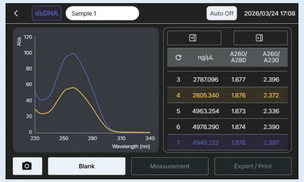
Make decisions before downstream work

Whether preparing samples for further analysis or checking routine quality before the next experiment, nPRO supports a practical decision-making step between measurement and action. Users can review key information immediately and decide whether to proceed, repeat, dilute, or investigate further.

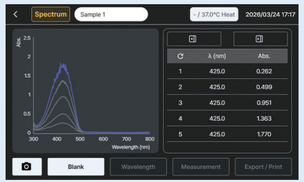
Keep results ready for documentation

After review, results can be saved, exported, printed, or transferred for recordkeeping and sharing. This helps keep measurement data connected to the rest of the lab workflow without adding unnecessary manual steps.



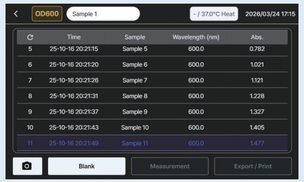
Nucleic acid analysis

Result table and absorbance curve in one view.



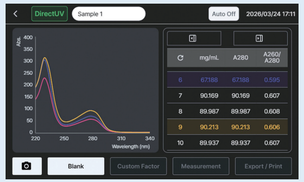
Spectrum mode

Scan display for peak/valley review and custom wavelengths.



OD600 workflow

Table-forward view for batch and cell density workflows.



Direct UV / protein

Custom factor and protein measurements with ratio data.

1 Blank → 2 Measure → 3 Review → 4 Export/ Print

nPRO

Technical specifications

MEASUREMENT	
Instrument control	Built-in touchscreen
Minimum sample volume	1 µL
Measurement time	5 seconds
Repeatability	0.002 A at 1.0 mm path or 1% CV, whichever is greater
Pathlength	0.030 – 1.0 mm auto-ranging

DETECTION & CONCENTRATION	
Limit of detection, dsDNA	Pedestal: 2.0 ng/µL
Limit of detection, BSA/IgG	0.04 mg/mL
Max. concentration, dsDNA	Pedestal: 27,500 ng/µL
Max. concentration, BSA/IgG	820 mg/mL

OPTICAL PERFORMANCE	
Wavelength range	190 – 1,000 nm
Wavelength accuracy	±0.5 nm
Photometric range	0.02 – 550 Abs, 10 mm equivalent
Spectral bandwidth	FWHM ≤ 1.3 nm at Hg 546.08 nm
Light source	Xenon flash lamp
Detector	2048-element high-sensitivity CMOS linear sensor

PHYSICAL & POWER	
Dimensions	250 mm (W) x 300 mm (D) x 260 mm (H)
Weight	4.9 kg
Operating voltage	12 V DC
Power consumption	Operating: 12 – 24 W Standby: 6 W
Temperature control	RT – 40°C, cuvette only (heating block temperature)

SYSTEM & INTERFACE	
Operating system	Android OS
CPU	Hexa-Core ARM® processor, up to 1.8 GHz, 64-bit architecture
Display	10.1 inch, 1280 × 800 high-definition color display
Control interface	On-board touchscreen with display mirroring Dedicated PC control software
Touchscreen	Multipoint capacitive touch, compatible with lab gloves
Gesture recognition	Single point, swipe, and pinch
Internal storage	32 GB flash memory

CONNECTIVITY & DATA MANAGEMENT	
Ports & network	3× USB ports, Ethernet, Wi-Fi
Network features	SMB file sharing and IPP network printing
PC compatibility	Windows® 10, 11, 64-bit
Export & storage	Network drive, USB flash drive, internal storage
Printing	Network printing, auto-generated PDF report

APPLICATIONS	
Measurement modes	Nucleic Acid, Protein, OD600, Kinetics, End-point, Spectrum, Custom Methods
Nucleic acid outputs	A260, A260/280, A260/230
Protein methods	A280, BCA, Bradford, Lowry, Biuret, Custom Methods

GENERAL	
LED indicators	Sky Blue: Initializing Green: Initialization complete. Ready for measurement Blue: The device is measuring a sample Red: Initialization or communication error
Language support	English, Korean, Chinese

MicroDigital Co., Ltd.

Innovation Through Simplification

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MicroDigital

nPRO

UV-Vis Nano Spectrophotometer

Fast, intuitive microvolume and cuvette analysis for modern life-science labs.

