



*HPLC  
Detector  
Range*

*Premier Instruments For High  
Performance Liquid Chromatography*





## High Performance Liquid Chromatography Products

GBC manufactures and distributes a comprehensive range of quality HPLC products from turn-key systems to stand-alone modules including autosamplers, pumps and detectors. GBC also offers accessories such as columns, fittings and tool kits.

Simplify your choices by selecting one of our customised and complete HPLC Systems or choose from our comprehensive range of pumps, detectors, and autosamplers to compliment your existing system.

## ISO 9001 QUALITY ACCREDITATION



GBC has always placed a strong emphasis on quality in all aspects of our operation, from design and manufacture to the provision of service and support to our customers, and we are fully committed to continuous evaluation and improvement in all areas.

The GBC Quality Management System has been accredited to the ISO 9001 quality standard by Lloyd's Register Quality Assurance Limited. This certification is your assurance that the procedures and processes used to produce the goods and services which GBC provides comply with the relevant International Standard, and demonstrates our commitment to meeting the needs and expectations of our customers



## LC1200 Variable Wavelength UV-Vis Detector

The high performance LC1200 is designed for standard HPLC applications requiring UV-Vis detection and is most suitable for QC and educational laboratories, offering a level of performance and versatility one would expect from much higher priced models.

Flexible operation at single wavelengths within the range of 190–600 nm makes for versatility. For example, rather than being restricted to one or two wavelengths, you can use the LC1200 at 254 nm for the detection of aromatic compounds, improve sensitivity and selectivity for proteins, peptides, phenols and catecholamines at 280 nm, detect analytes of interest in the visible range, or monitor nitrate/nitrite and carboxylic acids at 200 nm.

## LC1200 Specifications

### Optical Design

High energy forward optical design with concave holographic grating monochromator.

### Wavelength Range

UV and Visible (190–600 nm).

### Noise

$< \pm 2 \times 10^{-5}$  AU at 254 nm, 0.1 sec time constant.

### Drift

$< \pm 5 \times 10^{-4}$  AU/hour after warm-up at 254 nm.

### Wavelength Accuracy

$\pm 2$  nm.

### Wavelength Precision

$\pm 0.2$  nm.

### Spectral Bandwidth

10 nm.

### Absorbance Range

0.001–2.0 AUFS.

### Absorbance Linearity

$\pm 1\%$  to 1.0 AU at 254 nm.

### Time Constant

User-selectable from 0.1, 0.2, 0.5 sec.

### Lamp

Deuterium (pre-aligned).

### Flowcell

10 mm pathlength with 10  $\mu$ l volume.  
Pressure Limit: 7 MPa (1029 psi).

### Display

Liquid crystal display.

Displayed Parameters:

Operating Wavelength, Reference Energy,  
Sample Energy and Absorbance.

### Analog Outputs

Two outputs (Integrator and Chart Recorder).

Integrator Output:

1.0 AU/V (unattenuated).

Chart Recorder Output:

10 mV FS (attenuated).

### Diagnostics

Reference energy and sample energy.

### Operating Environment

4 to 40°C, <85% relative humidity.

### Power Requirements

100–120 / 220–240V, 50–60 Hz.

### Dimensions

263 x 183 x 450 mm (W x H x D).

### Weight

Nett 13.2 kg, Shipping 16.2 kg.

## Filtering

Recorder Output:

Active 1 Hz filter with averaging digital filter of 16, 32, 64 and 128 sample points.

Integrator Output:

User-selectable active filter from rear panel: 0.1, 0.5, 1.0 Hz.

## Noise

Electronic noise: < 1 pA (no filter)

## Cell Compartment

Integrated Flowcell Compartment.

Fully enclosed shielded design for protection against RF emissions and static electricity.

## Cell Design and Volume

Open Wall Jet Design.

Effective cell volume  $\leq 5 \mu\text{l}$ .

(flow rate > 0.50 ml/min).

## Cell Material

316 Stainless Steel, Kel-F and PTFE.

## Working Electrode

3 mm and 1 mm Glassy Carbon\*.

3 mm Gold.

3 mm Silver.

3 mm Platinum.

3 mm Composite Glassy Carbon.

