

Technical Data

Zenyth
1100 3100

	1100	3100	
General			
Light Source:	High Power LEDs (Light Emitting Diodes)	x	x
	Deuterium Lamp		x
Plate Types:	96- and 384-well plates (max. plate height: 25mm)	x	
	6-, 24-, 48-, 96-, 384-well plates (max. plate height: 25mm)		x
Detector:	Silicon Photodiode and CPM Photomultiplier Tube	x	x
Shaking:	3 speeds (linear, orbital and squared)	x	x
Temperature Control:	3°C above ambient to 45°C (VIS; > 369nm);		x
	4°C above ambient to 45°C (UV; Deuterium Lamp)		x
Interface to PC:	Serial Interface 9-pin (RS232)	x	x
Power Supply:	100 - 240VAC, 50/ 60Hz	x	x
Dimensions/ Weight:	Width 39cm, Depth 58cm, Height 24cm/ 25kg	x	x
System Requirements:	recommended Operating System - Windows™ NT4/2000/XP	x	x
	recommended Hardware - Pentium II, 300MHz, 128MB RAM	x	x
Absorbance			
Wavelength Range:	340 - 650nm (VIS)	x	
	230 - 650nm (UV/ VIS)		x
Resolution:	0.1mOD from 0 - 3.5OD	x	x
Accuracy:	<+ 1% and ± 10mOD at 2.0OD (at 405nm)	x	x
Linearity:	<± 0.75% and ± 0.010OD from 0.1 up to 3.0OD (> 399nm)	x	x
	<± 0.75% and ± 0.010OD from 0.1 up to 2.5OD (< 400nm)	x	x
Reproducibility:	<± 0.5% and ± 0.005OD at 2.0OD (400 - 650nm)	x	x
	<± 0.5% and ± 0.005OD at 1.0OD (230 - 399nm)		x
Luminescence (Glow Type)			
Wavelength Range:	400 - 650nm	x	
	400 - 750nm		x
Detection Limit:	2fmol ATP; white 96-well plate	x	x
Linear Dynamic Range:	5 decades	x	x
Fluorescence Intensity Top (FI Top)			
Wavelength Range:	Excitation 340 - 630nm, Emission 390 - 650nm	x	
	Excitation 230 - 650nm, Emission 390 - 750nm		x
Detection Limit:	10fmol/ 200µl Fluorescein, black 96-well plate, 1s integration time	x	
	5fmol/ 100µl Fluorescein, black 384-well plate, 0.4s integration time	x	
	1.5fmol/ 200µl Fluorescein, black 96-well plate, 1s integration time		x
	1.5fmol/ 100µl Fluorescein, black 384-well plate, 0.4s integration time		x
Fluorescence Intensity Bottom (FI Bottom)			
Wavelength Range:	Excitation 300 - 630nm, Emission 390 - 650nm		x
Detection Limit:	50fmol/ 200µl Fluorescein, black 96-well plate, 1s integration time		x
	25fmol/ 100µl Fluorescein, black 384-well plate, 0.4s integration time		x
Fluorescence Polarization (FP)			
Wavelength Range:	Excitation 300 - 650nm, Emission 390 - 750nm		x
Detection Limit:	5mP at 10nM Fluorescein, black 96-well plate, 1s integration time		x
	5mP at 10nM Fluorescein, black 384-well plate, 0.4s integration time		x
Time-Resolved Fluorescence (TRF)			
Wavelength Range:	340 - 750nm		x
Detection Limit:	50amol/ 200µl Europium, white 96-well plate, 1s integration time		x
	30amol/ 100µl Europium, white 384-well plate, 0.4s integration time		x
Linear Dynamic Range:	5 decades		x
Scope of Supply			
Dustcover, Spare Fuses, Power and Serial Cable; Standard Software and User Manual on CD	x	x	
2 Filter Slides - 2 FI filter pairs (Coumarin, Fluorescein), 4 Abs. filters (405, 450, 492, 620nm)	x		
2 Filter Slides - 2 FI (Rhodamin, Fluorescein), 3 FP (Fluorescein), 1 TRF (Europium) filter pair(s)		x	
1 Absorbance Filter Slide (260, 340, 405, 450, 595, 620nm)			x

Manufacturer

Anthos Labtec Instruments GmbH, Salzburg - Austria, www.anthos-labtec.com

Zenyth 1100 & 3100

Microplate Multimode Detector



The new Anthos Zenyth multilabel platform is designed to cover the needs of the demanding laboratory environment of academic, pharmaceutical and routine labs.



- ▶ Multi-mode system (Fluorescence, Luminescence, Absorbance)
- ▶ High end specifications
- ▶ Intuitive and user-friendly Software
- ▶ Unique technical design (high power LEDs, XY transport)
- ▶ Multi filter slides (providing easy filter management)
- ▶ Capability for robotic integration

Two versions - Zenyth 1100 and Zenyth 3100 - cover all common non-radioactive detection modes.

Zenyth 1100

Zenyth 1100 is a compact multi-functional microplate detector providing 3 detection technologies in one instrument. Therefore, the instrument offers an excellent solution for customers in biotech- and research laboratories.

