Colo Science
Laboratory & Scientific Equipment

COLO.SCIENCE · TECHNICAL SPECIFICATION

UV/VIS SCANNING SPECTROPHOTOMETER

NOVEL-100S

UV/Vis Scanning Spectrophotometer · 190–1100 nm · Spectral bandwidth 2 nm · Split beam · 8″ touch screen · Auto 8-cell holder

NOVEL-100S UV/Vis Scanning Spectrophotometer covers the full range from 190 to 1100 nm with a 2 nm spectral bandwidth. Split-beam optics with a Czerny-Turner monochromator, deuterium and tungsten-halogen lamps, automatic wavelength setting and an automatic 8-position cell holder make it a routine instrument for UV and visible quantitative, scanning and kinetic measurements, operated from the 8″ colour touch screen — for DNA and protein work, pharmaceutical and clinical analysis, water and environment, food and quality control.

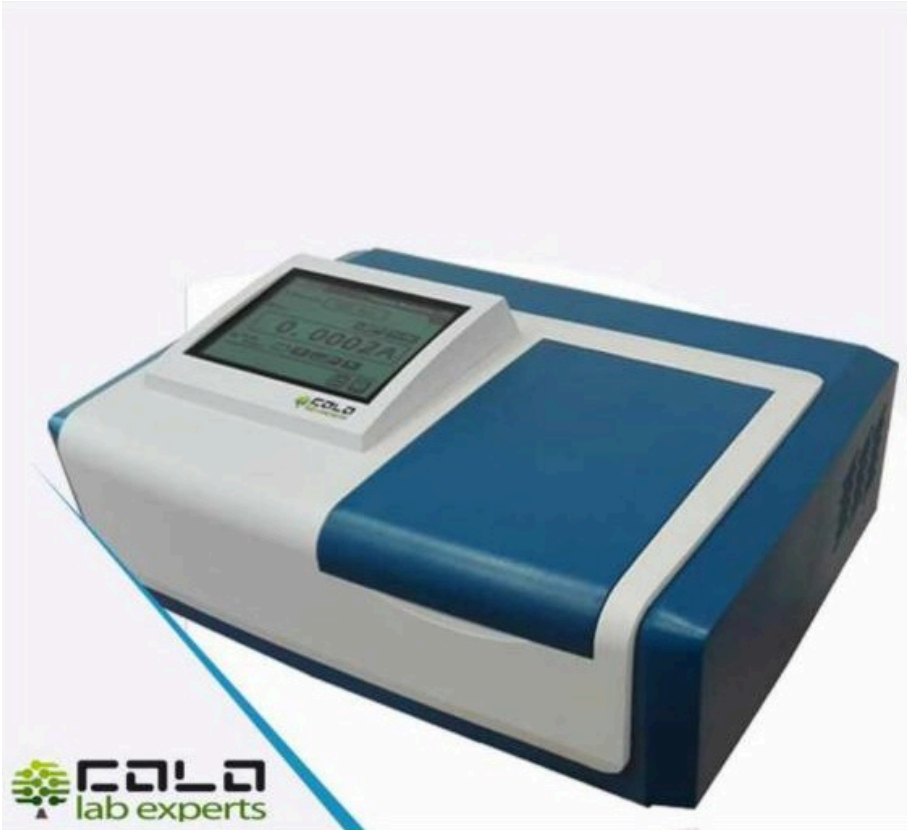
UV/Vis 190–1100 nm | Bandwidth 2 nm | Split beam | D2 + W lamps | Auto wavelength | Spectral scanning | Kinetics | Auto 8-cell holder | 8″ touch screen

Document type: **Technical Specification Sheet**
Product: **NOVEL-100S UV/Vis Scanning Spectrophotometer**
Format: Print layout · A4 landscape

NOVEL-100S product page | UV/Vis spectrophotometers — overview | UV/Vis spectrophotometers catalogue

Request quote

WAVELENGTH RANGE	SPECTRAL BANDWIDTH
190–1100 nm · auto setting	2 nm
WAVELENGTH ACCURACY	**STRAY LIGHT**
±0.3 nm · repeatability ≤0.1 nm	≤0.03 %T at 220 nm and 360 nm



NOVEL-100S · UV/Vis scanning spectrophotometer

MODEL
NOVEL-100S

ADDRESS / HQ
Polje ob Sotli 4
SI-3255 Buče, Slovenia

CONTACT
sales@colo.si
+386 70 713 437

NOVEL-100S · product overview

UV and visible range with 2 nm bandwidth and automatic 8-cell measurement

CORE TECHNOLOGY

Split-beam optics with Czerny-Turner monochromator — a reference beam compensates source fluctuations for a stable reading.

