



Diamond

- Introduction

Diamond

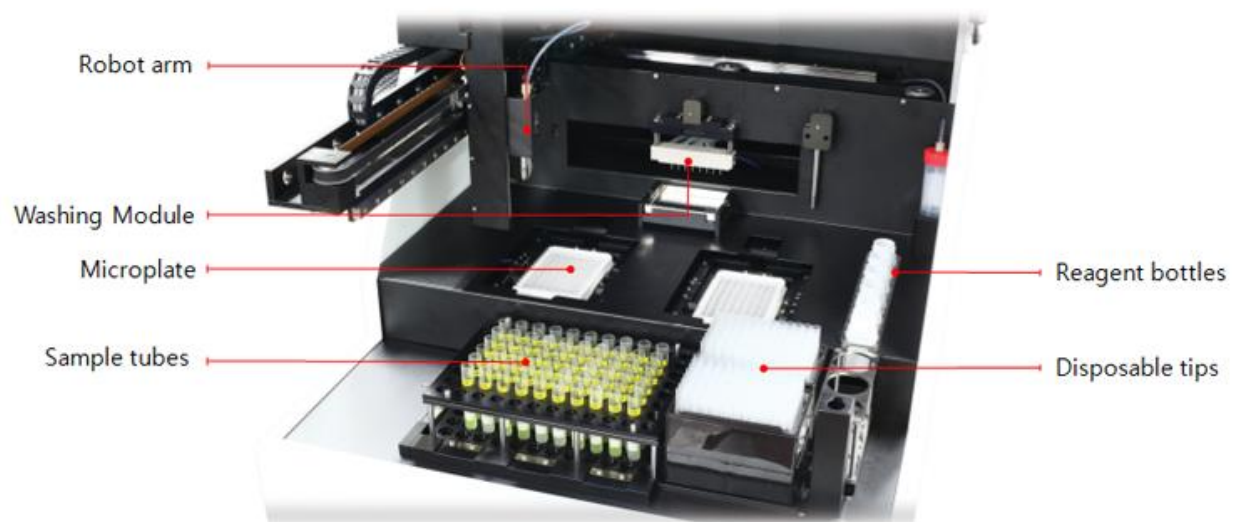
Fully Automatic Immuno Analyzer

Diamond – Fully Automatic Immuno-Analyzer takes care of sample and reagent handling to well washing and optical measurement with a touch of a button.

Diamond is a convenient and accurate fully automated system specialized for CLIA(chemiluminescence immunoassay) and ELISA(enzyme-linked immunosorbent assay)

Feature

- Fully automated immunoassay system (luminescence, absorbance measurement)
- Open platform
- Compatible with conventional 96-well plates
- Quick and accurate control
- Minimized inter-well cross contamination through the use of disposable tips
- Accurate liquid handling



Specification

General	
Sample Capacity	96 Patient Sample Positions
Reagent Capacity	9 Custom Reagent Positions
Test Tube	Standard 13, 16 mm diameter (Customizable)
No. of Microplate	2 Microplate Positions
Barcode Reader	Optional
System Architecture	Universal Open Platform (Qualitative and Quantitative)
Sample Tray	Easy loading and unloading of samples
Dimension	659 x 814 x 658 mm
Power	100 – 240 V, 50 – 60 Hz
ELISA Reader Specification	
Dynamic Range	0 – 3.0 OD
Photometer	450, 630 nm (Optional: 405, 490, 550 nm)
Filter Slots	6

Precision	<1% CV (2.0 OD)
Accuracy	±0.005 OD or 2.5%
CLIA Reader Specification	
Dynamic Range	Up to 7-log of dynamic range
Limit of Detection	1 x 10 ⁻¹⁸ moles of ATP
Crosstalk	3.0 x 10 ⁻⁵
Washer	
Manifold Configuration	8 Channels
Dispense-volume Range	100 – 350 µl
Washing Tank	2 External Washing Tanks (2.5L) and 1 Waste Tank (5L) with level sensing
Wash Cycle	1 - ∞ (Customizable)
Residual Volume	<1 µl
Incubator	
Temperature Range	Up to 42°C
Temperature Uniformity	±1°C
Shaking	Amplitude: 1 mm, Speed: Up to 800 RPM
Temperature Monitoring	Yes
Pipetting	
Aspiration Volume	≥5 µl
Tip	Disposable
Serial Dilution	Yes
Replicates	Yes
Precision	<0.8% CV at 100 µl

Process Security	
Liquid-level Detection	Yes (Must use tips from MicroDigital)
Level-sensor System	Pressure Differential
Dispense-anomaly Detection	Yes
Tip Detection	Yes
Well-fill Verification	Yes
Alarms	Warning Message on PC Software
Software	
Operating Software	Diamond Software for PC
Work Protocols (Assays)	Unlimited
Data Processing	Quantitative and Qualitative
Access Level Control	Yes (Master, Manager, and Operator)
O/S	Windows®
Models	
Diamond E	System for ELISA
Diamond C	System for CLIA
Diamond M	System for ELISA & CLIA