



FytoScope Chamber FS 130

FytoScope Chamber FS 130 represents a remarkable combination of a LED-based growth chamber and measuring device designed for well-defined cultivation and monitoring of higher plants. It is equipped with a LED-based light panel that provides high-intensity illumination that is controllable in its power, spectral composition and temporal modulation. Temperature and gas atmosphere composition can be constant or varied. The FytoScope has a large, easy-to-read display screen that clearly shows operating parameters and actual values. Intuitive programming allows multiple parameter changes to light intensity, light characteristics, temperature, or humidity (optional).

The FytoScope can also be used for growing algae and cyanobacteria in Petri dishes or Erlenmeyer flasks.

▼ APPLICATIONS

- Real-time, *in-situ*, high-content monitoring of plant performance
- Accurate, precision-controlled plant growth under defined light composition
- Accurately controlled growth of algae or cyanobacteria in Petri dishes or Erlenmeyer flasks
- Small footprint area for maximizing floor space in the lab
- Adequate space for cultivations under controlled temperature and light characteristics, intensity and mode
- Multi-line schedule for temperature and lighting

▼ KEY FEATURES

- High PPFD up to $1,500 \mu\text{mol}(\text{photons})\cdot\text{m}^{-2}\cdot\text{s}^{-1}$, optional $2,000 \mu\text{mol}(\text{photons})\cdot\text{m}^{-2}\cdot\text{s}^{-1}$
- Rapid modulation of irradiance simulating light flecks as well as precise adjustment of the light intensity in the range of 1 to 100 %
- Other colors LEDs available
- Digital display for temperature, relative humidity, and lighting intensity readings
- Independently programmable light composition and dynamics in PAR and NIR
- LED technology with minimum plant heating
- Temperature control: programmable controller ramps temperature up or down in the range of 7 to 50 °C
- Day/night cycle programmable
- Relative humidity control (optional)
- Integrated gas mixing system (optional)
- Incorporated module for measuring chlorophyll fluorescence parameters (optional)
- Cloudy sky simulation (optional)



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ONLINE MEASURED PARAMETERS (OPTIONAL)

- F_T , F_M , QY
- Relative humidity
- Temperature
- Light intensity
- CO₂ assimilation monitor

CONTROL SOFTWARE (OPTIONAL)

- Data collection in real time
- Data upload for processing during the experiment
- Data visualization in graphs or tables
- Web interface

VERSIONS

- WIR (white + far-red LEDs; cool white or warm white)
RGBIR (red + green + blue + far-red LEDs)

TECHNICAL SPECIFICATION

- **LED Light Illumination:**
LED panel 25 × 35 cm
- **Controlled Temperature Range:**
+15 to +50 °C
(with maximum illumination);
+7 to +50 °C
(without illumination);
+7 to +50 °C
(with maximum illumination) – optional
- **External Dimensions:**
100 × 55 × 62 cm (H × W × D)
- **Internal Dimensions:**
69 × 42 × 40 cm (H × W × D)
- **Weight:** 55 kg
- **Internal Volume:** 124 l
- **Refrigerant:** R134a
- **Air Ventilation:** 250 l/hour
- **Compressor:** 220–240 V; ~50 Hz;
160 W; 0.70 A
- **Power:** 300 W
- **Power Input:** 500 W

