



FL300 GROW WHITE FIXTURE



The LED fixture for special lighting requirements

Highlights

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

About FL300 Grow White

The FL300 Grow white top-light is a 550 watt fixture emitting light in the photosynthetic active region of the visible light spectrum. The Grow White spectrum was developed by growers with special lighting requirements and offers a full continuous spectrum. It is a combination of the Grow and the Sunlight spectrum, and combines the best of both worlds. This spectrum is used in production areas where a higher photosynthetic activity is required, or by growers requiring supplementary lighting where colour recognition and rapid, healthy growth are key factors.

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. That way you can maintain the full control of your LED installation.

Documented results

Saatzucht Bauer is one of Germany's leading grain research institutes with a particular focus on wheat. Saatzucht Bauer is pursuing the production of new wheat varieties that offer increased yield, but without compromising stability or quality.

The institute evaluated the FL300 Sunlight solution and liked the spectrum, but they also wanted to increase the production rate with no loss in colour recognition. Saatzucht Bauer naturally chose our FL300 Grow White, which is designed for exactly that purpose.

There are several full spectrum LED solutions currently on the market, but none are controllable. The FL300 Grow White installed at Saatzucht Bauer, however, offers the full package – an efficient but eye-friendly spectrum, a compact stable fixture and a dynamic controllable fixture.

The institute is pleased with both the light and the spectrum, and plant quality results already look promising.



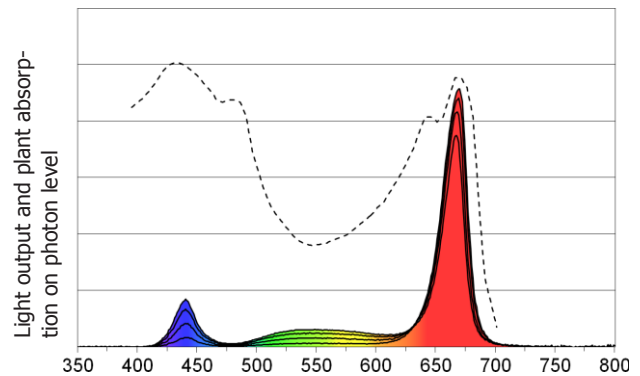
SPECIFICATIONS / FL300 GROW WHITE FIXTURE

| Parameter | |
|------------------------|--|
| Power input | 230 V AC / 50/60 Hz |
| Nominal current | 2.4 A |
| Power usage | 100 - 550 watt (adjusted via controller) |
| Light output | Up to 2.3 $\mu\text{mol/s}$ per Watt* |
| Net weight | 12.4 kg |
| Dimensions L x W x H | 550 x 230 x 160 mm |
| Operating temperature | 0 - 40° C |
| Light intensity decay | At least 70,000 hours at L80B10 |
| 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 3 - 22 % of total light* |

*Depending on light modulation

When evaluating possible LED solutions, it is important to check two parameters: Temperature of the LED when the fixture is running and the distribution profile on your plants. The FL300 Grow White 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 White 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 White together with a general action spectrum of plants. Spectral distribution for FL300 shown for 2, 6, 10, 14 % blue

FL300 Grow White - 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 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

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