

APATITE

UV-VIS FIXED WAVELENGTH DETECTOR

Is a detector with an **interference filter**. By means of this filter can be this unit adjusted at one fixed wavelength in range of **200 – 600 nm** (optionally up to 800 nm, filter is not included in price). Noise level at 254 nm is $\pm 5 \cdot 10^{-6}$ AU with an empty cell. The unit is designed for use in routine **analytical** chromatography applications.

The unit is easy to operate; **reference and sample** signals are available for detector **diagnostics** as well as information on **lamp working hours**.

Output signal is available in digital form on the output connector. The unit is controlled via **RS232 interface**, it is supported in software **ECOMAC and Clarity**.



Connecting capillaries are led from the detector's left side.

The detector is equipped with a high standard **deuterium lamp** in a special socket that enables **easy changing**. It is possible to change the interference filter at customer's premises.

SPECIFICATION

TECHNICAL PARAMETERS:

Wavelength range	200 – 600 nm (optional up to 800 nm)
Bandwidth	According to filter used
Light source	Deuterium discharge lamp
Noise level with empty cell (254nm)	$\pm 5 \cdot 10^{-6}$ AU
Drift with empty cell	$2 \cdot 10^{-4}$ AU/hr
Materials in contact with mobile phase	PTFE, fused silica, stainless steel (depends on flow-cell)
Time constant	Ca. 1 s
Output for integrator	1 V/AU
Interface	RS232
Power supply	100-240 V 50/60Hz 110VA
Dimensions (w x h x d)	150 x 140 x 270 mm
Weight	3.4 kg

ACCESSORIES

- When ordering detector Apatite, please specify required interference filter, which is not included in the price of the unit. Most common interference filter is 254nm (P/N 254-12-0.5-M), other filters upon request.
- Analytical cell HPLC 04 (P/N 7900000X) is a standard accessory of this unit.

ECD2600 CE

UV DETECTOR



This detector with wavelength in the range of **190-600 nm** is derived from basic type **ECD2600**. It is originally designed for use in **capillary electrophoresis (CE)**. Newly developed cell enables easy installation of quartz capillaries and minimizes interference by ambient light as well as mechanical shocks. The light is brought into the cell using optical fiber, which is focused in the center of quartz capillary for electrophoresis.

Detector is easy to operate, light intensities for **reference and measuring** channel are available for easy detector **diagnostics** as well as information about **lamp operating hours**. The detector performs **automatic wavelength calibration** after lamp start. High standard

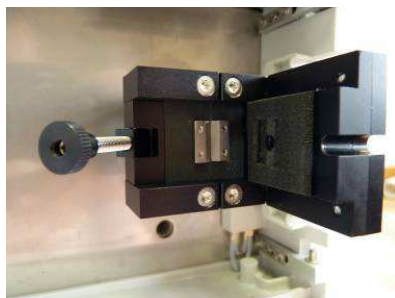
deuterium lamp in a special socket enables **easy lamp exchange**.

Output signal is available in both **digital and analogue** form. Detector can be controlled, programmed and used together with **Clarity** or **ECOMAC** software via **RS232** or **Ethernet** interface.

SPECIFICATION

TECHNICAL PARAMETERS

Wavelength range	190-600 nm
Spectral half-width	6 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp
Noise (Test cell, 254nm, TC 1s, 10 Hz)	± 10·10 ⁻⁶ AU
Drift (Test cell, 254nm)	1·10 ⁻⁴ AU/hr.
Time constant	20 – 10 000 ms
Sampling speed	Up to 100 Hz
Digital output	1 V/AU
Analogue output	1x configurable
Communication	RS232, Ethernet(LAN)
Power supply	100-240V 50/60Hz 100VA
Dimensions (w x h x d)	280 x 135 x 498 mm
Weight	9 kg



ECD2600

ECD2800

UV DETECTOR



These detectors have continuously variable wavelength in the range of **190-600 nm** respective **190 – 800 nm** and noise level is $\pm 3 \cdot 10^{-6}$ AU.

The units are suited for **analytical** applications.

It is easy to operate; light intensities for **reference and sample** channels are available for detector **diagnostics** as well as information on **lamp operating hours**. The detector performs **automatic wavelength calibration** after the lamp has been switched on. High standard **deuterium lamp** in a special socket enables **easy exchange**.

Output signal is available in both digital and **analogue** form. Detector could be controlled, programmed and used together with **Clarity** or

ECOMAC software via **RS232** or **Ethernet** interface.

Cell could be easily removed from the front of the unit. Three selectable flow cells **AC02**, **AC05** and **AC10** with optical path length 2.4, 5 and 10 mm. AC05 cell is included as component of the detector.

SPECIFICATION

TECHNICAL PARAMETERS

	ECD2600	ECD2800
Part Number	ADB0000X	ADA0000X
Wavelength range	190-600 nm	190 – 800 nm
Spectral half-width	6 nm	
Accuracy of adjustment	± 1 nm	
Reproducibility	± 0.5 nm	
Light source	Deuterium lamp	Deuterium + Halogen lamps
Noise (Test cell, 254nm, TC 2s, 10 Hz)	$\pm 3 \cdot 10^{-6}$ AU	
Drift (Test cell, 254nm)	$1 \cdot 10^{-4}$ AU/hr.	
Time constant	20 – 10 000 ms	
Sampling speed	up to 100 Hz	
Digital output	1 V/AU	
Analog output	1x configurable	
Wetted materials	depend on a cell – fused silica, PTFE, stainless steel, PEEK	
Communication	RS232, Ethernet(LAN)	
Display, keypad	VFD 140x32 pixels, 10 pushbuttons	
Power supply	100-240V 50/60Hz 100VA	
Dimensions (w x h x d)	280 x 135 x 498 mm (11.02 x 5.12 x 18.23 in)	
Weight	9 kg (19.8 lb)	

ECD2600

ECD2800

UV DETECTOR



These detectors have continuously variable wavelength in the range of **190-600 nm** respective **190 – 800 nm** and noise level is $\pm 3 \cdot 10^{-6}$ AU.

