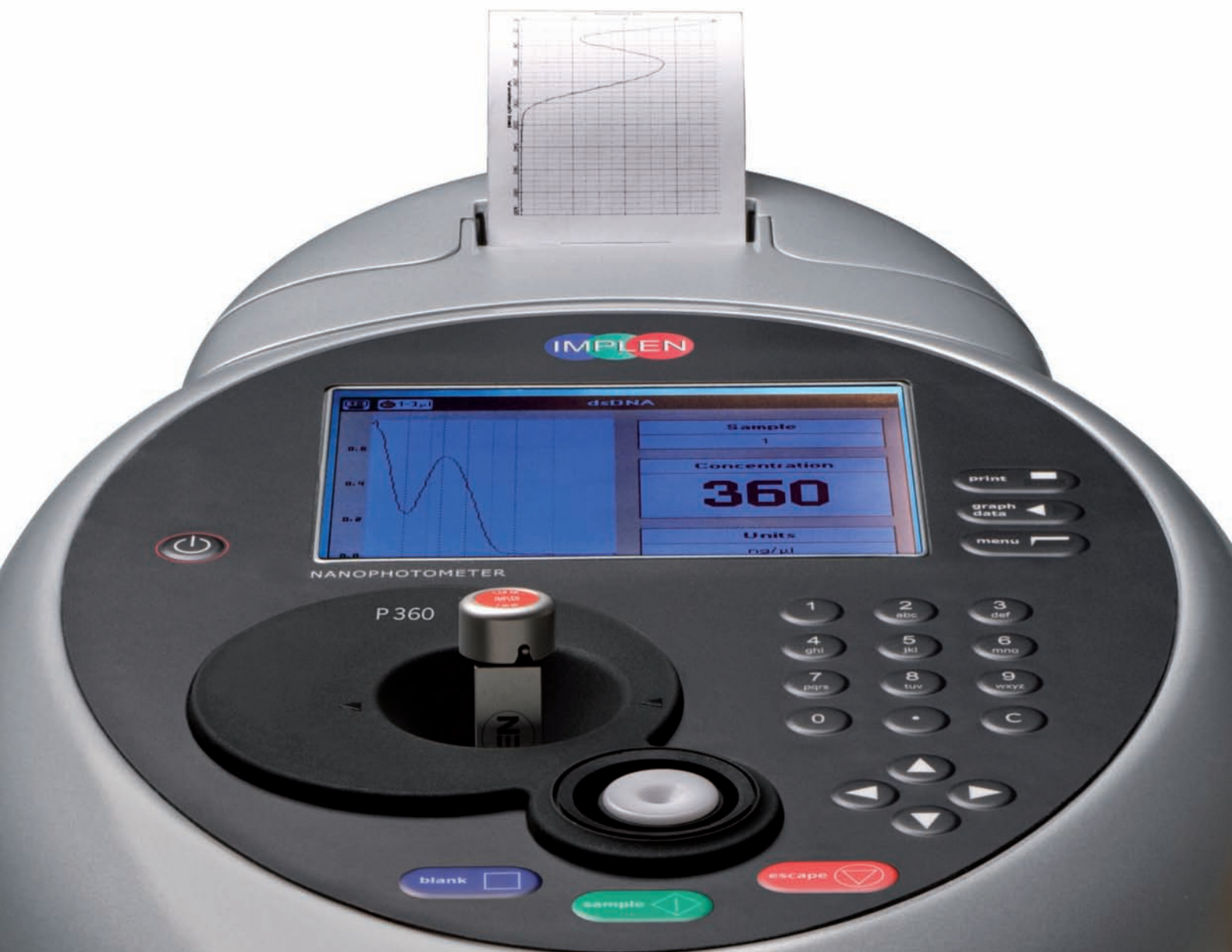


Small. Fast. Accurate.

