

RAYO - Multiwavelength Plate Reader

Technical Specifications



General

Detection Method	▶ Absorbance
Measurement Modes	▶ Kinetic, Endpoint
Plate Types	▶ 6-, 12-, and 96-well, plus Cerillo Duet Co-Culture plate
Dimensions	▶ W: 15 cm D: 11.5 cm H: 9.1 cm
Liquid Handler Internal Clearance	▶ 1-, 8-, and 12-channel pipettes Vertical and horizontal plate grippers
Weight	▶ 1 kg
Power Input	▶ 12V DC, 5.5A peak
Power Draw	▶ 65W peak, <5W idle

Measurement

Environmental Tolerance	▶ Temperature: 0–50°C Humidity: 0–99% (<i>non-condensing</i>) O ₂ concentration: 0–21% CO ₂ concentration: 0–25%
Wavelengths	▶ 405nm, 450nm, 590nm, 740nm
Resolution	▶ 0.001 OD
Detection Range	▶ 0.000–4.000 OD
Linearity	▶ < ±1% (0.000 - 2.000 OD)
Accuracy	▶ < ±1% and ±0.05 OD (0.000 - 2.000 OD)
Repeatability	▶ < ±0.25% and ±0.01 OD (0.000 - 2.000 OD)
Data Storage	▶ microSD card; up to 32 GB (16 GB card provided)

Software

Operating System	▶ macOS 13 (Ventura) or higher; Windows 10 or 11
Data Export Formats	▶ .csv (on-board device), .xlsx, .pdf
Data Interface	▶ USB 2.0 over USB-C

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