The units are suited for **analytical** applications.

It is easy to operate; light intensities for **reference and sample** channels are available for detector **diagnostics** as well as information on **lamp operating hours**. The detector performs **automatic wavelength calibration** after the lamp has been switched on. High standard **deuterium lamp** in a special socket enables **easy exchange**.

Output signal is available in both digital and **analogue** form. Detector could be controlled, programmed and used together with **Clarity** or

ECOMAC software via **RS232** or **Ethernet** interface.

Cell could be easily removed from the front of the unit. Three selectable flow cells **AC02**, **AC05** and **AC10** with optical path length 2.4, 5 and 10 mm. AC05 cell is included as component of the detector.

SPECIFICATION

TECHNICAL PARAMETERS

	ECD2600	ECD2800
Part Number	ADB0000X	ADA0000X
Wavelength range	190-600 nm	190 – 800 nm
Spectral half-width	6 nm	
Accuracy of adjustment	± 1 nm	
Reproducibility	± 0.5 nm	
Light source	Deuterium lamp	Deuterium + Halogen lamps
Noise (Test cell, 254nm, TC 2s, 10 Hz)	$\pm 3 \cdot 10^{-6}$ AU	
Drift (Test cell, 254nm)	$1 \cdot 10^{-4}$ AU/hr.	
Time constant	20 – 10 000 ms	
Sampling speed	up to 100 Hz	
Digital output	1 V/AU	
Analog output	1x configurable	
Wetted materials	depend on a cell – fused silica, PTFE, stainless steel, PEEK	
Communication	RS232, Ethernet(LAN)	
Display, keypad	VFD 140x32 pixels, 10 pushbuttons	
Power supply	100-240V 50/60Hz 100VA	
Dimensions (w x h x d)	280 x 135 x 498 mm (11.02 x 5.12 x 18.23 in)	
Weight	9 kg (19.8 lb)	

ECD2600 EX

UV DETECTOR WITH OPTICAL CONNECTORS

This detector with wavelength in the range of **190-600 nm** is derived from basic type **ECD2600**. **Cell is installed out of the unit** and it is connected using fiber optic cables with **SMA connectors**.

Detector is easy to operate, light intensities for **reference and measuring** channel are available for easy detector **diagnostics** as well as information about **lamp operating hours**. The detector performs **automatic wavelength calibration** after lamp start. High standard **deuterium lamp** in a special socket enables **easy lamp exchange**.



Output signal is available in both **digital and analogue** form. Detector can be controlled, programmed and used together with **Clarity** or **ECOMAC** software via **RS232** or **Ethernet** interface.

SPECIFICATION

TECHNICAL PARAMETERS

Wavelength range	190-600 nm
Spectral half-width	6 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp
Noise (Test cell, 254nm, TC 1s, 10 Hz)	± 15·10 ⁻⁶ AU
Drift (Test cell, 254nm)	3·10 ⁻⁴ AU/hr.
Time constant	20 – 10 000 ms
Sampling speed	Up to 100 Hz
Digital output	1 V/AU
Analogue output	1x configurable
Communication	RS232, Ethernet(LAN)
Power supply	100-240V 50/60Hz 100VA
Dimensions (w x h x d)	280 x 135 x 498 mm
Weight	9 kg

ECD2800 CE

UV-VIS DETECTOR

This detector with wavelength in the range of **190-800** is derived from basic type **ECD2800**. It is originally designed for use in **capillary electrophoresis (CE)**. Newly developed cell enables easy installation of quartz capillaries and minimizes interference by ambient light as well as mechanical shocks. The light is brought into the cell using optical fiber, which is focused in the center of quartz capillary for electrophoresis.

Detector is easy to operate, light intensities for **reference and measuring** channel are available for easy detector **diagnostics** as well as information about **lamp operating hours**. The detector performs **automatic wavelength calibration** after lamp start. High standard



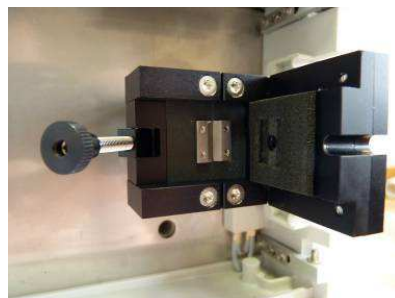
deuterium lamp in a special socket enables **easy lamp exchange**.

Output signal is available in both **digital and analogue** form. Detector can be controlled, programmed and used together with **Clarity** or **ECOMAC** software via **RS232** or **Ethernet** interface.