NanoPhotometer™ P-Class



NanoPhotometer™ P-Class



Small

0.3µl sample volume

Sample Compression Technology™ allows for accurate determination of nucleic acids, proteins, and peptides in ultra low sample volumes

Fast

3.5 seconds per reading

Turn on and instantly measure without lamp warm up time; Full scan capability from 200-950nm in 3.5 sec

Accurate

Lifetime accuracy without recalibration

Sealed optics without moving parts or pathlength drift eliminates the need for costly and time consuming recalibrations; Avoid evaporation and sample limitations utilizing the patented Sample Compression Technology™

Flexibility and Mobility

All-in-One

Small volume and cuvette capability always standard; Standalone mobile design with large LCD display and available thermal printer for convenient direct printing; Electronic data can be automatically generated in a variety of file formats when connected to a PC; Bluetooth or SD-Memory capability is available on select models

Detection Range

Widest concentration coverage

Apply NanoVolume samples directly without dilution; Optical alignment, high linearity, and automatic dilution provide the widest concentration range of dsDNA 2-18,750 ng/ul and protein (BSA) 0.08-543 mg/ml

Standardization

Optimized Sample Condition

Ensure homogeneous samples with built-in low vibration vortexer option for consistent readings and accurate results over the entire life-time



Small

0.3 μ l sample volume

Sample Compression Technology™ allows for accurate determination of nucleic acids, proteins, and peptides in ultra low sample volumes

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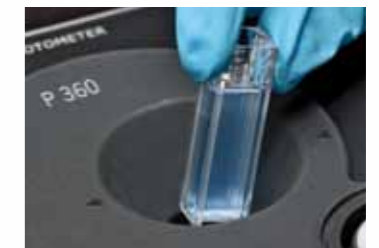
NanoVolume Capability



0.3 μ l analysis with patented* Sample Compression Technology™

*US Patents 20080204755 and 20080106742

Cuvette Capability



Wide concentration range for cuvettes (up to 2.5 Abs); Removable cell holder for easy cleanup after accidental spills; Methods optimized for OD600, Bradford, Lowry, Biuret, BCA and Kinetics

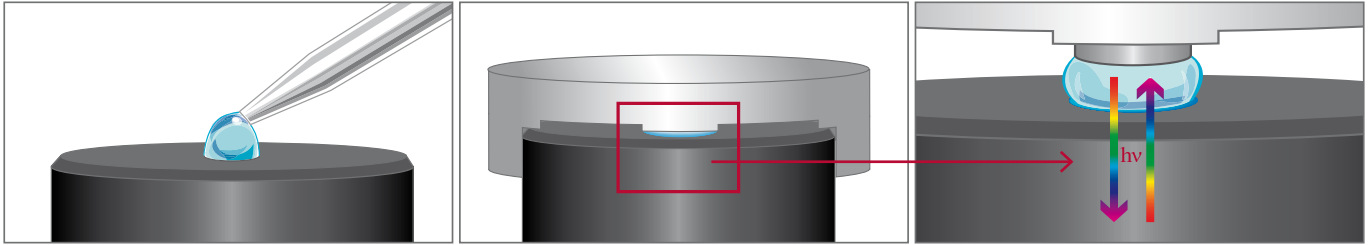
Built-in Vortexer



Achieve sample uniformity by vortexing prior to each measurement; Obtain readings that represent the accurate concentration of the entire sample

Performance and Applications

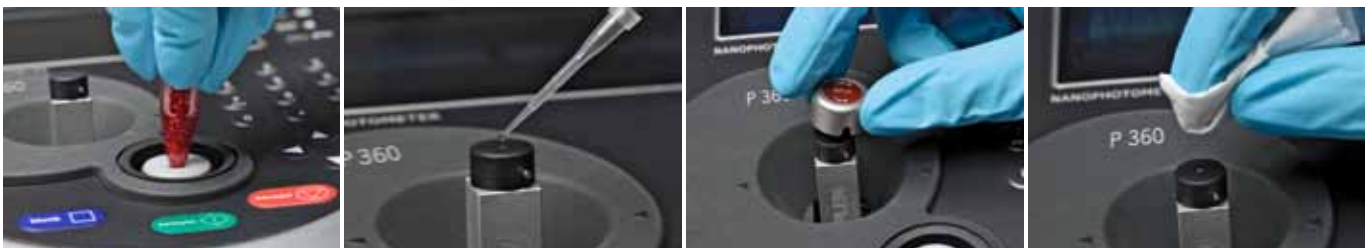
Sample Compression Technology™



- | Dual Absorption™ of light for ultra sensitivity at low concentrations with minimal sample volumes of 0.3µl
- | Reliable solution for small volume protein measurements due to independence of sample surface tension; No issues of column formation with low surface tension samples

