



LED AGRITECH

Modern horticulture has to deal with serious challenges such as climate change, scarce resources, and increasing needs of the fast-growing population. In order to meet these demands, the horticulture industry continuously seeks for new technologies in the case of key variables, such as lighting, to promote the growth of plants. The mission of Tungsum Agritech is to apply its expertise - acquired over decades - in the field of LED lighting to serve sustainable plant cultivation.



Greenhouse Linear Toplight Single Module

Our Linear Toplight Single Module is the most preferred option by horticultural producers, due to its physical parameters, modularity, high 986 $\mu\text{mol/s}$ output, and long lifetime.

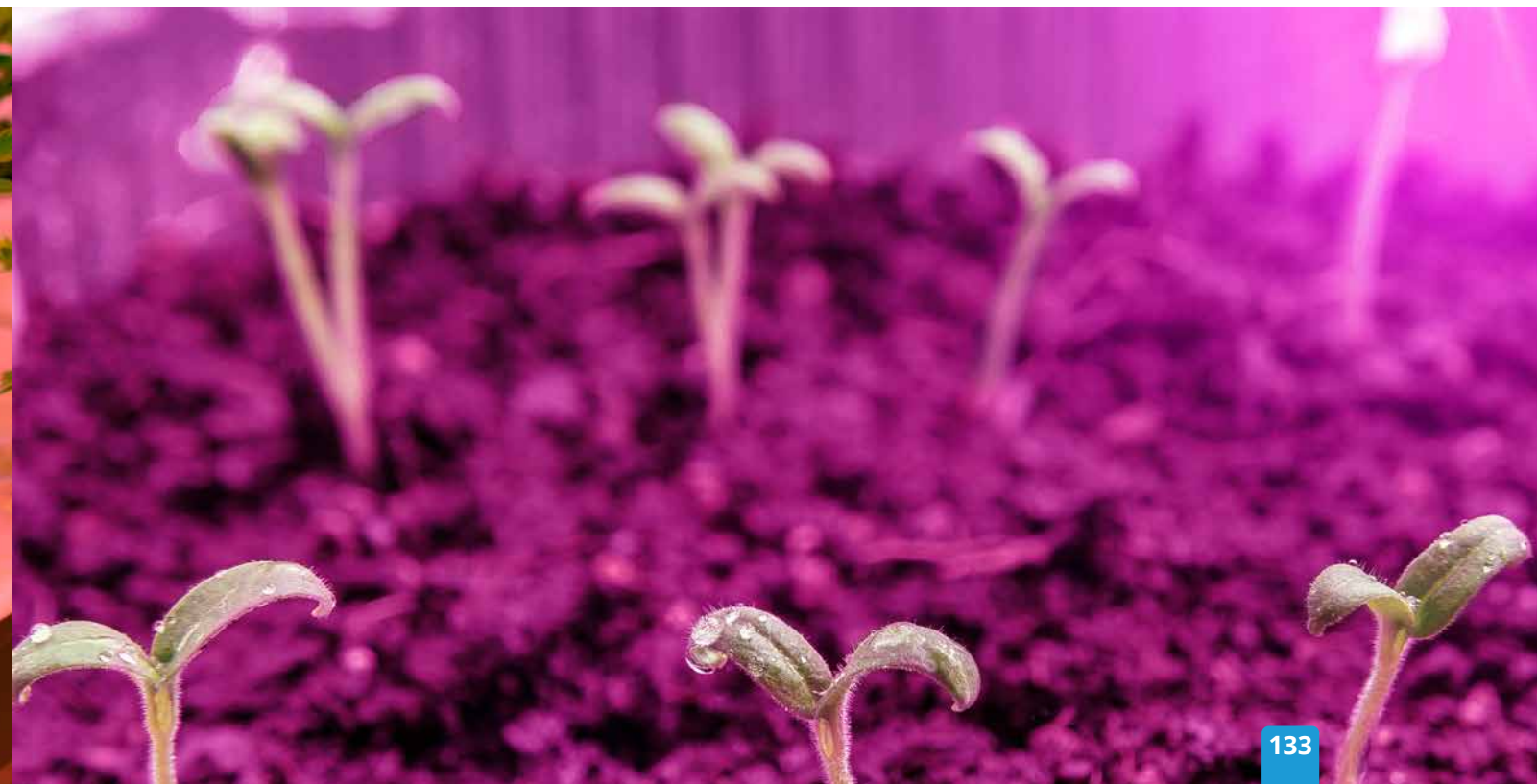
- ⊗ Slim design - minimal shadowing
- ⬆ High-system efficacy up to 3.67 $\mu\text{mol/J}$
- ⋄ Remote driver - better heat management