(\* 3mm Glassy Carbon supplied as standard).

## Reference Electrode

Ag/AgCl (3M) in miniature gel-filled shielded design.

## Display

Liquid crystal display

Displayed parameters:

Working Potential (V), Pulse Cleaning Potential (A and B), Measured Cell Potential and Current, Current Range, Zero Acknowledgement, Offset, Filter, Chart Recorder Polarity, Chart Recorder Marker Acknowledgement, Cell Operating Mode, Clean On and Off.

## Instrument Panel

Solvent-proof instrument keypad

Input parameters:

Cell Operating Mode, Operating Mode Potential, Operating Mode Current Range, Clean On/Off, Current Zero, Recorder Polarity, Marker and Recorder Output Filter Setting.

## Signal Output

Two, Recorder Output (10 mV and 1 V FS) and Integrator Output (1 V FS).

## Remote Control

Remote inputs for CLEAN ON, CLEAN OFF and ZERO.

## Operating Environment

4 to 40°C, 85% relative humidity.

## Power Requirements

100 to 240V, 50–60 Hz.

## Dimensions

263 x 183 x 450 mm (W x H x D).

## Weight

Nett 10.8 kg, Shipping 13.8 kg.



## LC1275 Conductivity Detector

The LC1275 is a high performance conductivity detector for the rapid determination of anions, cations, metals, organic acids and surfactants down to ppb levels.

A temperature-stabilised flow cell is isolated from external temperature fluctuations, and active temperature control of the detector eliminates temperature induced variations in analyte or background signals.

The LC1275 is suitable for both suppressor-based and single column IC applications.

The detector auto-zero can offset high-conductivity mobile phase for sensitive detection of ions, essential in single column applications.

The detector is modular, stackable, and may be integrated into any HPLC system for immediate operation.

## LC1275 Specifications

### Detector Design

Synchronous Alternating Current detection design with built-in flowcell.

Temperature-controlled heat exchanger and advanced microprocessor-based circuit for maximum sensitivity with both suppressor-based and single-column ion chromatography.

### Detection Range

0.1 to 5000  $\mu\text{S}/\text{cm}$  FS (in 12 steps).

### Noise

< 0.0004  $\mu\text{S}/\text{cm}$   
(Deionised water, 1 ml/min at 35°C).

### Drift

< 0.004  $\mu\text{S}/\text{cm}/\text{hour}$   
(Deionised water, 1 ml/min at 35°C).

### Time Constant

0.1, 0.5, 1, 5, 10 sec. User-selectable.

### Flowcell Type

Gold-plated SS electrodes (2).

### Flowcell Volume

0.5  $\mu\text{l}$ .

## Fluid Path

Inert polymers: PEEK and PTFE.

## Cell Compartment

Insulation

Minimum .5" all sides.

Heater

25 W DC heating element vulcanised to aluminium block.

Size

2.25" x 6.25" x 2.25" (W x L x H).

Temperature

User-adjustable, ambient to 60°C.

Factory set at 35°C.

Temperature Precision

$\pm 0.05^\circ\text{C}$ .

Heat Exchanger

TFE tubing knitted and encased in high thermal-mass housing.

## Display

LCD, 2 x 20 characters.

## Displayed Modes

Working Modes

Calibrate

testing reading of 100  $\mu\text{S}/\text{cm}$

(with 10-step gain test).

Background

absolute conductivity of eluent.

Measure

conductivity of eluent with background

offset.

Display Modes

Conductivity

conductivity in  $\mu\text{S}/\text{cm}$ .

Temperature

actual cell temperature.

Temperature Set

cell temperature set-point.

## Method Storage

1–10, user-defined cell compartment

## Autozero

Offsets up to 10,000  $\mu\text{S}/\text{cm}$  (suitable for high conductivity eluents in SCIC).

## Analog Output

10 mV, 100 mV and 1 V FS, switch selectable.

## Remote Communication

RS-232 output of detector signal, external control of detector functions.

## Power Requirements

100/220 V, 50/60 Hz (field selectable).

## Weight

Nett 6 kg, Shipping 8 kg.