Measure nucleic acids, proteins, OD600, and full-spectrum absorbance with a compact standalone platform designed for simple daily operation.

1 µL	190-1,000 nm	2-5 seconds	10.1 inch
minimum sample volume	wavelength range	measurement time	wide touch display

One Platform for Everyday Quantification Needs

nPRO combines microvolume UV-Vis analysis, cuvette workflows, and a modern Android-based interface in one compact standalone instrument. From routine nucleic acid quantification to protein, OD600, and spectral analysis, nPRO helps users move from sample to result with fewer steps.

Feature highlights

10.1 inch Wide LCD Touch Display
Glove-friendly touchscreen for effortless operation in lab environments.

Automatic Door Detection
Intelligent door sensing enhances usability and streamlines the measurement process.

Precise Cuvette Temperature Control
Precise and stable cuvette incubation with preheating for temperature-ready measurements.

Android-based Intuitive GUI
A modern Android interface designed for fast, simple and user-friendly operation.

Smart Xenon Lamp Auto-Control
Automatically optimizes light intensity for stable, accurate measurements.

Flexible Control Options
Supports standalone operation and external control through Windows PC software.

Wide Range of Applications
Designed for nucleic acid, protein, OD600 and spectral analysis workflows.

Fast, Maintenance-Free Operation
Enables rapid testing and consistent performance with minimal upkeep.

From sample to decision

Use nPRO for quick concentration, purity ratio review, absorbance curves and cuvette-based measurements—without moving between multiple instruments.

Applications from nucleic acids to OD600

One platform for everyday UV-Vis workflows, including nucleic acids, proteins, OD600, cuvette analysis, and spectral measurement.

Nucleic acids
dsDNA, ssDNA, RNA, oligo DNA and custom factors for everyday concentration and purity workflows.

Cuvette & OD600
Cuvette workflows, OD600 and spectral analysis with temperature-ready cuvette measurements.

nPRO

Proteins
Direct UV and protein assay workflows for BSA, IgG and custom protein factors.

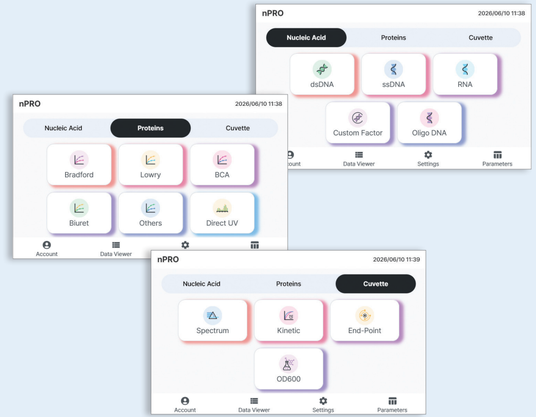
Spectral analysis
Full-spectrum absorbance analysis for method development and sample investigation.

Kinetic analysis
Track time-dependent absorbance changes for reaction monitoring, enzyme activity, and other cuvette-based kinetic measurements.

27,500 ng/µL
maximum dsDNA concentration on pedestal

2.0 ng/µL
dsDNA detection limit on pedestal

RT - 40°C
cuvette incubation with preheating



Less handling. More clarity.

nPRO supports everyday UV-Vis analysis with a workflow designed around clarity, usability, and flexible measurement. Instead of adding complexity to day-to-day quantification, nPRO helps users see what matters: the result, the curve, the ratio, and the next step.

Before the next step, know your sample

Routine quantification is rarely the final goal. In most workflows, the measurement is a checkpoint before PCR, sequencing, cloning, protein analysis, cell culture monitoring, or another downstream process. nPRO lets users review their samples with the information they need before moving forward.

Instead of focusing only on a final concentration value, nPRO allows users to review absorbance curves, purity ratios, result tables, and application-specific outputs in one measurement environment. This allows users to make practical decisions: whether a sample is ready to use, whether it should be diluted, whether the measurement should be repeated, or whether the result needs closer review.

Go beyond a single number

A concentration value is important, but it does not always tell the full story. By displaying curves, ratios, and measurement results together, nPRO helps users evaluate the sample in context. This makes routine review easier, especially when checking nucleic acids, proteins, OD600, or full-spectrum absorbance data.

Review patterns, not just results

Absorbance curves can help users recognize unexpected sample behavior, unusual peaks, baseline shifts, or results that may require additional confirmation. nPRO provides a visual result review environment so users can look at the shape of the data before saving, exporting, or reporting.

Not just a measurement - a checkpoint before what comes next.