SPECIFICATION

TECHNICAL PARAMETERS

Wavelength range	190-800 nm
Spectral half-width	6 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp and halogen lamp
Noise (Test cell, 254nm, TC 1s, 10 Hz)	± 10·10 ⁻⁶ AU
Drift (Test cell, 254nm)	1·10 ⁻⁴ AU/hr.
Time constant	20 – 10 000 ms
Sampling speed	Up to 100 Hz
Digital output	1 V/AU
Analogue output	1x configurable
Communication	RS232, Ethernet(LAN)
Power supply	100-240V 50/60Hz 100VA
Dimensions (w x h x d)	280 x 135 x 498 mm
Weight	9 kg



ECD2800 EX

UV-VIS DETECTOR WITH OPTICAL CONNECTORS

This detector with wavelength in the range of **190-800** is derived from basic type **ECD2800**. **Cell is installed out of the unit** and it is connected using fiber optic cables with **SMA connectors**.

Detector is easy to operate, light intensities for **reference and measuring** channel are available for easy detector **diagnostics** as well as information about **lamp operating hours**. The detector performs **automatic wavelength calibration** after lamp start. High standard **deuterium lamp** in a special socket enables **easy lamp exchange**.



Output signal is available in both **digital and analogue** form. Detector can be controlled, programmed and used together with **Clarity** or **ECOMAC** software via **RS232** or **Ethernet** interface.

SPECIFICATION

TECHNICAL PARAMETERS

Wavelength range	190-800 nm
Spectral half-width	6 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp and halogen lamp
Noise (Test cell, 254nm, TC 1s, 10 Hz)	± 15·10 ⁻⁶ AU
Drift (Test cell, 254nm)	3·10 ⁻⁴ AU/hr.
Time constant	20 – 10 000 ms
Sampling speed	Up to 100 Hz
Digital output	1 V/AU
Analogue output	1x configurable
Communication	RS232, Ethernet(LAN)
Power supply	100-240V 50/60Hz 100VA
Dimensions (w x h x d)	280 x 135 x 498 mm
Weight	9 kg

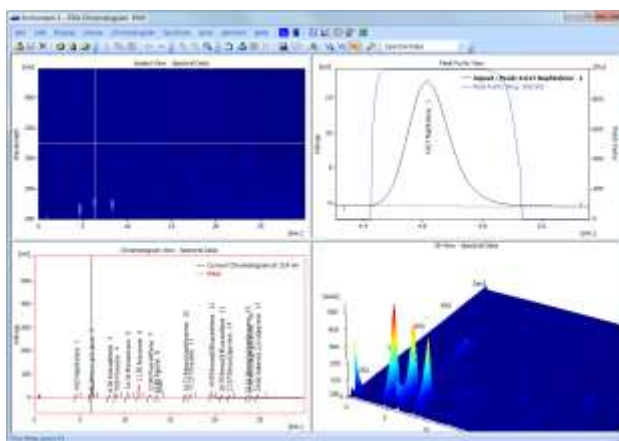
ECDA2800

UV-VIS PDA DETECTOR

Is an analytical **Diode Array Detector** which allows measuring absorbance of eight **wavelengths simultaneously in one cell** just as measuring of whole spectrum (scan). This unit is used in liquid chromatography **to verify analyzed samples** by means of eight wavelengths or scanned spectra.

Noise level at 254 nm is $\pm 5 \cdot 10^{-6}$ AU with a test cell. High standard **deuterium lamp** in a special socket enables **easy exchange** from front panel.

Output signal is available in both **digital and analogue** form. Detector could be controlled by **Clarity** or **ECOMAC** software.



Cell could be easily removed from the front of the unit. Three selectable flow cells **AD02, AD05** and **AD10** with optical path length 2.4, 5 and 10 mm. AD05 cell is included as component of the detector. Other cells on request.

The unit's DAD (diode array detector) design offers many advantages:

- **continuous up to 100 Hz scan** or absorbance measuring **on eight wavelengths simultaneously**
- wavelength setting **from 200 up to 800 nm** in increments of 1nm
- lamp work hours are counted **using the built-in counter for both deuterium and halogen lamps**
- **the cell is easy to replace** from side of the detector
- **Clarity PDA module support for 3D measurement**
 - **unit is controlled by RS232, Ethernet or USB interface**

SPECIFICATION

Wavelength range	200-800 nm
Spectral half-width	10 nm
Number of CCD elements	512 mathematically enhanced to 4 096 by sophisticated algorithm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp, halogen lamp
Noise (Test cell, 254nm, TC 2s, 10 Hz)	$\pm 5 \cdot 10^{-6}$ AU
Drift (Test cell, 254nm)	$1 \cdot 10^{-4}$ AU/hr.
Time constant	10 – 10 000 ms
Sampling speed	up to 100 Hz
Digital output	1 V/AU
Analog output	4x configurable
Wetted materials	fused silica, stainless steel, PEEK
Communication	RS232, Ethernet(LAN), USB
Display, keypad	VFD 140x32 pixels, 10 pushbuttons
Power supply	100-240V 50/60Hz 110VA
Dimensions (w x h x d)	280 x 135 x 498 mm (11.0"x 5.3" x 19.6")
Weight	9 kg

FLASH 10 DAD 400

DETECTOR



is an UV diode array detector, which allows measuring absorbance of **four wavelengths simultaneously** in one cell just as measuring of whole spectrum (scan). More wavelengths are used in liquid chromatography to **verify purity of analyzed samples** or in situations when some peaks absorb on different wavelengths. It is possible to use the detector in **flash and preparative** applications.

It is possible to control the detector **manually by keyboard and display** but also by **RS232**. At the back panel are available **four analog outputs**.

