

OPTIZEN NanoQ Lite

SMART MICROVOLUME SPECTROPHOTOMETER



The Smart Microvolume Spectrophotometer



OPTIZEN NanoQ Lite is a small micro sample analyzer with a simple yet sophisticated design and easy and convenient user interface (UI). It applies the Slope Algorithm, which is a light path optimization technique, to enable measurement of a wide range of absorbance. Using three LED (260 nm, 280 nm, and 600 nm) and a single silicon photodiode, it lowered the product cost drastically while maintaining the needed functions and performance level. It can perform the baseline correction function using an additional LED (360 nm).

Metrics: dsDNA, ssDNA, RNA, Protein, Lysozyme, BSA, IgG, OD600

1

Portable

It is a small spectrophotometer featuring compact size and main unit control

2

Quick Boot

There is no need for measurement standby since it does not require a lamp warming-up.

3

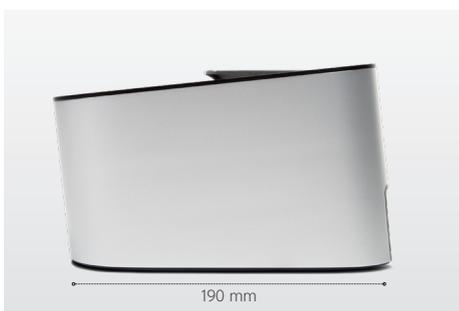
Auto Pathlength

A user can conduct the measurement quickly since there is no need to set the pathlength according to the concentration.

4

Quick Button

A user can run the main functions quickly with a button.



Slope Algorithm

OPTIZEN NanoQ Lite uses the Slope Algorithm to automatically determine the sample concentration to be High, Middle, or Low and set the optical path optimized for the measurement.

“Slope Algorithm” applies Beer’s Law to improve the performance of measuring the concentration of the sample using the absorption change according to the change of the optical path and the linearity. NanoQ Lite uses this algorithm to offer the high measurement performance in a wide concentration range.



Slope Algorithm

It is the technology to improve the measurement performance of the sample concentration using the absorption change according to the change of the optical path and the linearity.

Maximization of user-friendliness

There is no need for a user manual since it provides a simple and intuitive user environment.

Cuvette Holder

It can measure protein and conduct cell counting.

Data management

The measurement result can be saved or downloaded to a USB flash drive or smartphone.

LCD Touch Screen

A user can easily operate the system using the intuitive LCD screen and touch functions.

Loading Guide

It helps even novice users to drop the sample easily and accurately on the loading spot.



Quick button

* It is equivalent to pressing the [Measure] button in the measurement mode.

* Enters power saving mode when the button is pressed for 2-3 seconds / Press the button for 2-3 seconds to release it.



Stand-Alone

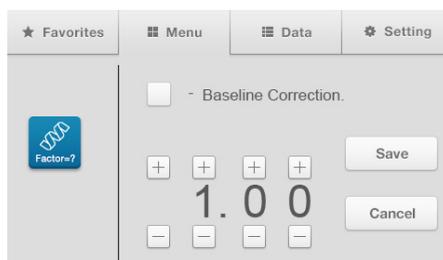
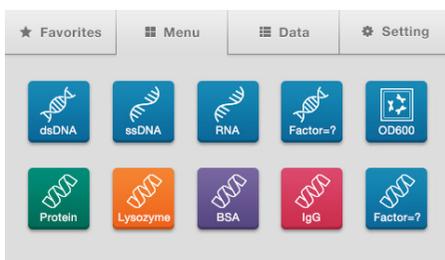
It does not need a separate computer since the main unit performs the control, and the measurement data can be saved in the equipment to improve the spatial utilization and economic efficiency.

Portable

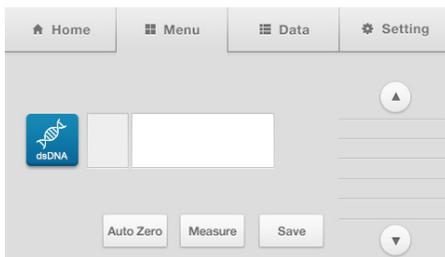
The lightweight and small spectrophotometer features the dimensions of 148 x 179 x 110 mm and weight of 1.4 kg.

4.3-inch Touch LCD

The built-in touch LCD panel helps users operate it easily and conveniently.



There is no need for a user manual since it provides a simple and intuitive user environment. The designated factor is set as the default value for each mode, and the input mode is provided to allow the users to set a factor value which is different from the default. Users can specify the factor appropriate for the user preference, the lab environment, and the type of protein.



Target elements		
	Menu	Factor
Nucleic Acid	ds DNA	50
	ss DNA	33
	RNA	40
	Other	Input
Protein	Protein	1
	BSA	1.49
	IgG	0.72
	Lysozyme	0.37
OD600	Other	Input
	OD600	1

OPTIZEN NanoQ Lite

SPECIFICATIONS

Instrument Type	Microvolume Spectrophotometer
Minimum Sample Volume	1 μ L
Sample Number	1
Pathlength	0.3 ~ 0.5 mm
Spectral Resolution	\leq 8.0 nm
Absorbance Precision	0.002 AU (0.5 mm path)
Absorbance Range	0 – 200 Abs
Detection Limit	About 2 ng/ μ l (dsDNA)
Maximum Concentration	dsDNA – Pedestal: 2,000 ng/ μ L BSA – Pedestal: 60 mg/ μ L, IgG – Pedestal: 28.8 mg/ μ L
Photometric	Range(10 mm Equivalent) – Cuvette: 0~2 A Accuracy – 3% (at 1A/mm at 280 nm)
Light Source	LEDs
Measurement Wavelength	260, 280 nm / 600 nm(Cuvette)
Baseline Correction Wavelength	360 nm
Detector	Silicon photodiode
Measurement Time	< 10 seconds
Footprint(W \times D)	145 x 190 mm
Weight	1.4 kg
Operating Voltage	12 V (DC)
Power Consumption	Operating – 4.7~5.2 W, Standby – 3.3 W
Display	4.3-inch, Touch–screen glove compatible
Display resolution	480 x 272 pixels (Color display)
Internal Storage	4 GB
Connectivity	USB–A, USB–B, RS232C, Bluetooth
Accessories	Thermal Printer(Optional)

* The contents of this document may be changed without notice.

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