

DFW-20F Fixed Wavelength Detector

Fixed Wavelength Detectors at the Lowest Cost!!

D-Star Instruments continues to provide the analytical chemist with a series of new and improved, easy to operate, economically priced, and high performance UV-VIS Fixed Wavelength Detectors for liquid chromatography and other dynamic flow techniques.



This UV-VIS detector product line continues to meet the tight budgets of today's economy. The DFW-20F, DFW-20FC, and DFW-21FC are the first of a series of liquid chromatography detectors designed, not only to fit the tightest budget requirements, but they are light in weight, small in footprint, and simple to use.

The DFW-20F is a 254 nm Fixed wavelength detector only and cannot be converted to any other wavelength. The DFW-20FC and DFW-21FC can be converted to other wavelengths where the lamp / filter combination is available.

Important DFW-20F, DFW-20FC and DFW-21FC Features:

- Flowcells are located in convenient position at the front of the detector.
- Flowcells are available for analytical including Microbore techniques, industrial, and biochemical applications, as well as preparative and semi-preparative separations. Flow rates in excess of 100 ml / min can be used.
- All wettable components constructed of PEEK^a, TFE^a, or Tefzel^a which make the detector useful for applications requiring biocompatibility.

Applications requiring the use of mobile phases such as Methylene Chloride, THF, and DMSO, or Buffers such as TFA should use the available SS flowcells.

- For analytical procedures requiring high sensitivity the new analytical flowcell with heat exchanger is recommended.
- Output for Integrators and data systems (1 V/AU) are available at the rear of the detector.
- Hg and Tungsten lamps available for VIS and limited NIR analysis (Contact factory for special Filter availability and prices).
- Low UV lamps available for 229nm and 214nm.

Applications:

Designed for maximum flexibility, D-Star detectors can accommodate many applications. Their relatively low price, better than one half the price of the nearest competitor, puts the DFW-20, DFW-20C, and DFW-21C within the limited budgets of university undergraduate curriculum, and many other under funded activities. The detectors simple operation is ideal for undergraduate, and even secondary schools chemistry classes where chemical instrumentation, and in particular separation science, is part of the curriculum.

Further, the light weight of the detector and its small footprint make it ideal for applications where laboratory bench space is at a premium. This would include hood installations and field operations requiring transportability.

The detectors are finding wide usage for applications such as Flash Chromatography, GPC clean up procedures, non-chromatographic applications such as FIA and SIA, and still widely used for routine chromatographic techniques where variable wavelength or diode array detectors are not required.



D-Star Instruments, Inc. • 8424 Quarry Rd., Manassas, VA 20110
Phone: 703-335-0770 • Fax: 703-335-9952 • WWW.D-STAR.COM

DFW-20F Detector Specifications

Wavelengths: DFW-20F 254 nm only; DFW-20FC 254 nm but can be converted to other available wavelengths; DFW-21FC 280 nm but can be converted to other wavelengths w/ available lamp / filters.

Lamps: DFW-20F Standard 6 in low pressure Hg lamp (254 nm)
DFW-20FC Pencil type lamp / Filter combination (254nm)
DFW-21FC Pencil type Hg lamp with 280 nm phosphor with 280 nm filter
DFW-21FC Tungsten (W) Lamp for VIS and NIR Wavelengths
Low UV (LUV) 214, 229

Flowcells:

Analytical 7.0 mm Pathlength; 10 μ l illuminated volume (PEEK)
7.0 mm Pathlength; 10 μ l illuminated volume (PEEK) w/ Heat Exchanger
7.0 mm Pathlength; 10 μ l illuminated volume (SS)
7.0 mm Pathlength; 10 μ l illuminated volume (SS) w/ Heat Exchanger
Microbore 5.0 mm Pathlength; 1.5 μ l illuminated volume (PEEK)
Semi-Prep. 2.5 mm Pathlength; 44 μ l illuminated volume (fused silica). Very low back-pressure
Prep. 2.0 mm Pathlength; 4.0 μ l illuminated volume (PEEK)
Prep. 2.0 mm Pathlength; 4.0 μ l illuminated volume (SS)
Linearity > 2.0 %
Drift < 5 x 10⁻⁴ AU / Hr
Noise < 5 x 10⁻⁵ AUFS @ 254 nm, Constant Temperature
Integrator Output 1.0 V / AU
Dimensions 11.3 in. L x 7.5 in W x 3.0 in H
Weight 6 lb (2.7 kg)
Front Panel Power off / on indicator Lamp ; Autozero switch
Rear Panel Power switch; Integrator Output 1AU/Volt; remote autozero; other diagnostic voltages and remote control.
Power 115 VAC, 220-240 VAC, 50 / 60 Hz

Accessories:

Wavelength Conversion Kits:

Part # 025-0129 DFW-20FC 280 nm Lamp and Filter Kit
Part # 025-0130 DFW-20FC or DFW-21FC 365 nm Lamp and Filter Kit
Part # 025-0128 DFW-20FC or DFW-21FC 254 nm Lamp and Filter Kit
Part # 025-0131 DFW-20FC or DFW-21FC 420 nm Lamp and Filter Kit (Requires Optional VIS Photocell – See Below)
Part # 025-0132 DFW-20FC or DFW-21FC 505 nm Lamp and Filter Kit (Requires Optional VIS Photocell)
Part # 025-0020 VIS Dual Silicon Diode Photocell

Flowcells :

Part # 025-0022 Analytical Flowcell PEEK, 7 mm Pathlength, 10 μ l Volume w/ 12 in 1 / 16 " PEEK Tubing
Part # 025-0127 Same as above but SS construction w/ SS tubing
Part # 025- Same as Part # 025-0022 but with Heat Exchanger
Part # 025- Same as Part # 025-0127 but with Heat Exchanger
Part # 025-0021 Semi-Prep Flowcell PEEK, 2.5 mm pathlength; 44 μ l Volume w/ 24 in 1 / 8 " TFE Tubing
Part # 025-0085 Preparative Flowcell PEEK, 2.0 mm Pathlength, 4.0 μ l Volume w/ 1 / 8 " Fittings
Part # 025- Same as above but in SS w/ SS Fittings
Part # 025-0126 Microbore Flowcell PEEK 5.0 mm Pathlength; 1.5 μ l Volume w/ 1 / 32 " Tubing
Cables :
Part # 025-0027 Cable for Remote Control and Recorder / Integrator
Part # 025-0149 Cable for Remote Control, Recorder / Integrator for Automated Systems



D-Star Instruments, Inc. • 8424 Quarry Rd., Manassas, VA 20110
Phone: 703-335-0770 • Fax: 703-335-9952 • WWW.D-STAR.COM