Blazed holographic grating 1200 lines/mm, 160 mm focal length and silicon photocell detector; spectral bandwidth 2 nm.

Deuterium and tungsten-halogen lamps cover 190–1100 nm; the lamps can be switched on separately to extend their life.

Automatic 8-position cell holder for 10 mm cuvettes in standard delivery, with automatic wavelength setting and automatic zero / 100 %T.

Full-spectrum and detailed scanning at fast, medium or slow speed, with peak and valley detection, GOTO λ and multi-wavelength measurement.

Quantitative analysis — direct concentration reading and linear regression.

Time-based kinetics at a fixed wavelength.

Internal memory for results, spectra, regression equations and correction data; USB connection to a PC, thermal printer and COLO spectrum software as options.

PRODUCT HIGHLIGHTS



Automatic 8-cell holder
Eight 10 mm cuvettes measured in sequence — standard on NOVEL-100S.



Quartz and glass cuvettes
2 quartz cuvettes for UV and 4 glass cuvettes, 10 mm path length, in standard delivery.



Cell holders up to 100 mm
Manual holders for 50 mm and 100 mm path length for low concentrations.



Peltier / sipper system
Temperature-controlled measurement and sample aspiration for series of liquid samples.

APPLICATIONS

Medicine & health

Clinical testing

Biochemistry & DNA/protein

Petrochemical industry

Environment & water

Quality control

OPTICS	LIGHT SOURCE	PHOTOMETRIC ACCURACY	STABILITY
Split beam · Czerny-Turner · 1200 lines/mm	D2 + tungsten-halogen · 190–1100 nm	±0.002 A (0–0.5 A)	≤0.0009 A/h at 250 and 500 nm

NOVEL-100S product page | UV/Vis spectrophotometers — overview | UV/Vis spectrophotometers catalogue | Request quote

NOVEL-100S · technical parameters

Split beam · 190–1100 nm · spectral bandwidth 2 nm · automatic wavelength setting

TECHNICAL PARAMETERS

Optical system	Split beam; Czerny-Turner monochromator
Grating	Blazed holographic, 1200 lines/mm
Focal length	160 mm
Light source	Deuterium lamp and tungsten-halogen lamp
Wavelength range	190–1100 nm
Spectral bandwidth	2 nm
Wavelength accuracy	±0.3 nm
Wavelength repeatability	≤0.1 nm
Wavelength setting	Automatic
Photometric accuracy	±0.3 %T ±0.002 A (0–0.5 A) · ±0.004 A (0.5–1 A)
Photometric repeatability	≤0.15 %T 0.001 A (0–0.5 A) · 0.002 A (0.5–1 A)
Photometric range	0–200 %T · −0.301 to 4.000 A · 0–9999 C
Stray light	≤0.03 %T at 220 nm (NaI) and 360 nm ($NaNO_2$)
Detector	Silicon photocell

Baseline flatness	≤±0.0015 A (200–1090 nm)
Noise	≤0.15 %T at 100 %T · ≤0.1 %T at 0 %T
Drift	≤0.0009 A/h at 250 and 500 nm (after 2 h warm-up)
Measuring modes	T, A, C
Functions	Full-spectrum and detailed scanning (fast / medium / slow), peak/valley detection, GOTO λ, multi-wavelength measurement
Quantitative · kinetics	Concentration direct reading; linear regression · time-based kinetics
Cell holder · zero / 100 %T	Automatic 8-position, 10 mm (standard) · automatic
Display	8″ colour touch screen
Data	Internal memory; USB — PC connection and extended storage
Printer · PC software	Thermal printer · COLO spectrum software (options)
Conformity	CE
Power supply	AC 220 V ±22 V, 50 Hz ±1 Hz · 200 W
Packing size / gross weight	700 × 580 × 500 mm (0.203 m^3) / 32 kg