- | Reproducible results due to contained micro sample environment; Applications expanded to analytes in volatile solvents, such as drugs or other challenging sample types
- | No recalibration or maintenance as optical components and pathlengths are fixed without drift; Quartz sample surface is scratch resistant, inert, and does not require regular surface reconditioning

Easy Handling



Mix sample

Apply sample

Automatic sample dilution

Quick and easy cleaning

Professional Quantification

NUCLEIC ACIDS
2 – 18,750 ng/µl
(dsDNA)

PROTEINS
0.08 – 543 mg/ml (BSA)

OD600
0.01 – 2.5 OD

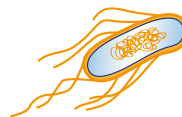
CONCENTRATION RANGE



DNA, RNA, Oligo

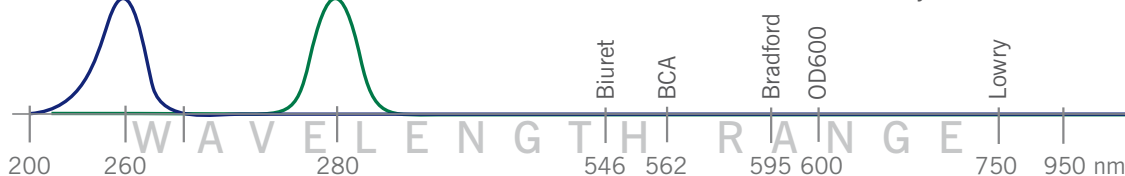


BSA, SA, IgG,
Lysozyme, Custom



Yeast & Bacteria
in Growth Curves

← Labelling of Nucleic Acids & Proteins
Colorimetric Protein Assays →



Technical specifications

SMALL VOLUME OPTION

Detection range	dsDNA: 2 ng/ μ l to 18,750 ng/ μ l, BSA: 0.08 mg/ml to 543 mg/ml
Photometric range	0.01 – 1.5 A (10 mm equivalent: 0.05 – 375)
Minimum sample size	0.3 μ l
Path lengths	0.04 mm, 0.1 mm, 0.2 mm, 1 mm and 2 mm
Virtual dilution factors	5, 10, 50, 100 and 250

SPECTROMODULE

Wavelength range	190 – 1,100 nm
Wavelength scan range	200 – 950 nm
System start up time	Less than 5 seconds, no warm up necessary
Measure time for full scan range	3.5 seconds
Wavelength reproducibility	< \pm 0.2 nm
Wavelength accuracy	\pm 2 nm
Bandwidth	Better than 5 nm
Stray light	< 0.5% at 220 nm using NaI and 340 nm using NaNO ₂
Photometric range	-0.3 – 2.499 A 0 – 199% T
Detection Range	dsDNA: 0.5 ng/ μ l to 125 ng/ μ l, BSA: 0.02 mg/ml to 3.6 mg/ml
Absorbance reproducibility	\pm 0.003 A (0 to 0.5 A), \pm 0.007 A (0.5-1.0 A) @ 260 nm
Absorbance accuracy	\pm 0.005 A or \pm 1% of the reading, whichever is the greater
Zero stability	\pm 0.003 A/hour after 20 min warm up @ 340 nm
Noise	0.002 A rms at 0 A @ 260 nm 0.005 A (pk to pk) at 0 A @ 260 nm
Optical arrangement	Dual channel Czerny Turner with flat grating, 1024 pixel CCD array, concave mirrors
Lamp	Xenon flash lamp
Lifetime	10 ⁹ flashes, up to 10 years
Cell types	15 mm centre height (z-height), outside dimension 12.5 mm x 12.5 mm

OTHER TECHNICAL DATA

Vortexer	2,800 rpm; tube size up to 2.0 ml
Cuvette storage	capacity for eight 10 mm cells
Photometric mode	Abs, %T, concentration, scan, ratio, multi wavelength, kinetics in Δ Abs x factor / min
Method storage	Up to 81 methods in user methods
Built-in methods	Nucleid acid, microarray (labeling efficiency), protein and cell density
Display formats	320 x 240 pixels
Size	140 mm x 275 mm x 380 mm
Weight	< 4.5 kg
Operating voltage	90 – 250 V, 50/60 Hz, Max 30 VA
Input / Output ports	SD Memory Card, USB or Bluetooth for connection to a PC for direct data download; printout and data storage
Performance verification	Auto diagnostics when switched on



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ISO 9001:2008



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