

LEDFan Toplight



FOOD AUTONOMY

POWERED BY TUNGSRAM

Next generation
LED lighting
resulting in lower
heating costs



BY GROWERS FOR GROWERS

LEDFan toplight was co-developed
with Lans Group.

Why is LEDFan unique?

The LEDFan Toplight has been specifically developed by growers for growers for the cultivation of tomatoes in high tech greenhouses. It is the best one to one replacement for the traditional high pressure sodium lamps (HPS) as it combines the advantages of LED and HPS.

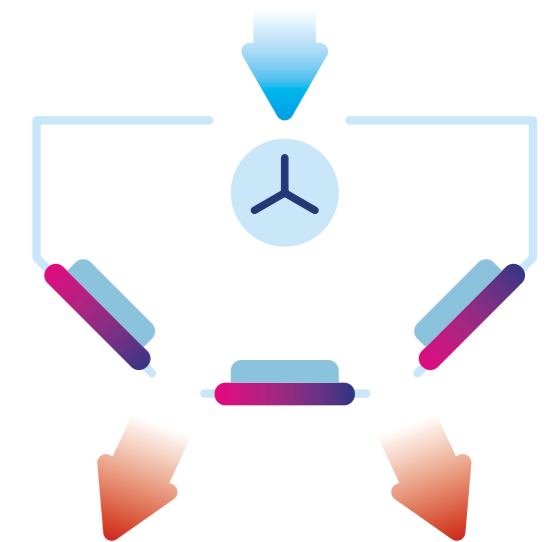


How it works?

The cold air drawn from the top by the built-in fans of LEDFan gets warmed up by the heat loss of the LED chips and drivers. LEDFan directs this warm air downwards, towards the crop and at the same time blocks the rising heat from the heat pipes thus creating a warm air blanket above the plants.

- Reduces not only lighting costs, but it provides considerable savings (around 15%) on heating costs compared to HPS and even more compared to normal LED fixtures, which are producing about 6% less heat than HPS
- Increases yield by providing more $\mu\text{mol/s}$ to the plants vs HPS
- Improves evaporation stimulating photosynthesis
- Dimmability further increases efficiency while maintaining light uniformity
- Switchable spectrum ensures optimal light for people and plants.

- ✓ **Cold air is drawn from the top, warmed up by the heat loss of the LED and drivers**
- ✓ **The warm air lowers humidity and stimulates evaporation, which improves the photosynthesis**
- ✓ **Meanwhile, it ensures that screens and windows can be further closed, which result in lower energy usage**



Key benefits of LEDFan



High luminous efficiency



Unlimited spectral variations



Controllable light intensity



High energy efficiency



50k lifetime



Stimulates evaporation



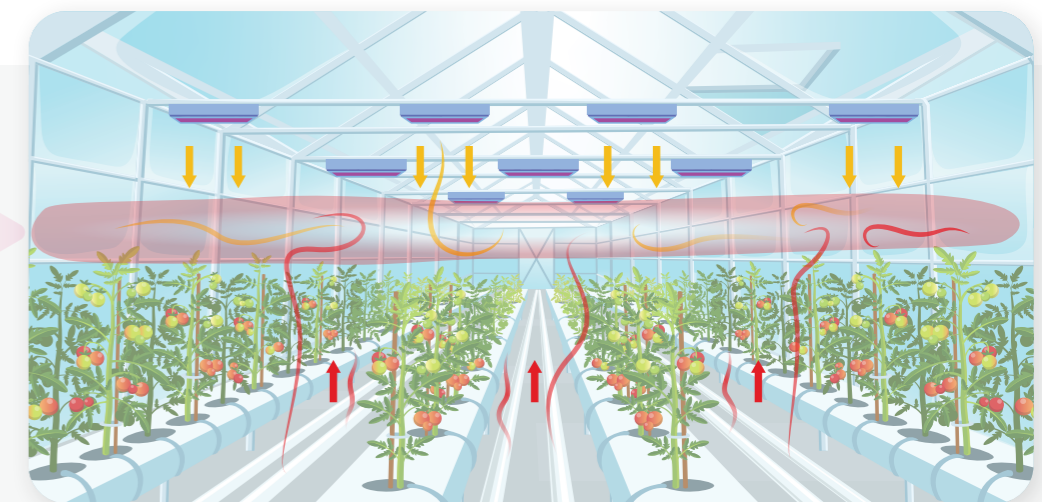
High uniformity



Durability



A warm air blanket forms around the top of the plants, creating an invisible energy screen.





Food Autonomy was established to take the baton from Tungsram's Agritech business unit in developing world-class LED lighting and smart solutions used in precision indoor farming operations. As a key objective, the new company will promote agritech products and solutions in new and existing markets globally and adapt these to the legal, economic and other specificities of the various local markets.

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