

Spyder™ Process Flow Cell

The Spyder™ is a spectroscopic flow cell intended for use in laboratories and small-scale pilot plants. When connected to a suitable near-infrared process analyzer using fiber optic cables it enables the analysis of liquid products flowing within a continuous chemical process.

Features & Benefits

- Experiment with pathlength**
 The pathlength of the cell can be varied using internal spacing rings in order to establish the optimum measurement for your process. The pathlength is then "locked in" for in-service use by exchanging the PTFE ferrules for stainless steel ones.
- Robust sapphire optics**
 Sapphire optics are renowned for their durability in service. Their optical transmission range is ideal for the near-infrared region of the spectrum.
- Standard swagelok connectors**
 Connection to the process stream is made using off-the-shelf swagelok fittings (US sizes only).
- Handles a wide range of chemical process conditions**
 With a 316L stainless steel body and FFKM sealing, the cell is able to handle many types of process chemistries and can contain flowing liquids at up to 200 °C and 30 bar g pressure.



Specifications

Body material	316L Stainless Steel
Sealing material	FFKM
Optical materials	Sapphire windows and quartz lenses
Optical range	12000–4000 cm ⁻¹
Fiber optic connection	SMA
Tubing connection	1/2" tubing

Adjustable pathlength configuration

In order to ascertain or calibrate the appropriate pathlength for a specific application, the supplied PTFE ferrules must be used to secure the optics. The pathlength can be adjusted using spacer rings as many times as needed. This configuration has the following performance limitations.

Maximum allowable pressure	Ambient pressure
Temperature range	Ambient temperature
Pathlength	Adjustable at 2, 4, 6, 8, or 10 mm

Fixed pathlength configuration

Under normal operating conditions and after the correct pathlength for the application has been determined, the supplied stainless steel ferrules may be used to secure the optics. The pathlength is preset using the spacer rings and cannot be adjusted once the stainless steel ferrules have been fitted.

Maximum allowable pressure	100 bar g @ 20 °C 30 bar g @ 200 °C
Temperature range	Ambient to 200 °C
Pathlength	Fixed at 2, 4, 6, 8, or 10 mm

Ordering information

Complete Spyder™ process cell kit	PC30000
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Spares

2x Optical window mounts	PC30001
Essential spares kit	PC30002
<i>Includes replacement O-rings, 1/2" and 5/8" swagelok unions, spare PTFE and Stainless Steel ferrules, and a spare set of spacers (2x 1mm, 2x 2mm, 2x 4mm)</i>	

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Reach out to us any time for more information on the application described in the text above or visit our website specac.com to read more and make an enquiry.