

# Light Analyzer LA-105



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**Affordable and Convenient Light Analyzer with High Precision**  
LA-105 complies with Class AA of JIS C 1609-1:2006.

## Features

Light Analyzer (LA-105), specially designed for light sources for plants, can easily measure various light sources. Photosynthesis in plant growth highly depends on the quality of light. Various morphogenesis is controlled from seeds to fruition during the plant growth. This photomorphogenesis is known to require various kinds of light, and thus the light should be precisely measured as photon flux.

Light Analyzer (LA-105) makes it possible to precisely measure photon flux at each wavelength. In monochrome light sources including LED, the best light source and/or photon flux can be selected for plant growth by measuring PPFD.\*

Light Analyzer (LA-105) is equipped with a 3.5 inch touch panel and easy-to-use interface. The optical part can be separated from the main body. The data can be stored in a SD card. The obtained data can be easily controlled with dedicated software by connecting LA-105 to a personal computer via USB cable.

\*PPFD: Photosynthetic Photon Flux Density

## Measuring Capabilities

- (1) Correlated Color Temperature (CCT),
- (2) Illuminance / Foot Candle (fc),
- (3) Color Rendering Index (CRI / R1 to R15),
- (4) Spectral irradiance
- (5) CIE Chromaticity Coordinates (I) CIE 1931 x, y Coordinates (II) CIE 1976 U.C.S u', v' Coordinates,
- (6) Peak wavelength / Dominate wavelength,
- (7)  $\Delta x$ ,  $\Delta y$ ,  $\Delta u'$ ,  $\Delta v'$ ,
- (8) Duv, Purity,
- (9) PPFD (400 to 700 nm), PFD-R (600 to 700 nm), PFD-G (500 to 600 nm),  
PFD-B (400 to 500 nm), PFD(380 to 780nm), PFD-UV(380 to 400nm), PFD-FR (700 to 780nm),
- (10) Irradiance

## Specifications

Model	LA-105
Dimensions	196H × 78W × 30D mm
Spectral Bandwidth	Approximately 12 nm ( Half Bandwidth )
Wavelength Data Increment	1 nm
Inner Diameter of the Optical Part	φ 6.9 ± 0.1 mm
Illuminance Meter Class	Class AA of JIS C 1609-1:2006
Wavelength Range	380 to 780 nm
Exposure Time	2 to 1,000 ms
Measurement Range	(1) 70 to 150,000 lx (illuminance), (2) 0.5 to 1,000 Wm <sup>-2</sup> (irradiance), (3) 1 to 3,000 μmolm <sup>-2</sup> s <sup>-1</sup> (photon flux density)
Display mode	(1) Basic mode, (2) spectral mode, (3) PFD, (4) PPFD, (5) CIE mode, (6) Logging mode
Measuring mode	Single/Continuous (logging mode)
Exposure mode	Automatic/Manual
Battery Operation Time	≤ 5 hours when fully charged
Number of Maximum File	About 78,000 files in a 16GB SD card
Display languages	English / Japanese / Simplified Chinese / German