

INNO-S™

Absorbance, Luminescence & Fluorescence Microplate Reader



Wide selections with different wavelengths for the fluorescence filters



Optional product is available with INNO-S

Technical Details

Detection modes	Fluorescence (top and bottom), Time-resolved fluorescence, Luminescence, UV-Visible absorbance
Read methods	End point, Kinetic, Spectral scanning, well-area scanning for Absorbance. Luminescence and fluorescence are available with End point, kinetic and area scanning.
Microplate types	6 to 384 well plates and NANO-VC™
Temperature control	Incubation up to 50°C ; ±0.5°C at 37°C
Shaking function	Linear & Orbital with 4 different speeds
Software	INNO-X™ (basic software) & INNO-XS™ (21 CFR part 11 Compliance software) (Optional)

Physical Characteristics

Connectivity	1 USB, 1 RS232 for external PC control
Power	100 – 240 Volts AC. 50/60 Hz
Dimension (mm)	408W x 390L x 290H
Weight	18.2 kg

Time-Resolved Fluorescence

Light source	High power LED
Wavelength selection	Filter

Regulatory

CE and RoHS compliant, ISO 9001, ISO 13485, ISO 14001, RoHS, IVD, and 21 CFR part 11 compliance software

Applicable optional products

Reagent Injector(INNO-D)	<ul style="list-style-type: none"> • 2 Syringe pumps • 15 ~ 1000µL • Minimum prime Vol. 1.1mL. 100µL with back flush
Read methods	<ul style="list-style-type: none"> • 2~ 2.5µL total 24 wells • 2.5ml cuvette holder • DNA/RNA, Lysozyme, DsDna, and Etc
Microplate types	<ul style="list-style-type: none"> • Absorbance linearity and accuracy QC • Luminescence linearity and crosstalk QC • Fluorescence linearity QC

Specifications

Certifications

- CE Marked
- ISO 9001 / ISO 13485 / ISO 14001
- RoHS
- IVD
- 21 CFR part 11 Compliance software



Absorbance	
Light source	Xenon flash lamp
Detector	Photodiode
Wavelength selection	Monochromator
Wavelength range	200 - 999 nm, 1 nm increments
Dynamic range	0-4.0 OD
Resolution	0.0001 OD
Monochromator wavelength accuracy	±2 nm
Monochromator wavelength repeatability	±0.2 nm
OD linearity	<1% from 0 to 3.0 OD
OD repeatability	< 0.5% at 2.0 OD

Fluorescence Intensity	
Sensitivity	Top and Bottom : Fluorescein 5 pM (1 fmol/well, 96-well plate)
Light source	High Power Led (Life time - 100,000 hours)
Wavelength selection	Filters
Wavelength range	350 - 750 nm (Options 850nm)
Dynamic range	>6 decades
Detector	PMT

Luminescence	
Sensitivity	Sensitivity - 10 amol ATP(FLASH) - Multi-mode
Wavelength range	250 - 750 nm (Options 850nm)
Dynamic range	>6 decades
Detection system	Low noise PMT
Peak wavelength	410 nm
Limit of Detection (moles)	10 amol

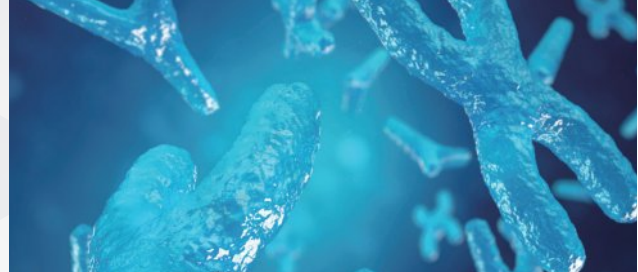
INNO-S™ Typical Applications

- Protein quantification
- Enzyme kinetics
- Protein quantification
- Cell proliferation
- Cytotoxicity
- Environmental monitoring
- Genetic analysis
- Food safety



Nucleic acid quantification

- Spectrophotometric determination of dsDNA, ssDNA, RNA at A_{260}
- Fluorometric determination of dsDNA with fluorescent dyes, for example, PicoGreen
- Determination of purity based on A_{260}/A_{280} ratios



ELISAs

Enzyme-Linked Immunosorbent Assay (ELISA) is one of the most used immunoassay in modern bio research