Greenhouse Linear Toplight Double Module

With its outstanding PPF reaching up to 1972 $\mu\text{mol/s}$, efficacy of 3.33 $\mu\text{mol/J}$, it is the ideal choice for the replacement of the traditional 1000 W High Pressure Sodium lamp. Similarity in their mounting and cabling options allow, smooth transition from the existing HPS lighting system into an LED-based solution.

- ↔ 1000W HPS replacement
- ⊖43% 43% energy saving compared to HPS
- 🔧 Low maintenance cost





Greenhouse Toplight Research Module

This module allows users to experiment with a different mix of wavelengths and light intensity in order to define and finetune the most optimal light for given phenophases, thus enabling all kinds of autotroph organisms to achieve their growers targeted quantity and quality of both primary and secondary metabolites.

- Uniform light distribution
- Wireless control



Greenhouse Interlight

Interlight is supplementary light source in greenhouses to light the lower, shadowed parts of the canopy. Growers can choose from PPF 141-246 $\mu\text{mol/s}$ modules, supplying the high-wired plants' entire surface with the proper amount of light to maximize yields and ultimately improve taste and nutritional value of their horticultural produces.



- Extremely high system efficacy- up to 3.42 $\mu\text{mol/J}$
- Low energy cost
- Ease of installation and maintenance





Vertical Farming Lightbar - Production



The highly efficient modular system of the Tungsram LED VF lightbar can be flexibly adopted to the needs of any indoor multilayer growing facility. Our fixed spectrum lightbars can be customized in length, light output and color spectra, while the 4-channel version enables growers to apply a dynamic lighting strategy for the different phenophases, pre-harvest periods to achieve the desired goals.

-  High-system efficacy up to 3.03 $\mu\text{mol}/\text{J}$
-  Remote driver - no heat radiation



Vertical Farming Lightbar - Research

The 6 and 8-channel version of our Vertical Farming Lightbar modules have been specifically designed to allow horticultural R&D facilities to experiment with the most versatile spectral variations to finetune light recipes for any given crop.

-  Remotely operated innovative control system
-  0-100% dimmability on each channel



CASE STUDY

DECATHLON LOGISTICS CENTER

Decathlon is a French multinational created in 1976, dedicated to design, manufacturing and distribution of sport goods with a strong development based on their own brands and a very large offer related on more than 110 different sport activities. Their strong positioning is mainly based on a strong commitment of innovation in each part of value chain: from research to development until sales, including also design, manufacturing and logistics, with an environmental conscience. The French international group is now active in more than 54 countries, with more than 160 outlets in Spain.

For more information please visit:
<https://tungsram.com/en/case-studies/decathlon-logistics-center>



DISCOVER TUNGSRAM PORTFOLIO

From traditional technologies to state-of-the-art LED products, we incorporate energy optimization and system intelligence into our portfolio.



LED OUTDOOR CATALOGUE



TRADITIONAL LAMPS CATALOGUE



AUTOMOTIVE CATALOGUE



LED AGRITECH CATALOGUE



TUNGSRAM ARCHIFM CATALOGUE



INFRATRAINER CATALOGUE