## GBC Autosuppressor

The GBC Autosuppressor utilises a unique electrochemical technique which self-generates the solid phase suppressor cells, providing improvements in IC detection sensitivity by up to two orders of magnitude, baseline stability and resolving power. For further details, contact your local GBC representative.

**Wavelength Accuracy**

±1.0 nm.

**Wavelength Precision**

±0.1 nm.

**Spectral Bandwidth**

6 nm.

**Absorbance Range**

0.0005–3.0 AUFS.

**Absorbance Linearity**

Better than 1% to 2.0 AU at 254 nm.

**Lamp**

Deuterium and Tungsten (pre-aligned).

**Flowcells**

Description	Path Length (mm)	Volume (µl)	Maximum Pressure (psi)
Analytical**	6	9	1000
Analytical	10	15	1000
Microbore	6	7	1000
Semi-prep	3	4.5	1000
Bio/Inert	6	9	500
High-pressure	2	0.25	7000

(\*\* supplied as standard)

**Standard Operating Modes**

Single- and Dual-wavelength

Wavelength Range:

UV and Visible (190–800 nm).

UV only (190–365 nm).

Visible only (366–800 nm).

**Wavelength Programming**

Single- and Dual-wavelength modes

Wavelength Range:

Single-λ mode:

UV and Visible (190–800 nm).

Dual-λ mode:

UV (190–450 nm) or Visible (366–700 nm).

Timed Wavelength Changes

(10 time lines per file).

Autozero on λ Change.

**Method Files and Sample Queue**

User files protected in non-volatile memory

10 times lines per file for wavelength

programming.

Other user-selectable parameters:

Rise Time, Autozero Time, Range Settings.

Sample Queue (grouping) for file linking.

**Method Development**

Develop File for sequential sample injections with automatic wavelength adjustments.

User-selectable parameters:

Start λ, End λ, λ Internal, Run Time, Runs

per λ, Rise Time, Auto Zero Time, Range

settings.

**Spectral Scanning**

High speed 'on the fly' spectral scanning:

(20 data pts/sec).

Scan range: 190–800 nm.

Up to 10 spectra from a single chromatographic run.

Scan File user-selectable parameters:

Start λ, End λ, λ Internal, Run Time, Run λ,

Rise Time, Scan Zero Time, Auto Scan, Range

Settings.

Automatic scanning of eluting peaks.

**Scan Data Display/Replay**

Scan Summary Data Display:

Time, λMax, λMax AU, λMin.

Spectral Replay on display:

Time, λ, AU (in 1 nm steps).

Spectral Replay from analog outputs:

(1 nm steps).

User-selectable replay parameters:

Range settings, Replay Rate (nm/sec).

Individual Data Point on display:

Time, λ, AU.

**Absorbance Ratios**

Absorbance Ratio (AU1/AU2) for peak purity confirmation.

Ratio Output from Analog 2.

**Lamp Operations**

Single- and Dual-lamp operations:

D<sub>2</sub> (190–365nm), W (366–800 nm),D<sub>2</sub> + W (190–800 nm).

Lamp Hours Registers.

Programmable Startup (Time or Manual).

Programmable Shutdown (Manual, Time, Time

From READY or End of Queue).

**Display**

Dual line backlit liquid crystal display:

(2 x 24 character).

**Factorised Response**

Factorised absorbance response using K-Factor for enhanced detection selectivity.

Factorised Output from Analog 2.

**Analog Outputs**

Two outputs, range-selectable over entire absorbance range.

Analog Offsets (%) (Analog 1 and 2).

Absorbance Ratio (AU1/AU2) from Analog 2.

Factorised Absorbance (K-factor) from

Analog 2.

**Remote Control**

Remote inputs for RUN, STOP and ZERO.

Output for READY and Accessory Relay.

**Remote Communications**

Standard RS232 communication:

(Communication with WinChrom Version 1.2 or above).

**Diagnostics**

Software version.

Light Levels with real-time error messages.

Diode Offsets (for dark current adjustment).

λ Calibration (recalibration with optional cuvette holder).

Self-Tests:

RAM, Voltages, Analog Outputs, Diode Offsets,

Stepper Motor, Deuterium Lamp, Tungsten

Lamp, Lamp and Shutter.