Detection Technologies and Applications:

- ▶ **Fluorescence Intensity Top technology** for Nucleic Acid and Protein quantitation, Immunoassays, Enzymes
- ▶ **Glow Type Luminescence technology** for ATP detection, LIA, Reporter assays
- ▶ **Absorbance Visible technology** for ELISA, Bradford, Enzyme Kinetics

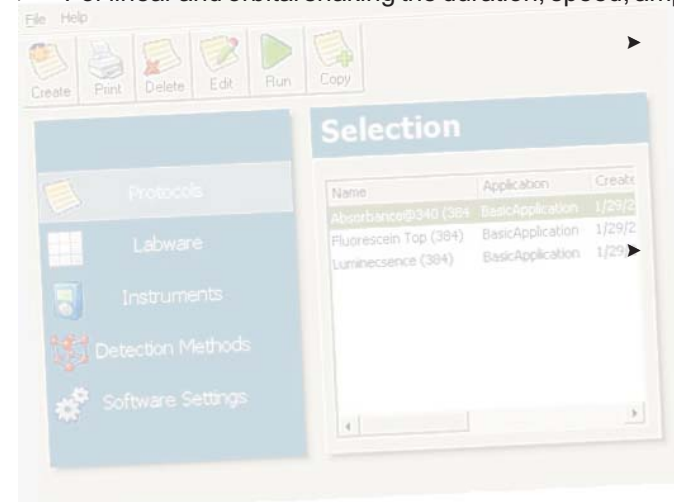
Different measurement modes, plate formats from 96- to 384-wells, wavelength range from 340 - 650nm, easy to use and intuitive software, as well as the unique technical design allow comfort and flexibility.

Unique Technical Design:

- ▶ The single photon counting system for Fluorescence and Luminescence ensures a wide dynamic range for detection of samples which differ in light output.
- ▶ Maintenance free high power LED's (Light Emitting Diodes) as light source provide high sensitivity and flexible specific wavelength ranges.
- ▶ The highly focussed light beam of the fiberless optics prevents crosstalk and ensures high sensitivity for a broad range of applications.

Additional Features and Benefits:

- ▶ Two Fluorescence Intensity filter pairs (Coumarin and Fluorescein) and four absorbance filters (405, 450, 492, 620nm) as standard filter configuration cover most of the common microplate Fluorescence and Absorbance applications.
- ▶ Fast switching of emission filters for FRET assays (< 1 second)
- ▶ For linear and orbital shaking the duration, speed, amplitude can be defined.



- ▶ Both, Hard- and Software are designed for user friendly high-volume testing and for seamless integration into robotic systems. Plates can be loaded in both directions (portrait, landscape) and dispensed inside the plate carrier.

The intuitive Standard Software enables a clear navigation of the instrument supporting the corresponding detection modes, data exports and a labware library.



Zenyth 3100

Zenyth 3100 is an expanded version of Zenyth 1100 providing 5 detection technologies in one instrument. With all major non-radioactive detection technologies onboard, Zenyth 3100 supports nearly all kinds of applications in molecular biology, biochemistry, environmental and food testing, toxicology and drug screening.

Detection Technologies and Applications:

- ▶ **Fluorescence Intensity Top technology** for Nucleic Acid and Protein quantitation, Immunoassays, Enzymes, Reporter assays.
- ▶ **Fluorescence Intensity Bottom reading** is the mode of choice to perform cell based applications where plates are covered to maintain sterility. Especially very common for Calcium determination, GFP-Reporter and Live-Dead assays.
- ▶ **Fluorescence Polarization** for binding studies (receptor-ligand)
- ▶ **Time Resolved Fluorescence** for Protein phosphorylation.
TRF measurements can be performed by using the Europium label (excitation by 340nm).
- ▶ **Glow Type Luminescence** for ATP detection, LIA, Reporter assays
- ▶ **Absorbance UV/VIS** for direct nucleic acid and protein quantitation, colorimetric assays.

This instrument with five detection modes features flexible plate format selection from 6- up to 384-well plates, wavelength range from 230 - 750nm, easy to use and intuitive software, temperature control and unique technical design for demanding modern laboratories.

Unique Technical Design:

- ▶ The adjustable beam focus offers the user the ability to optimize the signal to noise ratio for 6- to 384-well plates.
- ▶ For Fluorescence and Absorbance (visible range) maintenance free high power LED's (Light Emitting Diodes) guarantee high sensitivity and flexible specific wavelength ranges. For low UV Absorbance and UV Fluorescence Intensity measurements a deuterium lamp is used as light source.
- ▶ Zenyth 3100 is equipped with the same fiberless optics & single photon counting system as Zenyth 1100.

Additional Features and Benefits:

- ▶ For each detection technology the system provides filters for the most common applications. Two Fluorescence Intensity filter pairs (Rhodamin and Fluorescein), three filters for Fluorescence Polarization studies with the Fluorescein label and one Europium filter pair for Time Resolved measurements are included. In addition, one separated absorbance filter slide (260, 340, 405, 450, 595, 620nm) covers all major absorbance applications in Life Science and Routine.
- ▶ In cell based assays the demand for red dyes is increasing and, therefore, the instruments is equipped with a red sensitive PMT (750nm).
- ▶ Zenyth 3100 supports the same Hard- & Software features, shaking, robotic integration as Zenyth 1100.