The unit's DAD (diode array detector) design offers many advantages:

- absorbance measuring **on four wavelengths simultaneously**
- wavelength setting **from 200 up to 400 nm** in increments of 1nm

- **on line scan of whole spectrum**
- lamp work hours are counted **using the built-in counter**
- **the cell is easy to replace** from the side of the detector
- **powering by 90-264 V**
- **unit is controlled by RS232 and keyboard**
- **signals are available in analog and digital form**
- **easy service and diagnostic using display and keyboard**

SPECIFICATION

TECHNICAL PARAMETERS:

Wavelength range	200 - 400 nm (256 elements on CCD)
Typical spectral half-width	8 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp
Noise level at test cell (254 nm, TC 0.75 s)	± 5 x 10 ⁻⁵ AU
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr
Materials in contact with mobile phase	PTFE; fused silica, stainless steel
Time constant (T90)	0.5 s; 0.75 s; 1 s or 2 s (T63 0.3s;0.4s;0.6s;1s)
Digital output for integrator	1 V/AU
Four 1V analog outputs for integrator with sensitivity switching	5; 3; 2; 1; 0.5; 0.25; 0.1; 0.05 AU/V
Interface	RS232
Power supply	90-264 V
Power input	100 VA
Dimensions (W x H x D)	135 x 170 x 418 mm
Weight	6.0 kg

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

Volume / Optical path(adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min. (3 000 ml/min. with PLCC 3L)

FLASH 10 DAD 600

DETECTOR



is an UV-VIS diode array detector, which allows measuring absorbance of **four wavelengths simultaneously in one cell** just as measuring of whole spectrum (scan). More wavelengths are used in liquid chromatography **to verify purity of analyzed samples** or in situations when some peaks absorb on different wavelengths. It is possible to use the detector in **flash and preparative** applications.

It is possible to control the detector **manually by keyboard and display** but also by **RS232**. At the back panel are available **four analog outputs**.

The unit's DAD (diode array detector) design offers many advantages:

- absorbance measuring **on four wavelengths simultaneously**
- wavelength setting **from 200 up to 600 nm** in increments of 1nm

- **on line scan of whole spectrum**
- lamp work hours are counted **using the built-in counter**
- **the cell is easy to replace** from the side of the detector
- **powering by 90-264 V**
- **unit is controlled by RS232 and keyboard**
- **signals are available in analog and digital form**
- **easy service and diagnostic using display and keyboard**

SPECIFICATION

TECHNICAL PARAMETERS:

Wavelength range	200 - 600 nm (256 elements on CCD)
Typical spectral half-width	8 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp
Noise level at test cell (254 nm, TC 0.75 s)	± 5 × 10 ⁻⁵ AU
Drift at test cell (254 nm after 1 h)	1 × 10 ⁻³ AU/hr
Materials in contact with mobile phase	PTFE; fused silica, stainless steel
Time constant (T90)	0.5 s; 0.75 s; 1 s or 2 s (T63 0.3s;0.4s;0.6s;1s)
Digital output for integrator	1 V/AU
Four 1V analog outputs for integrator with sensitivity switching	5; 3; 2; 1; 0.5; 0.25; 0.1; 0.05 AU/V
Interface	RS232
Power supply	90-264 V
Power input	100 VA
Dimensions (W x H x D)	135 x 170 x 418 mm
Weight	6.0 kg

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

Volume / Optical path(adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min. (3 000 ml/min. with PLCC 3L)

FLASH 10 DAD 800

DETECTOR



is an UV-VIS diode array detector, which allows measuring absorbance of **four wavelengths simultaneously in one cell** just as measuring of whole spectrum (scan). More wavelengths are used in liquid chromatography **to verify purity of analyzed samples** or in situations when some peaks absorb on different wavelengths. It is possible to use the detector in **flash and preparative** applications.

It is possible to control the detector **manually by keyboard and display** but also by **RS232**. At the back panel are available **four analog outputs**

The unit's DAD (diode array detector) design offers many advantages:

- absorbance measuring **on four wavelengths simultaneously**
- wavelength setting **from 190 up to 840 nm** in increments of 1nm

- **on line scan of whole spectrum**
- lamp work hours are counted **using the built-in counter** for both deuterium and halogen lamps
- **the cell is easy to replace** from the side of the detector
- **powering by 90-264 V**
- **unit is controlled by RS232 and keyboard**
- **signals are available in analog and digital form**
- **easy service and diagnostic using display and keyboard**

SPECIFICATION

TECHNICAL PARAMETERS:

Wavelength range	190 - 840 nm (256 elements on CCD)
Typical spectral half-width	10 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp and halogen lamp
Noise level at test cell (254 nm, TC 0.75 s)	± 5 x 10 ⁻⁵ AU
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr
Materials in contact with mobile phase	PTFE, fused silica, stainless steel
Time constant (T90)	0.5 s; 0.75 s; 1 s or 2 s (T63 0.3s;0.4s;0.6s;1s)
Digital output for integrator	1 V/AU
Four 1V analog outputs for integrator with sensitivity switching	5; 3; 2; 1; 0.5; 0.25; 0.1; 0.05 AU/V
Interface	RS232
Power supply	90-264 V
Power input	110 VA
Dimensions (W x H x D)	135 x 170 x 418 mm
Weight	6.0 kg

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

Volume / Optical path(adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min. (3 000 ml/min. with PLCC 3L)

FLASH 14 DAD 400 DETECTOR



is an UV diode array detector, which allows measuring absorbance of **four wavelengths simultaneously in one cell** just as measuring of **whole spectrum (scan)**. This unit is used in liquid chromatography **to verify analyzed samples** by means of four wavelengths or in situations when some **peaks absorb on different wavelengths**. It is possible to use the detector in **flash and preparative** applications.

