

Greenhouse Toplight Research Module



DATA SHEET

Endless Spectral Variations

Product information

When selecting the right LED system for a specific crop, one must first consider the desired growth spectrum and the amount of PPFD (photosynthetic photon flux density). The new Research fixture of the Tungsram Agritech Series allows users to experiment with different mix of wavelengths and light intensity to define and finetune the most optimal light spectrum for given phenophases of all kinds of plants to achieve the targeted quantity and quality of primary and secondary metabolites. Our two research modules are equipped with standard compositions of LEDs - one module with 12% blue, 5% green, 75% red, 8% far red and the other module with 18% blue, 7% green, 64% red, 11% far red - but the mix can also be predefined by customers, to achieve the most versatile spectra in the given research environment.

Product Specifications

Product ID	Module	Growth Spectrum (% UV/B/G/R/FR)	Nominal Power (W)	PPF ($\mu\text{mol/s}$)	Efficacy ($\mu\text{mol/J}$)	Optics	Control	Options
TUAS-GTR	1	0012057508	190	540 *	2,84	C1-120°	D – multi channel DALI	ST-Standard
	2	0018076411	443	1160 *	2,64	L5-50°		

*Measured range 300-800 nm

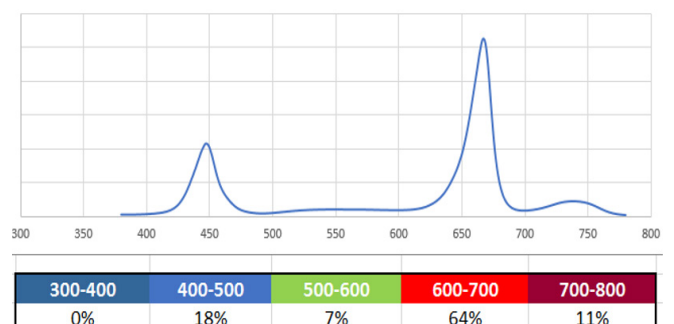
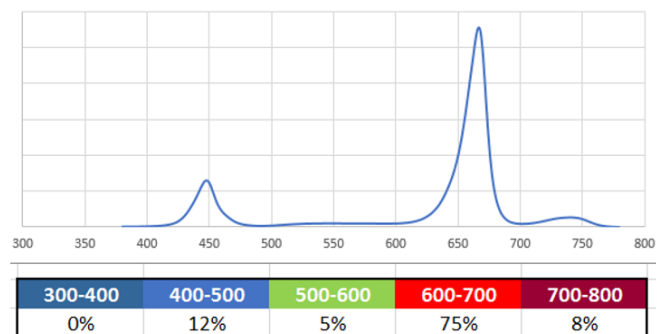
Key Technical Features

- Highest PPF – up to 1160 $\mu\text{mol/s}$
- High efficiency LED design, up to 2.84 $\mu\text{mol/J}$
- Ingress protection: IP66
- IK08
- Operating Environment: 0°C to +40°C
- Life-time >50 000h (Ta= 25 °C)
- Low heat radiation compared to High Intensity Discharge lamps
- Passive cooling
- Simple hanging system for easy installation
- Impact resistant design made of glass and aluminum
- Painted white finish
- Regulatory approvals – CE, RoHS

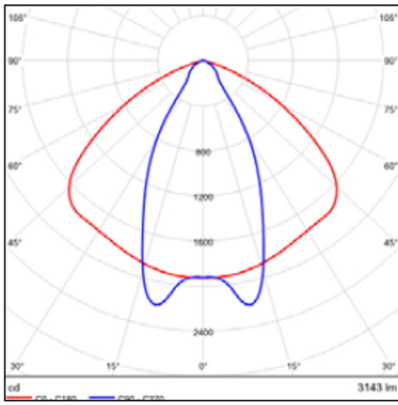
Advanced Control

- Innovative control system options for industrial scale and research cultivations
- Real time growing recipe management: **timed dimming, grouped control, easy-to-adapt map view**
- 0-100% dimmability on each channel ensures most versatile spectral variants and wide range of PPF density in each product

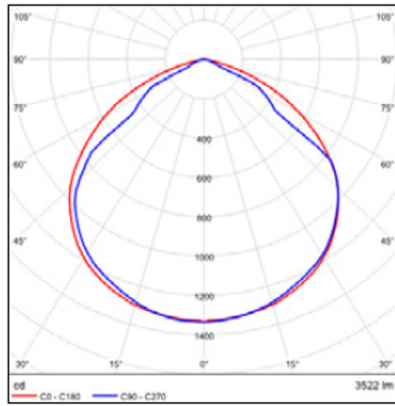
Spectral distribution



Photometric data



(with 50°optic)



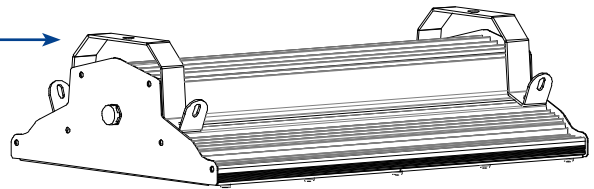
(with 120°optic)

Mounting

Various hook or bracket system options available for the installation and connection of this product. On request individual mounting solutions may also be worked out.

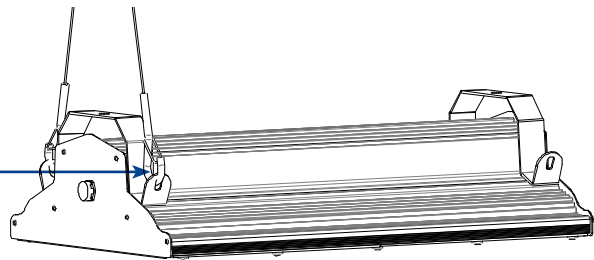
Rod Mount (included in the pack)

Available on all fixture configurations.
Attaches to M6 threaded rod.



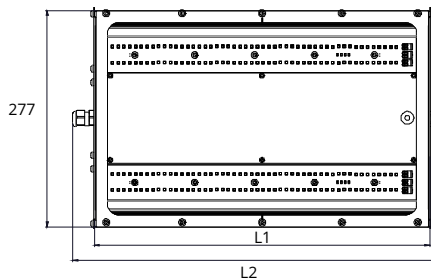
Y-Cable w/hook (optional, order separately)

Available in 1.5m, 3m, 4.5m, 6m lengths.



Note: Warranty only applies if products are installed with a mounting solution offered by us.

Dimensions (mm)



	Single	Double
L1	422	842
L2	456	876
Weight	5kg	10kg