J}$)	3,3	3,3	3,2	3,3	3,2	Efficacy ($\mu\text{mol/J}$)	3,2	3,2	3,1	3,2	3,1

Maximize energy saving

Specification	High Efficacy					Specification	High Efficacy				
Growth Spectrum	HR LB					Growth Spectrum	HR LB G FR				
Lamp type	Single module	Double module		Triple module		Lamp type	Single module	Double module		Triple module	
Beam type	Standard	Standard	Wide	Standard	Wide	Beam type	Standard	Standard	Wide	Standard	Wide
P (W)	258	516	516	774	774	P (W)	269	538	538	807	807
PPF $\mu\text{mol/s}$	952	1904	1866	2856	2800	PPF $\mu\text{mol/s}$	952	1904	1866	2856	2800
Efficacy ($\mu\text{mol/J}$)	3,7	3,7	3,6	3,7	3,6	Efficacy ($\mu\text{mol/J}$)	3,5	3,5	3,5	3,5	3,5

Increased crop yield

Specification	High output					Specification	High output				
Growth Spectrum	HR LB					Growth Spectrum	HR LB G FR				
Lamp type	Single module	Double module		Triple module		Lamp type	Single module	Double module		Triple module	
Beam type	Standard	Standard	Wide	Standard	Wide	Beam type	Standard	Standard	Wide	Standard	Wide
P (W)	334	668	668	1002	1002	P (W)	334	668	668	1002	1002
PPF $\mu\text{mol/s}$	1194	2388	2340	3582	3510	PPF $\mu\text{mol/s}$	1135	2270	2225	3405	3337
Efficacy ($\mu\text{mol/J}$)	3,6	3,6	3,5	3,6	3,5	Efficacy ($\mu\text{mol/J}$)	3,4	3,4	3,3	3,4	3,3

LB: low blue, HR: high red, R: red, FR: far red, G: green

At Food Autonomy, we are constantly developing and improving our products. For this reason, all product descriptions in this catalogue are intended as a general guide, and we may change specifications from time to time in the interest of product development, without prior notification or public announcement. All descriptions in this publication present only general particulars of the goods to which they refer and shall not form part of any contract. Data in this guide has been obtained in controlled experimental conditions. However, Food Autonomy cannot accept any liability arising from the reliance on such data to the extent permitted by law.
LED Flexi-Grow Datasheet – June 2022