**Other Features**

Status Lock (disables changes on run file).

Short Outputs.

Event Mark.

Ready Output (Active High or Active Low).

Detector Shutdown.

Display Contrast.

Cursor Speed.

**Operating Environment**

10 to 40°C, 5–95% relative humidity, non-condensing.

**Power Requirements**

100–120/220–240V, 50–60 Hz, 2 Amp max.

**Dimensions**

263 x 183 x 450 mm (W x H x D).

**Weight**

Nett 18 kg, Shipping 21 kg.



## LC1240 Refractive Index Detector

A refractive index detector is an indispensable universal detector which permits the identification of analytes not easily measured by UV detectors.

The LC1240 uses a beam deflection design with microprocessor control of flow-cell temperature for exceptional sensitivity (minimum range  $1/64 = 0.015625 \times 10^{-5}$  RIU/FS) and high stability. Automatic compensation for baseline and peak fluctuations is achieved with patented electrical and auto-zero design.

With a user-friendly keypad and LCD display, the LC1240 continuously monitors signal output and provides immediate visual feedback on detector performance and operation. For unattended operation, all detector controls can be interfaced with your integrator or data station through relay contacts.

## LC1240 Specifications

### Optical Design

Beam deflection high sensitivity design with microprocessor flowcell temperature control and purge function.

### Refraction Range

1.00 to 1.75 RIU.

### Measuring Range

$1/4 \times 10^{-6}$  to  $512 \times 10^{-6}$  RIU FS.

### Linearity

$\pm 50 \times 10^{-5}$  RIU FS.

### Noise

$\pm 2.5 \times 10^{-9}$  RIU.

### Sensitivity

0.05  $\mu\text{g/ml}$  sucrose in water.

### Response Time

Fast (1.5 sec), Normal (3.0 sec) and Slow (6.0sec).

### Flowcell Volume

7  $\mu\text{l}$ .

### Flowcell Pressure Limit

7  $\text{kg/cm}^2$ .

### Maximum Flow Rate

20 ml/min.

### Flowcell Temperature Control

User-selectable settings:  
30 to 50°C (5° increment) and Off.

### Detector Functions

Autozero.  
Marker.  
Polarity.  
Purge.  
Limit Set.  
Response Time.

### Detector Zero

Auto Zero, Fine Zero and Manual.

### Offset Adjustments

Zero and Integrator Level.

### Display

Liquid crystal display.

Displayed Parameters:

Recorder Output, Integrator Output, TP1 and XTP.

### Analog Outputs

Recorder Output: 0–1 mV, 0–10 mV.

3.2 mV/ $1 \times 10^{-6}$  RIU (H).

200  $\mu\text{V}/1 \times 10^{-6}$  RIU (L).

### Remote Control

Remote inputs for ZERO, PURGE, MARKER, POLARITY and RANGE.

### Power Requirements

100/120/220/240V, 50–60 Hz.

### Dimensions

260 x 140 x 480 mm (W x H x D).

### Weight

Nett 16 kg, Shipping 18 kg.



## LC1255 Programmable Scanning Fluorescence Detector

The LC1255 is a highly sensitive scanning fluorescence detector for liquid chromatography. The improved optical design provides exceptional performance.

High-efficiency holographic diffraction gratings are optimised for high sensitivity at both lower and higher wavelengths.

Selectivity may be customised by choosing one of the three slit widths.

Time programming of the Ex  $\lambda$  and Em  $\lambda$  allow sensitivity and selectivity to be easily optimised while automatic real-time scanning of eluting peaks provides identification of optimum wavelengths.

Quantitative accuracy and precision are greatly enhanced by use of 20 bit digital electronics, producing a wider dynamic range. The electronics design allows emission monitoring of fluorescence, phosphorescence and chemiluminescence.

## LC1255 Specifications

### Optical Design

Dual monochromators using concave holographic diffraction gratings, driven by microprocessor-controlled stepper motors.

### Sensitivity

<100 femtograms anthracene injected on column.

<4.1  $\text{fg}/\mu\text{l}$  anthracene as measured in flowcell. (Excitation 242 nm, Emission 396 nm in methanol, S/N = 3).

