FL300 GROW FIXTURE

The LED fixture mainly for greenhouse installations

Highlights

- Control of spectral compositon and intensity
- Dynamic control of the light intensity
- The natural replacement for the conventional HPS systems
- Enables easy integration with climate control systems
- Control the intensity of the taste of herbs and strawberries
- Control the height of the plant
- Minimize the use of Plant Growth Regulation (PGR)
- Long lifetime with no reduction of the light output
- Consistent light on the plants due to a patented optical lens system
- Well suited for greenhouses and research
- Danish developed and manufactures since 20015

About FL300 Grow

The FL300 Grow LED top-light is a 550 watt fixture emitting light in the photosynthetic active region of the visible light spectrum. Our solutions suit most modern production greenhouses in the world and are designed to withstand the harsh environment of a glass house and keep working year after year. The minimalistic design means easy installation using standard connection technology, and with a minimal shadow footprint, the FL300 Grow is able to produce good quality plants year round. This makes it a natural replacement to the conventional HPS systems used today.

Controllable

The light spectrum can be designed for individual crops in combination with LCC4 climate control systems. An alternative to the LCC4 climate control system is a small Control Unit which controls up to 49 fixtures. A further alternative is the LED Light Controller, which can be connected with your climate computer from another provider. So you can maintain the full control of your LED installation.

Documented results

The greenhouse of PKM is one of the largest flower growers in Europe with a total area of 260,000 m2 and is well known for innovation in developing new plants and being a pioneer in new technology. During four successive growth seasons PKM has tested our LED systems, and from 2011 to 2014 more than 300,000 Campanula flowers were grown under our LED fixtures. The results demonstrate conclusively the advantages:

- 25 % electricity savings compared to conventional HPS system
- Result: Same plant quality and same sales price as crops produced under 1,000 watt HPS system

The conclusion was that despite the low electricity consumption the plants are growing very well in the "new light" and are the same or even on some parameters better than the HPS quality.

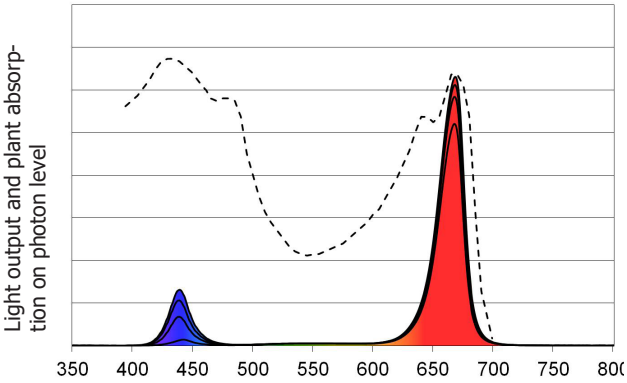
SPECIFICATIONS / FL300 GROW FIXTURE

Parameter	
Power input	230 V AC / 50/60 Hz
Nominal Current	2.4 A
Power usage	100 - 550 watt (adjusted via controller)
Light output	2.5 µmol/s per Watt*
Net weight	12.4 kg
Dimensions L x W x H	550 x 230 x 160 mm
Operating temperature	0 - 40° C
Coverage	Up to 12 m^2 (depending on light intensity)
Light modulation range	From 2 - 14 % blue light of total light
Green / white content	From 1 - 5 % of total light*

*Depending on the spectral settings

When evaluating possible LED solutions it is important to check on two parameters: Temperature of the LED when the fixture is running and the distribution profile on your plants. The FL300 Grow is equipped with a patented active cooling system that enables a low LED temperature and therefore a long lifetime that a passive cooled LED fixture does not have.

The FL300 Grow is designed with a patent-pending optical lens system that enables a traditional installation plan similar to HPS with homogenous distribution profile on plant level - but with less waste of light.



Spectral distribution of FL300 Grow together with a general action spectrum of plants. Spectral distribution for FL300 shown for 2, 6, 10, 14 % blue

FL300 Grow - Light Modulation Range

	100W	150W	200W	250W	300W	350W	400W	450W	500W	550W
2 % blue	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4 % blue	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6 % blue	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8 % blue	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10 % blue	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12 % blue	✓	✓	✓	✓	✓	✓	✓	✓	✓	
14 % blue	✓	✓	✓	✓	✓	✓	✓	✓		

Distributor:

Head office:

Senmatic A/S
Industrivej 8, 5471 Søndersø, Denmark
Phone: +45 64 89 22 11
dgtsales@senmatic.com – www.senmatic.com

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