151/152 UV/VIS Detectors

Deliver versatile, rugged HPLC detection for drug discovery and drug metabolism applications.

- Gilson's optical design lets you optimize detection of your sample at any wavelength from 190 to 700 nm
- The detectors have a sensitivity range of 0.001 to 2.0 AUFS (Absorbance Units, Full Scale)
- Controlled via Gilson's UniPoint™ System Software or choose stand-alone, keypad control with the 151 model
- Choose from the following modes to specify detection conditions and basic operating parameters:
  - single wavelength
  - file
  - status
  - setup

For technical specifications, see pages 40–41.

Product No.: 10105311 (151 with flow cell/accessory kit)
10105411 (152 with flow cell/accessory kit)

ALTERNATE CONFIGURATIONS	
Configuration	**Product No.**
151 UV/VIS Detector w/o flow cell accessory kit	1010531
152 UV/VIS Detector w/o flow cell accessory kit	1010541

155/156 UV/VIS Detectors

Offer integrated detection for your HPLC. Gilson's optical design lets you optimize detection of your sample at any wavelength from 190 to 700 nm.

- The detectors have a sensitivity range of 0.001 to 2.0 AUFS (Absorbance Units, Full Scale)
- Controlled via Gilson's UniPoint™ System Software or choose stand-alone, keypad control with the 155 model
- Choose from the following modes to specify detection conditions and basic operating parameters:
  - single wavelength
  - dual wavelength
  - scan wavelength
  - file
  - status
  - setup

For technical specifications, see page 41.

Product No.: 10105511 (155 with flow cell/accessory kit)
10105611 (156 with flow cell/accessory kit)

ALTERNATE CONFIGURATIONS	
Configuration	**Product No.**
155 UV/VIS Detector w/o flow cell accessory kit	1010551
156 UV/VIS Detector w/o flow cell accessory kit	1010561

Turn to pages 30–49 to find the **Technical Specifications** for the instruments in this Product Guide. The technical specifications include information such as software control, environmental conditions, dimensions, power requirements, and more.

Shipping Weight
- 15 kg (34 lbs.)

155/156 UV/VIS Detectors

Manufacturing Standards
- Meet applicable Safety and EMC certification standards; UL and CE certified

Autozero Range
- Suppresses up to 1.0 AU with 5 mm flow cell installed

Communication Interface
- RS-232 or GSIOC; Event and autozero inputs; remote contact closure can be activated by other instruments or the computer. Three channels output data to a recorder.

Drift
- After 1 hour at constant temperature: 3.0×10^{-4} AU/hr.

Environmental Conditions
- Indoor use
- Altitude: up to 2000 m
- Temperature range: 5–40°C
- Air pressure: 75–105 kPa
- Pollution degree: 1 or 2, in accordance with IEC 66
- Humidity: Maximum relative humidity 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C

Flow Cell Assemblies
- The following quartz flow cells are available:

Flow Cell	Path (mm)	Volume (µL)	psi
Analytical	5	12	500
Microbore	2	1.6	500
Preparative	0.2	0.7	500
Preparative	0.05	0.16	500

Flow Sensitivity
- 4.0×10^{-4} AU for flow step of 2.0 mL/min. to 0.5 mL/min. with methanol

Front Panel
- Four-line display shows modes, parameters, commands, and data. Six soft keys and HELP, ESC, CLEAR, ENTER, numeric, and arrow hard keys (155 only). LED indicator lights for POWER, UV,VIS, REMOTE, and ERROR. LAMP ON/OFF hard key (155 and 156).

Lamps
- UV lamp: Deuterium, life of 750 hours
- Visible lamp: Tungsten/halogen lamp, life of 500 hours

Lamp Warm-up Time
- One hour maximum

Linearity
- 1%, when value is within sensitivity range of 0.001 to 2.0 AU

Monochromator
- Dual beam, stepper motor-driven
  - Range: 190–700 nm
  - Spectral bandwidth: 9 nm
  - Setting accuracy: ±1 nm
  - Setting precision: ±0.2 nm

Noise with Air Block Installed
- 220 nm, short term, peak to peak, 2.0×10^{-5} AU/cm; 254 nm, short term, peak to peak, 2.5×10^{-5} AU/cm; 350 nm, short term, peak to peak, 10.0×10^{-5} AU/cm; 415 nm, short term, peak to peak, 8.0×10^{-5} AU/cm; 520 nm, short term, peak to peak, 6.0×10^{-5} AU/cm; 650 nm, short term, peak to peak, 4.0×10^{-5} AU/cm

Operating Modes
- Single, dual, and scan wavelength, status, file, and setup

Peak Width
- 0 and 4 to 99 seconds for single- or scan-wavelength mode; 4 to 99 seconds for dual-wavelength mode

Power Requirements
- Frequency: 50–60 Hz
- Voltage: 90–120 or 220–240V; mains voltage fluctuations not to exceed ±10% of the nominal voltage
- Current rating: 1.0A for 90–120V, or 0.5A for 220–240V
- Online switching regulation of line input from 80 to 260V AC

Sensitivity Range
- 0.001 to 2.0 AU. Sensitivity is adjustable in increments of 0.001 AU

Software
- Gilson UniPoint™ System Software. You can issue commands to do the following:
  - Select all detection parameters
  - Program parameter changes during run to optimize detection
  - Send digital detector output

Static RI Sensitivity
- Methanol versus cyclohexane at 270 nm: 5.0×10^{-3} AU

Temperature Sensitivity
- 3.0×10^{-4}/°C for temperature change from 21° to 24°C

Dimensions (w x d x h)
- 26.5 x 43.5 x 15.6 cm (10.4 x 17.1 x 6.2 in.)

Instrument Weight
- 10 kg (21 lbs.)

Shipping Weight
- 15 kg (34 lbs.)

112 UV Detector

Manufacturing Standards
- Meets applicable Safety and EMC certification standards; UL and CE certified

Autozero Range
- –0.5 to + 1 AU, to within 5×10^{-5} AU; front panel or remote activation

Communication Interface
- RS-232 or GSIOC; Event and autozero inputs; three channels output data to a recorder

Detector Type
- UV silicon photodiode

Drift
- 3×10^{-4} AU/hr.

Environmental Conditions
- Indoor use
- Altitude: up to 2000 m
- Temperature range: 5–40°C
- Air pressure: 75–105 kPa
- Pollution degree: 1 or 2, in accordance with IEC 66
- Humidity: Maximum relative humidity 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C

Event Marker
- Negative deflection on trace; front panel or remote activation

Flow Cells
- The following fused quartz flow cells are available:

Flow Cell	Path (mm)	Volume (µL)	psi
HPLC	10.0	11.0	1000
LC	10.0	40.0	1000
Microbore	5.0	1.3	1000
Preparative	2.0	10.0	1000
Preparative	0.5	2.5	1000
Preparative	0.1	0.3	1000

Flow Cell Sensitivity
- $<4 \times 10^{-4}$ AU for flow step of 0.5–2 mL/min. with methanol

Front Panel
- LCD indicator shows percent of full-scale output

Lamps
- Standard: Mercury (254 nm), life of 2000 hours; Phosphor-coated Mercury (280 nm), life of 500 hours