

LED Flat Panel Option

Perfect for biofuel research

Web
Version
low resolution

NEW!



- ▶ High-power LED lighting
- ▶ Ideal light distribution
- ▶ Airlift
- ▶ Scale up
- ▶ Controllable light intensity
- ▶ Choice of light spectra
- ▶ Multiple applications



www.infors-ht.com

May be subject to technical amendments

INFORS HT

High standard – high productivity

▶ High-power LED lighting

A total of 260 water-cooled high-power LEDs, focused with reflectors, offer a reproducible light source with a long service life. The maximal irradiation intensity of approx. 3000 $\mu\text{mol}/\text{m}^2\text{s}$ is comparable to Caribbean sunlight. The energy efficiency is approx. five times greater than for fluorescent tubes.

▶ Ideal light distribution

With a layer thickness of only 2 cm, the flat panel culture vessel offers a uniform irradiation strength for the entire culture without shadowing effects.

▶ Airlift

The mixing of the culture is achieved gently yet effectively using the Airlift process. Foam formation and biofouling are both reduced thanks to the asymmetrical shape of the head space.

▶ Scale up

A scaling up of the flat panel culture vessel to a pilot or production scale is possible.

▶ Controllable light intensity

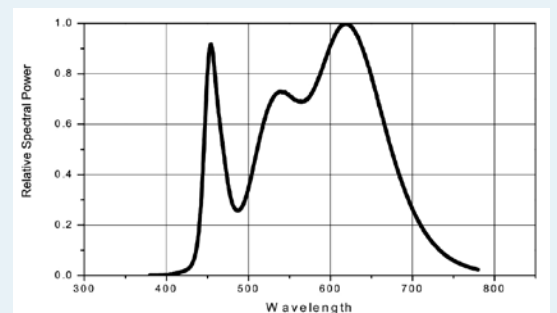
Continuously variable electronic dimming from 0–100% facilitates the precise adjustment of light intensity. When used in conjunction with Iris parallel bioprocess control software, not only are on/off cycles possible, but even the simulation of a daylight curve.

▶ Choice of light spectra

Warm white light in the standard design offers an ideal spectrum in the visible range that is similar to sunlight and contains a high proportion of photosynthetically-active light. Alternatively, other light colours such as red, blue, UV-A or infrared can be selected. The dimming of three colours independently of one another, allowing a dynamic change to the spectrum to be achieved, is optional.

▶ Multiple applications

Designed for the cultivation of algae, plant cells and cyanobacteria, the Labfors 5 Lux is ideal for every photosynthetic process, e.g. investigations into the feasibility of biofuel production using algae. The Labfors 5 Lux control unit is also perfectly suited for other applications, e.g. for bacteria or mammalian cell cultures – depending on the specification.



Key technical data

Total volume: 1.9 L

Working volume: 1.6–1.8 L

Light:
approx. 3000 $\mu\text{mol}/\text{m}^2\text{s}$
(approx. 180,000 lux)

Standard parameters:

- Temperature
- light
- pH
- pO_2
- antifoam/level
- feed
- Gas mix
- Gas flow

Additional parameters:

Easy integration of many online systems, e.g. extra sensors, balances, external pumps

- 4 x Analogue In
- 6 x Analogue Out
- 2 x Digital Out

Advanced process control features via Iris software, e.g. regulated control of medium feed

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