



# FL300 GROW FIXTURE

- ✓ Control of spectral composition and light intensity
- ✓ Consistent light on the plants due to a patented optical lens system
- ✓ Minimize the use of Plant Growth Regulation (PGR)
- ✓ Control the growth of the plant
- ✓ Long lifetime with no reduction of the light output
- ✓ Well suited for greenhouses and research
- ✓ Danish developed and manufactured since 2005



## Get better quality and higher output by using LED

### About FL300 Grow

The FL300 Grow LED top-light is a 500 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.

- The natural replacement for the conventional HPS systems
- Get a specific lighting plan based on your plant's need for lighting
- Enables easy integration with climate control systems

### Controllable

One of the major benefits of this fixture is the ability for control.

- Investing in a controllable LED fixture means you always have the option to change the light to keep up with new research findings, a new culture/culture stage, or simply to dim the fixture when less light is required.

- Simply put, an investment in the FL300 will not leave you with a fixed spectrum but lead to endless possibilities
- You can control the system by using either our LCC4 climate control system or our LED Light controller, which can be connected to your climate computer also from another provider. That way you can maintain the full control of the LED installation.

### Documented results

The greenhouse of PKM is one of the largest flower growers in Europe with a total area of 260,000 m<sup>2</sup> 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 - VERSION 1.2

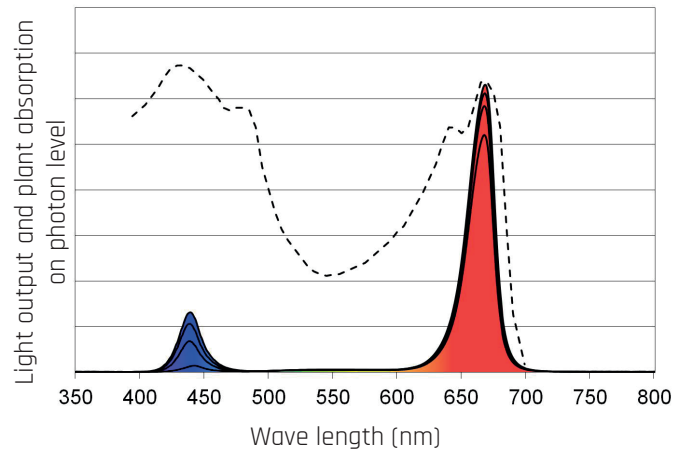
## Technical specifications

Power input:	230 V AC / 50/60 Hz
Nominal current:	2.2 A
Power usage:	100 - 500 watt (Adjusted via controller)
Cos φ:	0,98
Light output from fixture:	3.2 μmol/s per Watt*
PPF:	1600 μmol/s
Light output from diodes:	3.51 μmol/j
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 <sup>2</sup> (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 homogeneous distribution profile on plant level - but with less waste of light.



Spectral distribution of FL100 Grow together with a general action spectrum of plants. Spectral distribution for FL100 shown for 2, 6, 10, 14 % blue

## FL300 Grow - Light Modulation Range

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

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