The unit is designed **as stand alone with 90-264 V power supply and RS232 controlling. The unit DAD (diode array detector) design offers many advantages:**

- **Continuous 5 Hz scan** or absorbance measuring **on four wavelengths simultaneously**
- Wavelength setting **from 200 up to 400 nm** in increments of 1nm

- Lamp work hours are counted **using the built-in counter. Lamp is easy exchangeable from front panel**
- **Clarity PDA module support for 3D measurement**
- **Cell is easy to handle** from front panel
- **Powering by 90-264 V**
- Unit is controlled by RS232 interface

SPECIFICATION

TECHNICAL PARAMETERS:

Wavelength range (four wavelengths simultaneously)	200 - 400 nm (256 elements on CCD)
Scan	200 - 400 nm, 5 Hz, step 1 nm
Typical spectral half-width	8 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp
Noise level at test cell (254 nm, TC 0.75 s)	± 5 x 10 ⁻⁵ AU
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr
Materials in contact with mobile phase	PTFE; fused silica, stainless steel
Time constant (T90)	0.5 s; 0.75 s; 1 s or 2 s (T63 0.3s;0.4s;0.6s;1s)
Output for integrator	1 V/AU (in digital form only)
Interface	RS232
Power supply	90-264 V
Power input	90 VA
Dimensions (W x H x D)	280 x 130 x 463 mm (11.02 x 5.12 x 18.23 in)
Weight	9 kg (19.84 lb)

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

volume/optical path (adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min

FLASH 14 DAD 600 DETECTOR



is an UV diode array detector, which allows measuring absorbance of **four wavelengths simultaneously in one cell** just as visualization of whole spectra. This unit is used in liquid chromatography **to verify analyzed samples** by means of four wavelengths or in situations when some **peaks absorb on different wavelengths**. It is possible to use the detector in **flash and preparative** applications.

The unit is designed **as stand alone with 90-264 V power supply and RS232 controlling**. **The unit's DAD (diode array detector) design offers many advantages:**

- Absorbance measuring **on four wavelengths simultaneously**
- Support in **Clarity SW and ECOMAC**

- Wavelength setting **from 200 up to 600 nm** in increments of 1nm
- **Whole visualization spectra**
- Lamp work hours are counted **using the built-in counter**. **Lamp is easy exchangeable from front panel**
- **Cell is easy to handle** from front panel
- **Powering by 90-264 V**
- **Unit is controlled by RS232 interface**

SPECIFICATION

TECHNICAL PARAMETERS:

Wavelength range (four wavelengths simultaneously)	200 - 600 nm (256 elements on CCD)
Typical spectral half-width	8 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp
Noise level at test cell (254 nm, TC 0.75 s)	± 5 x 10 ⁻⁵ AU
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr
Materials in contact with mobile phase	PTFE; fused silica, stainless steel
Time constant (T90)	0.5 s; 0.75 s; 1 s or 2 s (T63 0.3s;0.4s;0.6s;1s)
Output for integrator	1 V/AU (in digital form only)
Interface	RS232
Power supply	90-264 V
Power input	90 VA
Dimensions (W x H x D)	280 x 130 x 463 mm (11.02 x 5.12 x 18.23 in)
Weight	9 kg (19.84 lb)

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

volume/optical path (adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min

FLASH 14 DAD 800 DETECTOR



is an UV-VIS diode array detector, which allows measuring absorbance of **four wavelengths simultaneously in one cell** just as measuring of **whole spectrum (scan)**. This unit is used in liquid chromatography to **verify analyzed samples** by means of four wavelengths or in situations when some **peaks absorb on different wavelengths**. It is possible to use the detector in **flash and preparative** applications.

The unit is designed **as stand-alone with 90-264 V power supply and RS232 controlling. The unit DAD (diode array detector) design offers many advantages:**

- **Continuous 5 Hz scan** or absorbance measuring **on four wavelengths simultaneously**
- Wavelength setting **from 190 up to 840 nm** in increments of 1nm

- Lamp work hours are counted **using the built-in counter. Lamp is easy exchangeable from front panel**
- **Clarity PDA module support for 3D measurement**
- **Cell is easy to handle** from front panel
- **Powering by 90-264 V**
- Unit is controlled by RS232 interface

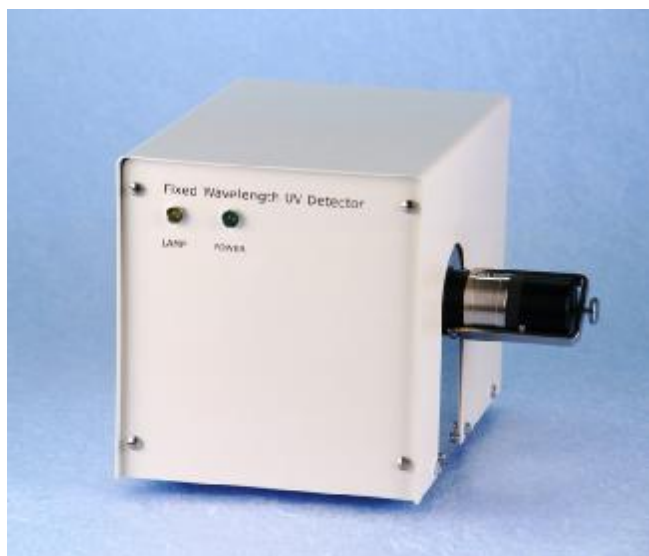
SPECIFICATION

TECHNICAL PARAMETERS:

Wavelength range (four wavelengths simultaneously)	190 - 840 nm (256 elements on CCD)
Scan	200 - 800 nm, 5 Hz, step 3 nm
Typical spectral half-width	10 nm
Accuracy of adjustment	± 1 nm
Reproducibility	± 0.5 nm
Light source	Deuterium discharge lamp and halogen lamp
Noise level at test cell (254 nm, TC 0.75 s)	± 5 x 10 ⁻⁵ AU
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr
Materials in contact with mobile phase	PTFE; fused silica, stainless steel
Time constant (T90)	0.5 s; 0.75 s; 1 s or 2 s (T63 0.3s;0.4s;0.6s;1s)
Output for integrator	1 V/AU (in digital form only)
Interface	RS232
Power supply	90-264 V
Power input	90 VA
Dimensions (W x H x D)	280 x 130 x 463 mm (11.02 x 5.12 x 18.23 in)
Weight	9 kg (19.84 lb)

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

volume/optical path (adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min



UV detector LCD 2071.3

P/N 71A00000

is **small simple unit** for use in **analytical, preparative and FLASH** liquid chromatography applications based on measurement of absorption of UV radiation of **254nm**. The unit is easy for operating, **reference and sample signal** are available for detector diagnostics. **Work hours** of lamp are counted using build in counter.

There is possible to control the unit using keyboard, external logic signals or using **RS 232**. The output signal available in **digital and analogue form** on the output connector. The detector is equipped with an interference filter 254 nm to reduce the others spectral lines of mercury lamp.

Very interesting are the **small dimensions** of unit.

There is possible to use three type of cells:

Preparative cell PLCC 11 with basic path length **0,1 mm**

Preparative cell PLCC 13 with basic path length **0,3 mm**

Analytical cell HPLC 08

Specification

Wavelength	254 nm
Light source	low pressure mercury lamp Nk4/4
Time constant	1.0 sec.
Noise level at empty cell	$\pm 8 \times 10^{-5}$ AU
Drift at empty cell (after 1 hour)	8×10^{-4} AU/hr
Absorbance output	0.5 V/au
Power supply	230 V \pm 10%, 50 Hz or 115/100 V \pm 10%, 50-60 Hz
Power input	34 VA
Dimensions (W x H x D)	165 x 178 x 250 mm (6.50" x 7.0" x 9.84")
Weight	4kg

Important notice: Output signal of the detector is directly proportional to the optical path of the cell. Since the optical paths of cells may be changed, noise and drift levels are referred to the optical path of 10 mm, corresponding to the AU definition.

Analytical cell HPLC 08

Volume / optical path	10 μ l / 5 mm
Diameters of capillaries OD x ID	input 1/16" x 0.2 mm; output 1/16" x 0.5 mm

Preparative cell PLCC 11 / PLCC 13

volume/optical path (adjustable)	45 μ l / 0.1 mm 0.3 mm by PLCC 13 55 μ l / 1.4 mm 70 μ l / 2.4 mm
cell connecting	tubing with OD = 1/16" or 1/8", thread 1/4"-28

TOYDAD 400

TWO CHANNEL UV DETECTOR FOUR CHANNEL UV DETECTOR SCANNING UV DETECTOR

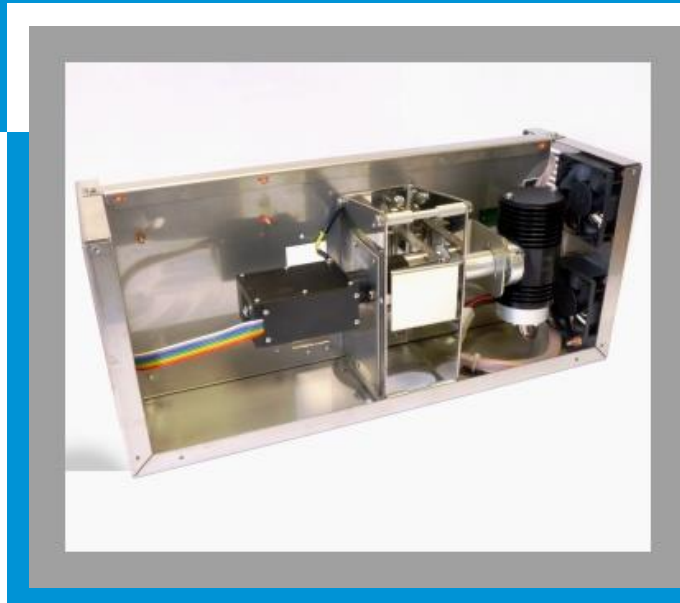
is **OEM built-in** UV detector suited for preparative and flash chromatography with diode array (DAD) in range 200 – 400 nm. It is offered in the following versions:

Two Channel version measures at **two wavelengths simultaneously** with possibility to see **current scan**.

Four Channel version measures at **four wavelengths simultaneously** with possibility to see **current scan**.

Scanning version measures at **four wavelengths simultaneously** or **sends scan with speed 5 Hz** which allows to **create 3D picture**.

More wavelengths or scan are used in liquid chromatography to **verify purity of analyzed samples** or in situations when some peaks absorb on different wavelengths.