- Indirect ELISA
- Sandwich ELISA
- Competitive ELISA
- Nucleic acid quantification
- Spectrophotometric determination of dsDNA, ssDNA, RNA at A_{260}
- Determination of purity based on A_{260}/A_{280} ratios



Fluorescence Applications

- Calcium Assay (GPCR)
- Caspase-3 apoptosis Assay
- Cell Growth Assay
- Cytotoxicity Assay
- Fluorescent protein quantification
- Nucleic Acid quantification



Luminescence Applications

- ATP based Cell Viability Assay
- Chemiluminescent ELISA
- Cytotoxicity Assay
- Mycoplasma Monitoring
- NanoBRET/BRET

Features



By using lamp and monochromator, all of our readers with absorbance mode allows you to measure from 200 to 999 nm freely at your choice of 1nm increment. Xenon lamp(in absorbance) will serve the instrument semi permanent life time which allows the users to experience comfort since lamps do not need to be replaced such as halogen lamps.



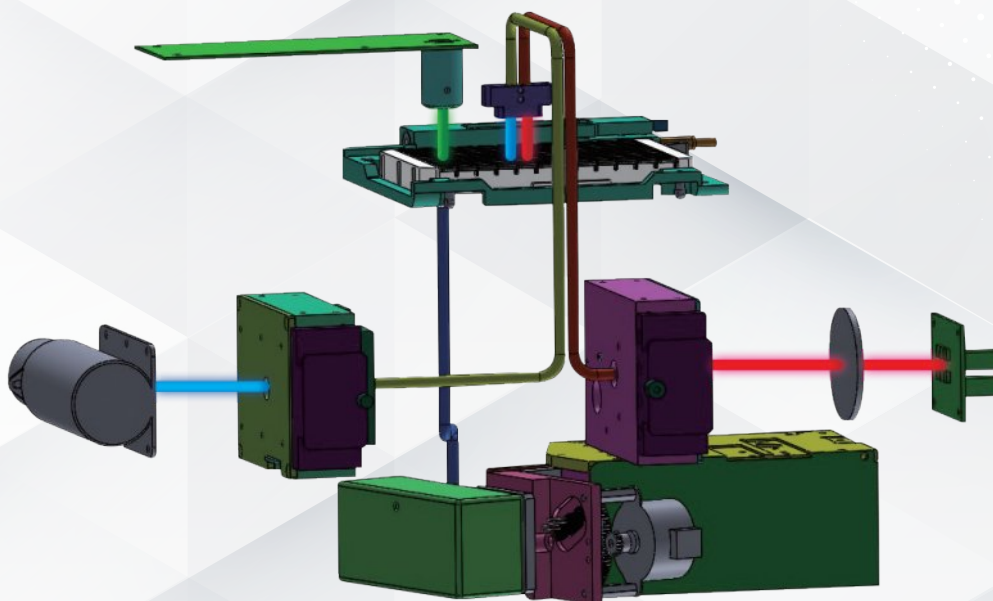
Supporting dual injector with variety of shaking technologies and incubating function up to 50°C.



Using INNO-XS™ (21 CFR Part 11 Compliance) offers high performance software and safety reliable security for personal data with CFR Part 11 Compliance function.

INNO-S™

Monochromator and filter optics



INNO-S™ has three main detecting functions. Since INNO-S™ is a monochromator-based microplate spectrophotometer for the absorbance measurements, it requires zero filters and allows you to measure from 200 to 999 nm freely at your choice of 1nm increment. Also Xenon lamps in absorbance will serve the instrument semi-permanent life time which brings the comfortable experiences to the users since the lamps do not need to be replaced such as halogen lamps.

Fluorescence using High Power LED to provide TRF(Time Resolved Fluorescence) and various convenient features as ready to run at "on". Also HPL has semi-permanent life time which the user does not have to go through the burdens such as switching the fluorescence light source every once in a while.

Main Features

- 01 Monochromator-based UV-Vis absorbance
- 02 High power LED and filter-based fluorescence detection for flexibility and performance
- 03 Time Resolved Fluorescence (TRF)
- 04 2µL low volume nucleic acid quantification with NANO-VC™ plate (Option)
- 05 Cell friendly orbital shaking and advanced incubator design up to 50°
- 06 Dual reagent injectors for inject/read applications
- 07 Provides a software with powerful and diverse functions with 21 CFR Part 11 Compliance