### Wavelength

200–650 nm and zero order excitation and emission.

200–800 nm emission  
(with optional red sensitive PMT)

### Wavelength Accuracy

$\pm 2.0$  nm.

### Wavelength Precision

<0.5 nm.

### Spectral Bandwidth

8, 20 or 30 nm, user-selectable.

### Lamp

Pulsed xenon with selectable flash rate,  
20 or 100 Hz.

### Detector

UV-enhanced photomultiplier 200–650nm.

### Flowcell

Hi-purity quartz, PTFE, and PEEK  
8 µl illuminated volume Maximum pressure 450  
psi (30 bar).

### Fluorescence Range

0.01–500 FU FS.

### Standard Operating Modes

Fluorescence, Phosphorescence and  
Chemiluminescence.

User-selectable parameters:

Exλ, Emλ, Range Settings, Rise Time,  
Autozero Time, Lamp Flash Rate, Lamp  
Status, PMT Voltage.

### Wavelength Programming

Timed Wavelength Changes  
(10 time lines per file).

Autozero on λ Change.

### Method Files and Sample Queue

Four user files protected in non-volatile  
memory.

10 time lines per file for wavelength  
programming.

Other user-selectable parameters:

Rise Time, Autozero Time, Range settings,  
Lamp Flash Rate, Lamp Status, PMT Voltage.  
Sample Queue (grouping) for file linking.  
File Protection from editing.

### Spectral Scanning

High speed 'on-the-fly' spectral scanning

Scan type:

Excitation, emission or synchronous (delta).

Scan rate: 100 steps per second.

Step size selectable: 2, 4, 8, 16 or 32 nm.

Auto Spectra for automatic scanning of eluting  
peaks.

Auto Threshold for minimum peak intensity  
specification.

Up to 60 spectra stored in memory.

User-selectable parameters:

Start Exl, Start Eml, Step Size, Scan Length,  
Scan No., Auto Spectra, Auto Threshold, Scan  
Zero Time, Auto Scan, Range Settings.

### Spectral Replay

Spectral Replay on display:

Time, Exl, Eml, FU.

Spectral Replay from analog outputs.

User-selectable replay parameters:

Range Settings, Replay Rate (nm/sec).

Individual Data Point on display:

Time, Exλ, Emλ, FU .

### Display

Dual line backlit liquid crystal display:

(2 x 24 character).

### Analog Outputs

Two, fully rangeable over entire fluorescence  
range using 20-bit D/A .

Analog Offsets (%) (Analog 1 and 2).

### Remote Control

Remote inputs for RUN, STOP and ZERO. Output  
for READY .

### Remote Communications

Standard RS232 communication:

(Communication with WinChrom  
Chromatography Data Management System  
Version 1.2 or above).

### Diagnostics

Software version.

Lamp Count.

Data Acquisition.

Fluorescence Response (for calibration).

Self-Tests:

RAM, Excitation and Emission Motors,  
Internal Voltages and Lamp.

### Other Features

Status Lock (disables changes on run file).

Short Outputs.

Event Mark.

Ready Output (Active High or Active Low).

Detector Shutdown.

Display Contrast.

Cursor Speed.

### Operating Environment

10 to 40°C, 5–95% relative humidity, non-  
condensing.

### Power Requirements

100–120/220–240V, 50–60 Hz, 2 Amp max.

### Dimensions

263 x 183 x 450 mm (W x H x D).

### Weight

Nett 10.5 kg, Shipping 15.1 kg.



## LC1260 Electrochemical Detector

Add LCEC capability to your existing HPLC  
system without major instrument re-  
configurations or user re-training.

The LC1260 electrochemical detector  
provides enhanced detector performance in  
a robust and easy to use instrument. It  
adopts a patented Wall Jet Flowcell design  
optimised for high assay sensitivity, wide  
linear dynamic range, response stability and  
reproducibility. In LCEC the electrode  
surface is in direct contact with the test  
medium, resulting in gradual fouling of the  
electrode surface due to the adsorption of  
chemicals. The washing effect of the  
impinging jet made possible by the wall jet  
design improves electrode stability and  
precision with much-reduced down-time for  
electrode cleaning.