NOVEL-100S · accessories and sample handling

Standard delivery and optional cell holders, film holders and sampling systems

ACCESSORIES



Quartz and glass cuvettes, 10 mm

STANDARD



Automatic 8-cell holder, 10 mm

STANDARD



Manual 4-cell holder, up to 100 mm

OPTIONAL



Single cell holder, 10 mm

OPTIONAL



Adjustable XY micro cell holder

OPTIONAL



Single-hole film holder

OPTIONAL



Manual 4-position film holder

OPTIONAL



Integrating sphere

OPTIONAL



Test-tube rack

OPTIONAL



Peltier / sipper system

OPTIONAL

Standard delivery

Instrument	NOVEL-100S UV/Vis scanning spectrophotometer
Cell holder	Automatic 8-position cell holder, 10 mm
Cuvettes	4 × glass cuvette, 2 × quartz cuvette, 10 mm path length
Cables and spares	Power cable · 2 fuses
Documents	Operation manual

Optional

Printer and software	Thermal printer · COLO spectrum PC software
Wi-Fi UV lamp control	D2 lamp on/off from the touch screen or an Android device
Cell holders	Manual 4-cell holder up to 100 mm · 50 mm cell holder · single 10 mm holder · adjustable XY micro cell holder
Solids and films	Single-hole and 4-position film holders · integrating sphere
Sampling systems	Peltier / sipper system · flow cell · test-tube rack

Cell holders and cuvettes are selected according to sample volume, path length and wavelength (quartz for UV); COLO confirms the set with the quotation.

PATH LENGTH
Micro cells to 100 mm

CELL POSITIONS
8 automatic (standard)

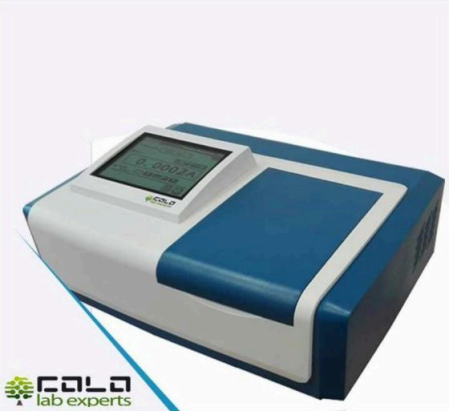
SAMPLE TYPES
Liquids · films · solids · tubes

TEMPERATURE CONTROL
Peltier / sipper (option)

NOVEL-100S · configuration and support

Ordering information, configuration checklist and contact

OPERATION, CONFIGURATION AND SUPPORT



NOVEL-100S · UV/Vis scanning spectrophotometer

Ordering information

Models	NOVEL-100S — with wavelength scanning · NOVEL-100 — same instrument without scanning
Range / bandwidth	190–1100 nm · 2 nm
Cell holder	Automatic 8-position, 10 mm
Power	AC 220 V ±22 V, 50 Hz · 200 W

Configuration checklist

Samples: UV-absorbing or coloured solutions, micro volumes, films or solids — defines cuvettes, cell holders, film holders or the integrating sphere.

Path length and throughput: 10 mm cells in the automatic 8-position holder, 50 or 100 mm cells for low concentrations.

Methods: DNA/protein at 260/280 nm, quantitative, scanning or kinetics in the 190–1100 nm range; temperature control with Peltier / sipper.

Data: thermal printer, USB connection to a PC or COLO spectrum PC software.

SALES AND SUPPORT

COLO Lab Experts
Polje ob Sotli 4, SI-3255 Buče, Slovenia

Selection guidance: send your sample type, wavelength range and methods — we confirm the configuration, accessories and delivery time with the quotation.

QUICK CONTACT

colo.si
sales@colo.si
+386 70 713 437

COLO.SCIENCE · SPECTROPHOTOMETRY SUPPORT

Need help choosing cell holders, cuvettes or the right configuration?

Send your sample type, the wavelengths and methods you use and the number of samples per day — we propose the configuration and confirm it with the quotation.

Request quotation | sales@colo.si | +386 70 713 437

Specifications are subject to change without notice. Values refer to standard laboratory conditions.