Most important features of TOYDAD detectors:

- small dimensions
- **built-in** lamp working hours counter
- **easy replacement** of flow cell
- **measuring at more wavelengths simultaneously**
- **sophisticated diagnostic software**

SPECIFICATIONS

TECHNICAL PARAMETERS:

	TOYDAD 400 Two Channel UV Detector	TOYDAD 400 Four Channel UV Detector	TOYDAD 400 Scanning UV Detector
Part Number	TOY01000	TOY02000	TOY03000
Wavelength range	200 - 400 nm (128 elements on CCD)		
Number of channels (Signals)	2	4	4
Scan	Informative 200 – 400 nm	Informative 200 – 400 nm	200 - 400 nm, 5 Hz, step 1 nm
Typical spectral half-width	8 nm		
Accuracy of adjustment / Reproducibility	± 1 nm /±0.5 nm		
Noise level at test cell (254 nm, TC 0.75s)	± 5 x 10 ⁻⁵ AU		
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr		
Materials in contact with mobile phase	PTFE; fused silica, stainless steel		
Time constant (T63)	0.5 s, 0.75 s, 1.0 s, 2.0 s, 4.0 s, 8.0 s, 16.0 s, 0.2 s, 0.1 s		
Interface	RS232		
Power supply	24 -36 V DC		
Power input	48 W		
Dimensions (W x H x D)	131 x 167 x 386 mm (5.15 x 6.57 x 15.20 in)		
Weight	3.20 kg (7.06 lb)		

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

volume/optical path (adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min

TOYDAD 600

TWO CHANNEL UV DETECTOR
FOUR CHANNEL UV DETECTOR
SCANNING UV DETECTOR



is **OEM built-in** UV detector suited for preparative and flash chromatography with diode array (**DAD**) in range **200 – 600 nm**. It is offered in the following versions:

Two Channel version measures at **two wavelengths simultaneously** with possibility to see **current scan**.

Four Channel version measures at **four wavelengths simultaneously** with possibility to see **current scan**.

Scanning version measures at **four wavelengths simultaneously** or **sends scan with speed 5 Hz** which allows to **create 3D picture**.

More wavelengths or scan are used in liquid chromatography to **verify purity of analyzed samples** or in situations when some peaks absorb on different wavelengths.

Most important features of TOYDAD detectors:

- small dimensions
- **built-in** lamp working hours counter
- **easy replacement** of flow cell
- **measuring at more wavelengths simultaneously**
- **sophisticated diagnostic software**

SPECIFICATIONS

TECHNICAL PARAMETERS:

	TOYDAD 600 Two Channel UV Detector	TOYDAD 600 Four Channel UV Detector	TOYDAD 600 Scanning UV Detector
Part Number	TOY11000	TOY12000	TOY13000
Wavelength range	200 - 600 nm (256 elements on CCD)		
Number of channels (Signals)	2	4	4
Scan	Informative 200 – 600 nm	Informative 200 – 600 nm	200 - 600 nm, 5 Hz, step 2 nm
Typical spectral half-width	8 nm		
Accuracy of adjustment / Reproducibility	± 1 nm /±0.5 nm		
Noise level at test cell (254 nm, TC 0.75s)	± 5 x 10 ⁻⁵ AU		
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr		
Materials in contact with mobile phase	PTFE; fused silica, stainless steel		
Time constant (T63)	0.5 s, 0.75 s, 1.0 s, 2.0 s, 4.0 s, 8.0 s, 16.0 s, 0.2 s, 0.1 s		
Interface	RS232		
Power supply	24 -36 V DC		
Power input	48 W		
Dimensions (W x H x D)	131 x 167 x 386 mm (5.15 x 6.57 x 15.20 in)		
Weight	3.20 kg (7.06 lb)		

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

volume/optical path (adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min

TOYDAD 800

TWO CHANNEL UV DETECTOR FOUR CHANNEL UV DETECTOR SCANNING UV DETECTOR

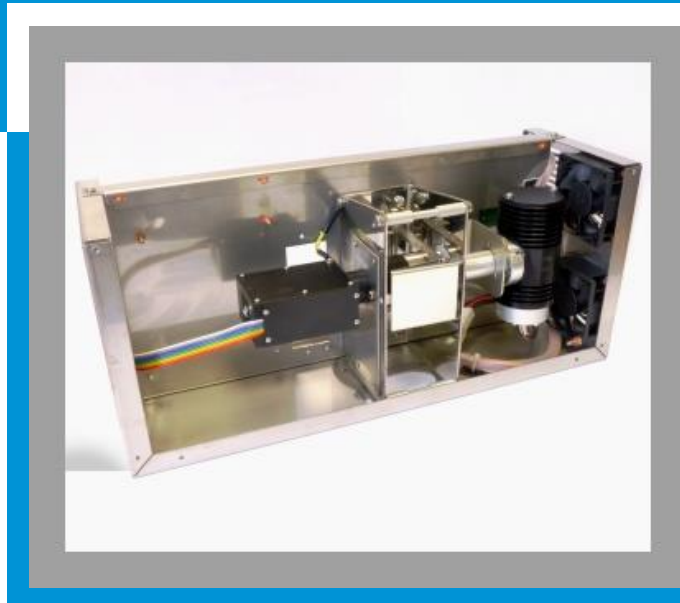
is **OEM built-in** UV detector suited for preparative and flash chromatography with diode array (DAD) in range 200 – 800 nm. It is offered in the following versions:

Two Channel version measures at **two wavelengths simultaneously** with possibility to see **current scan**.