The design also enables faster warm-up and  
equilibration. The detector utilises a  
modular, stackable design and can be  
readily integrated into existing HPLC  
systems.

## LC1260 Specifications

### Detector Design

High sensitivity amperometric open wall jet  
flowcell design with integrated cell compartment.

### Operating Modes

DC and Pulse.

### Working Potential

±2.000 V in 1 mV increments.

### Pulse Cleaning Potential

±2.000 V in 1 mV increments.

### Current Range

10 pA to 500 nA FS (Recorder Output)  
(15 steps in 1,2,5 sequence).

1 nA to 1000 nA FS (Integrator Output)  
(4 steps in decade sequence).



## LC1205 Programmable Variable Wavelength UV-Vis Detector

The high performance, fully-featured LC1205 is suitable for all applications requiring UV/Vis detection. It provides an extended variable wavelength range from 190 to 800 nm. Up to ten timed wavelength changes can be easily programmed in the method file.

A wide selection of flow cells is available for analytical, bio-compatible capillary and preparative assays.

### LC1205 Specifications

#### Optical Design

Dual-beam forward optical design with high speed stepper motor driven concave holographic grating monochromator. Pre-aligned, side-mounted lamps and flowcell.

#### Wavelength Range

UV (190–380 nm) and Visible (366–800 nm).

#### Noise

$\pm 1 \times 10^{-5}$  AU at 254 nm, 1.0 sec rise time.

#### Drift

$< 2 \times 10^{-4}$  AU/hour after warm-up at 254 nm.

#### Wavelength Accuracy

$\pm 1.0$  nm.

#### Wavelength Precision

$\pm 0.1$  nm.

#### Spectral Bandwidth

6 nm

#### Absorbance Range

0.0005–3.0 AUFS.

#### Absorbance Linearity

Better than 1% to 2.0 AU at 254 nm.

#### Display

Dual line backlit liquid crystal display: (2 x 24 character).

#### Lamp

Deuterium and Tungsten (pre-aligned).

#### Flowcells

Description	Path Length (mm)	Volume ( $\mu$ l)	Maximum Pressure (psi)
Analytical**	6	9	1000
Analytical	10	15	1000
Microbore	6	7	1000
Semi-prep	3	4.5	1000
Bio/Inert	6	9	500
High-pressure	2	0.25	7000

(\*\* supplied as standard)

#### Wavelength Programming

Time-programmable, variable wavelength.

Wavelength Range:

UV (190–450 nm) or Visible (366–700 nm).

Ten Timed Wavelength Changes.

Autozero on  $\lambda$  Change.

Edit file (1) protected in non-volatile memory.

Other user-selectable parameters:

Rise Time, Autozero Time, Range Setting.

#### Lamp Operations

D<sub>2</sub> (190–365 nm) or W (366–800 nm).

Lamp Hours Registers.

Programmable Startup (Time or Manual).

Programmable Shutdown:

(Manual, Time, Time From READY).

#### Analog Outputs

CH1: 1.0 AU/V, unrange.

CH2: Range-selectable over entire absorbance range.

Analog Offsets (mV for CH1 and % for CH2).

#### Remote Control

Remote inputs for RUN, STOP and ZERO.

Output for READY and Accessory Relay.

#### Remote Communications

Standard RS232 communication (Communication with WinChrom Chromatography Data Management System Version 1.2 or above).

#### Diagnostics

Software version.

Light Levels with real-time error messages.

Diode Offsets (for dark current adjustment).

$\lambda$  Calibration (recalibration with optional cuvette holder).

Self-Tests:

RAM, Voltages, Analog Outputs, Diode Offsets,

Stepper Motor, Deuterium Lamp, Tungsten

Lamp.

#### Operating Environment

10 to 40°C, 5–95% relative humidity, non-condensing.

#### Power Requirements

100–120/220–240V, 50–60 Hz, 2 Amp max.

#### Dimensions

263 x 183 x 450 mm (W x H x D).

#### Weight

Nett 18 kg, Shipping 21 kg.



