

Variable Spectrum LED Fixture _VSF1

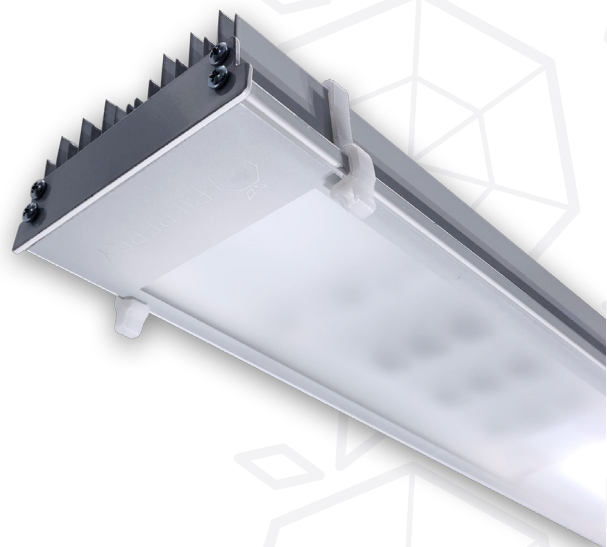


220-240 V
50/60 Hz

IK
06

IP
65

LED



_MECHANICAL DATA

Size: 97 x 600 x 42 mm (A);
97 x 1200 x 42 mm (B)

Assembly: hanged, clip-in

Case: extruded aluminum, powder coating

Glass: tempered diffusive glass

_ELECTRICAL DATA

Max. power: 200 W

Supply voltage: 230 VAC 50 Hz

Min. power factor: 0,95

Electric connector: provided separately

Appliance class: II

_GENERAL DATA

Communication: Bilberry research platform

Ingress Protection: IP65

Warranty: 3 years (fixture only, LED panels are covered by separate warranty)

Application: plant growth research

Working temperature: -40...+50

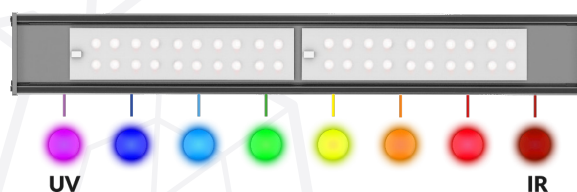


Variable Spectrum LED Fixture _VSF1



_DESCRIPTION

The Variable Spectrum Light Fixture [VSF1] is a light fixture with exchangeable LED panels (light sources) for horticultural research applications, which can dynamically shape its output in such a way that it will follow a user defined spectrum. VSF1 has the ability to shape its spectrum in the range from 280 nm (UV) to 855 nm (IR). The functionality allows for triggering of certain behaviors or metabolic reactions in plants. VSF1 is also equipped with a wireless control module, allowing it to be easily connected to the Bilberry Plant Research Platform. Optionally it can be also equipped with the Bilberry H1 cable height adjustment system.



_APPLICATION

The LED luminaire enables investigation of the influence of different light spectra on growth and physiology of plants and microorganisms. It is well suited for research purposes that require controlled amount of light and specific light frequencies. It allows determining of optimal light spectra for growing individual crops. Other possible research applications include plant speed breeding, control of metabolic processes, improvement of crops quality and nutritional value (polyphenol/antioxidant content), crop sequential harvesting, algae/microorganism cultivation for sewage treatment and others.

The LED luminaire is equipped with nine different LED channels, emitting wavelengths in the range from 280 nm to 730 nm. The light intensity of each LED channel is controlled independently to adjust required spectrum. The luminaire can work in a feedback loop mode, when coupled with The Bilberry Research Spectrometer RS1, that measures light spectrum in real-time. The Bilberry software ensures that the desired spectrum is maintained at all times. The cloud-based Bilberry Research Platform application offers a number of features that facilitate control over the research process.

FOR MORE INFORMATION, PLEASE CONTACT:
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_REALIZATIONS

Research on Phalaenopsis - JMP Flowers Research and Development Centre.