Four Channel version measures at **four wavelengths simultaneously** with possibility to see **current scan**.

Scanning version measures at **four wavelengths simultaneously** or **sends scan with speed 5 Hz** which allows to **create 3D picture**.

More wavelengths or scan are used in liquid chromatography to **verify purity of analyzed samples** or in situations when some peaks absorb on different wavelengths.



Most important features of TOYDAD detectors:

- small dimensions
- **built-in lamp working hours counter**
- **easy replacement of flow cell**
- **measuring at more wavelengths simultaneously**
- **sophisticated diagnostic software**

SPECIFICATIONS

TECHNICAL PARAMETERS:

	TOYDAD 800 Two Channel UV Detector	TOYDAD 800 Four Channel UV Detector	TOYDAD 800 Scanning UV Detector
Part Number	TOY31000	TOY32000	TOY33000
Wavelength range	200 - 800 nm (256 elements on CCD)		
Number of channels (Signals)	2	4	4
Scan	Informative 200 – 800 nm	Informative 200 – 800 nm	200 - 800 nm, 5 Hz, step 3 nm
Typical spectral half-width	10 nm		
Accuracy of adjustment / Reproducibility	± 1 nm /±0.5 nm		
Noise level at test cell (254 nm, TC 0.75s)	± 5 x 10 ⁻⁵ AU		
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr		
Materials in contact with mobile phase	PTFE; fused silica, stainless steel		
Time constant (T63)	0.5 s, 0.75 s, 1.0 s, 2.0 s, 4.0 s, 8.0 s, 16.0 s, 0.2 s, 0.1 s		
Interface	RS232		
Power supply	24 -36 V DC		
Power input	48 W		
Dimensions (W x H x D)	131 x 167 x 386 mm (5.15 x 6.57 x 15.20 in)		
Weight	3.20 kg (7.06 lb)		

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

volume/optical path (adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min

TOYFIX

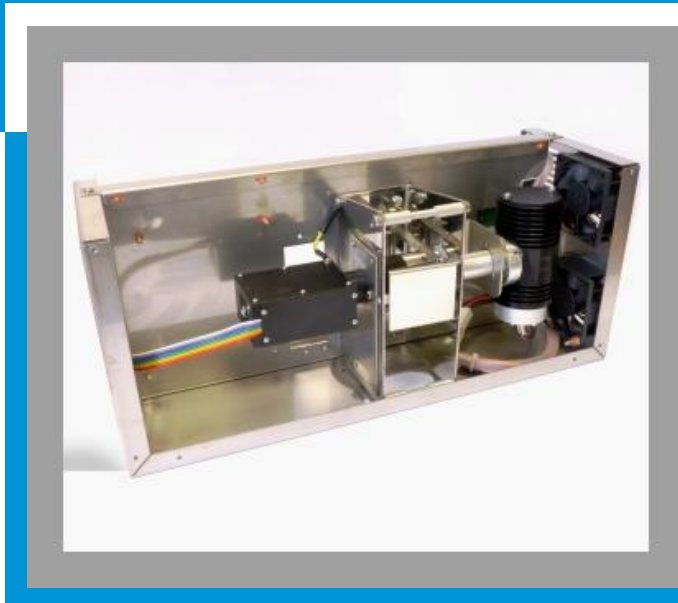
SINGLE UV DETECTOR

DUAL UV DETECTOR

is **OEM built-in** UV detector suited for preparative and flash chromatography with diode array (**DAD**) in range of **200 – 600 nm**. It is offered in two versions as follows:

Single UV detector version measure at **one fix wavelength** which is adjusted in production **according to customer order in range of 200 – 600 nm**.

Dual UV detector version measure at **two fix wavelengths** which are adjusted in production **according to customer order in range of 200 – 600 nm**.



Most important features of TOYFIX detectors:

- small dimensions
- **built-in** lamp working hours counter
- **easy replacement** of flow cell
- **sophisticated diagnostic software**

SPECIFICATIONS

TECHNICAL PARAMETERS:

Part Number	TOYFIX Single UV Detector	TOYFIX Dual UV Detector
	TOY21000	TOY22000
Wavelength range	200 - 600 nm (256 elements on CCD)	
Number of channels (Signals)	One fix wavelength in range of 200 – 600nm	Two fix wavelengths in range of 200 – 600nm
Typical spectral half-width	8 nm	
Accuracy of adjusted wavelength	± 1 nm	
Noise level at test cell (254 nm, TC 0.75s)	± 5 x 10 ⁻⁵ AU	
Drift at test cell (254 nm after 1 h)	1 x 10 ⁻³ AU/hr	
Materials in contact with mobile phase	PTFE; fused silica, stainless steel	
Time constant (T63)	0.5 s, 0.75 s, 1.0 s, 2.0 s, 4.0 s, 8.0 s, 16.0 s, 0.2 s, 0.1 s	
Interface	RS232	
Power supply	24 -36 V DC	
Power input	48 W	
Dimensions (W x H x D)	131 x 167 x 386 mm (5.15 x 6.57 x 15.20 in)	
Weight	3.20 kg (7.06 lb)	

PREPARATIVE CELL PLCC 15 (SUPPLIED WITH UNIT)

volume/optical path (adjustable)	45 µl / 0.3 mm; 55 µl / 1.4 mm; 70 µl / 2.4 mm
Cell connecting	tubing with OD = 1/8", thread 1/4"-28
Maximal flow rate	500 ml/min