## LC1210 Programmable Scanning Dual Wavelength UV-Vis Detector

The advanced LC1210 UV-Vis detector provides programmable dual wavelength analysis and spectral scanning. The dual monochromator design ensures exceptional optical performance and versatility.

This detector is designed for all UV-Vis HPLC applications including routine and trace analyses as well as method development.

The micro-processor controlled stepper motor permits fast and accurate wavelength switching, low-noise dual-wavelength operation and high speed "on-the-fly" spectral scanning. A wide selection of flow cells is available for analytical, bio-compatible, capillary and preparative assays.

Advanced on-board features include auto peak detection and spectral scanning, display of spectral information and "Develop File" for automatic wavelength switching. For unattended operation, a "Sample Queue" program automatically switches assay method for multi-assay bench runs.

### LC1210 Specifications

#### Optical Design

Dual-beam forward optical design with high speed stepper motor driven concave holographic grating monochromator. Pre-aligned, side-mounted lamps and flowcell.

#### Wavelength Range

UV and Visible, 190–800 nm (190–380 nm with D2 lamp and 366–800 nm with W lamp).

#### Drift

$< 2 \times 10^{-4}$  AU/hour after warm-up at 254 nm.

#### Noise

Single-wavelength mode

$\pm 1 \times 10^{-5}$  AU at 254 nm, 1.0 sec rise time.

Dual-wavelength mode

$\pm 2.5 \times 10^{-5}$  AU at 254 nm, 1.0 sec rise time (254, 280 nm).



## LC5100 Photo-Diode Array Detector

The LC5100 is a very high performance photodiode array detector for HPLC. Precision optics ensures high sensitivity, superior spectral resolution as well as high stability.

This very compact PDA provides the latest validation tools to support GLP/GMP. The LC5100 delivers a superb noise level of  $\pm 0.8 \times 10^{-5}$  AU. for unsurpassed sensitivity, bringing new levels of accuracy to trace component identification, spectral elucidation and library searching. Full scan spectra can be continuously collected in the flowing analyte stream.

The detector is equipped with both a deuterium lamp and a tungsten-halogen lamp to provide superior sensitivity over the 190 to 800 nm range and provide real time spectra using a 512 element photodiode array. Full spectral information can be provided at any time during the chromatographic run. Chromatograms can be generated at individual wavelengths or as three-dimensional plots showing absorbance against both time and wavelength. An automatic wavelength accuracy check is performed at four wavelengths as part of the validation procedure.

The LC 5100 is very easy to use, with the light sources and flow cell located at the front of the instrument. A leak sensor alerts the user to any solvent leak and an interlock switch protects the user during lamp replacement when the protection cover is removed. These features increase operational safety.

The WinChrom Chromatography Data System software package version 1.31 provides complete instrument control.

## LC5100 Specifications

### Wavelength Range

190–800 nm

### Light Source

Deuterium on, Tungsten-Halogen on or both on

### Diodes

Single array, 512 photodiodes

### Wavelength Accuracy

$\pm 1.0$  nm

### Resolution

Spectral Range	nm/diode
190–800 nm	1.2

### Noise

$\pm 0.8 \times 10^{-5}$  AU (250 nm, 600 nm)

### Baseline Drift

$< 1 \times 10^{-3}$  AU/hr

### Flow cells

10 mm pathlength, (standard)

### Maximum Pressure

12 MPa

### AC Power

100/120/220/240 Volts, 50/60 Hz, 150 watts

### Dimensions

260 x 420 x 140 (WxDxH)

### Weight

10.5 kg

### Safety

Leak sensor

Automatic lamps shut off when lamp cover is removed

Thermostatted at lamp housing surface

Temperature fuse at power supply

### Ease of use

Light sources and cell are pre aligned and accessible from front of instrument

### OO

Instrument performs automatic wavelength accuracy function at four wavelengths upon power up

### Ordering Information

LC5100 Photodiode Array Detector 220V  
50/60 Hz 99-1472-00



Designed and manufactured by  
GBC Scientific Equipment Pty Ltd  
A.C.N. 005 472 686  
GBC reserves the right to change  
specifications without prior notice.

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### GBC SCIENTIFIC EQUIPMENT

Manufacturer of world-class  
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