



Gemini Scientific Instruments - Price List 2009

<u>Part Number</u>	<u>Description</u>	<u>Price</u>
Mercury Series Gas Cells		
MERC-0.1L/10CM	<p>Mercury Series Single-Pass Gas Absorption cell for FTIR gas analysis. Mounting for standard FTIR cell holder. 1/4" glass hose connections with stopcocks. Comes standard with two 25mm x 4mm KBr windows.</p> <p>Pathlength: 10 cm Volume: 0.1 liters Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: n/a Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$1,400.00
MERC-0.1L/10CM-SS	<p>Mercury Series Single-Pass Gas Absorption cell for FTIR gas analysis. Mounting for standard FTIR with baseplate. 1/4" SS Swagelok sample line connections (with ut valves). Comes standard with two 37.5 mm x 4mm KBr windows.</p> <p>Pathlength: 10 cm Volume: 0.1 liters Cell Body: stainless steel, electropolished Cell Hardware: aluminum black anodized Optical Coating: n/a Temperature Range: ambient Pressure Range: vacuum-15 p.s.i.</p>	\$2,600.00
MERC-0.1L/1CM-VCR-PRG	<p>Mercury Series Single Pass Gas Cell. Baseplate and mounting fixture for center-focus FT-IR with telescoping purge tubes to seal against sample compartment bulkheads(1/8" SS Swagelok purge connections provided). Sample line connections 1/4" SS Welded VCR fittings. Comes with two 25mm x 4mm KBr windows.</p> <p>Pathlength: 1 cm Volume: 0.01 liters Cell Body: stainless steel, electropolished Cell Hardware: aluminum black anodized Optical Coating: n/a Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$3,800.00
MERC-0.1L/10CM-VCR-PRG	<p>Mercury Series Single Pass Gas Cell. Baseplate and mounting fixture for center-focus FT-IR with telescoping purge tubes to seal against sample compartment bulkheads(1/8" SS Swagelok purge connections provided). Sample line connections 1/4" SS welded VCR fittings. Comes with two 37.5mm x 4mm KBr windows.</p> <p>Pathlength: 10 cm Volume: 0.1 liters Cell Body: stainless steel, electropolished Cell Hardware: aluminum black anodized Optical Coating: n/a Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$4,200.00



<u>Part Number</u>	<u>Description</u>	<u>Price</u>
MERC-0.1L/2.4M	<p>Mercury Series Long Path Gas Absorption cell for FTIR gas analysis. Transfer optics for center-focus FTIR and standard cell holder. 1/8" SS Swagelok connections, with flow tube and valves. Comes standard with one 37.5mm x 4mm KBr window.</p> <p>Pathlength: 2.4 meters, fixed Volume: 0.1 liters Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$4,200.00
VEN-0.5L/4.8M	<p>Venus Series Gas Cells</p> <p>Venus Series Long Path Gas Absorption cell for FTIR gas analysis Transfer optics for center-focus FTIR and standard cell holder. SS Swagelok connections, with flow tube and SS valves. Comes standard with two 25mm x 4mm KBr windows.</p> <p>Pathlength: 4.8 meters, fixed Volume: 0.5 liters Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$5,200.00
VEN-0.75L/6.4M	<p>Venus Series Long Path Gas Absorption cell for FTIR gas analysis Transfer optics for center-focus FTIR and standard cell holder. SS Swagelok connections, with flow tube and SS valves. Comes standard with two 25mm x 4mm KBr windows.</p> <p>Pathlength: 6.4 meters, fixed Volume: 0.75 liters Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$5,600.00
VEN-0.5L/5V	<p>Venus Series Long Path Gas Absorption cell for FTIR gas analysis. Transfer optics for center-focus FTIR and standard cell holder. SS Swagelok connections, with flow tube and SS valves. Comes standard with two 25mm x 4mm KBr windows.</p> <p>Pathlength: 1 to 5 meters, variable Volume: 0.5 liters Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient-100 C. Pressure Range: vacuum-ambient</p>	\$6,800.00



<u>Part Number</u>	<u>Description</u>	<u>Price</u>
VEN-0.75L/8V	<p>Venus Series Long Path Gas Absorption cell for FTIR gas analysis. Transfer optics for center-focus FTIR and standard cell holder. SS Swagelok connections, with flow tube and SS valves.. Comes standard with two 25mm x 4mm KBr windows.</p> <p>Pathlength: 1.6 to 8 meters, variable Volume: .075 liters Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient-100 C. Pressure Range: vacuum-ambient</p>	\$7,200.00
Earth Series Gas Cells		
EA-2L/10M	<p>Earth Series Long Path Gas Absorption Cell for FTIR gas analysis. Transfer optics and baseplate for center-focus FTIR. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4 mm KBr windows as standard.</p> <p>Pathlength: 10 meters, fixed Volume: 2 liters Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$6,800.00
EA-2L/10V	<p>Earth Series Long Path Gas Absorption Cell for FTIR gas analysis. Transfer optics and baseplate for center-focus FTIR. Optical alignment device with 6 volt power supply. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4 mm KBr windows as standard.</p> <p>Pathlength: 1 to 10 meters, variable Volume: 2 liters. Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient-100 C. Pressure Range: vacuum-ambient</p>	\$9,600.00
EA-5L/20V	<p>Earth Series Long Path Gas Absorption Cell for FTIR gas analysis. Six-mirror transfer optics and baseplate for center-focus FTIR. Optical alignment device with 6 volt power supply. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4 mm KBr windows as standard.</p> <p>Pathlength: 2 to 30 meters, variable Volume: 5 liters. Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient-100 C. Pressure Range: vacuum-ambient</p>	\$13,800.00



<u>Part Number</u>	<u>Description</u>	<u>Price</u>
EA-8L/20M	<p>Earth Series Long Path Gas Absorption Cell for FTIR gas analysis. Transfer optics and baseplate for center-focus FTIR. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4 mm KBr windows as standard.</p> <p>Pathlength: 20 meters, fixed Volume: 8 liters. Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$9,800.00
EA-8L/20V	<p>Earth Series Long Path Gas Absorption Cell for FTIR gas analysis. Transfer optics and baseplate for center-focus FTIR. Optical alignment device with 6 volt power supply. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4 mm KBr windows as standard.</p> <p>Pathlength: 2 to 30 meters, variable Volume: 8 liters. Cell Body: borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: gold, durable native Temperature Range: ambient-100C Pressure Range: vacuum-ambient</p>	\$15,800.00
MARS Series Gas Cells		
MARS-0.2L/3M	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 3 meters, fixed Volume: 0.2 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGoldtm, protected multilayer Temperature Range: durable native Pressure Range: ambient-200 C. vacuum-45 p.s.i.</p>	\$7,200.00
MARS-0.2L/3M-SS	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 3 meters, fixed Volume: 0.2 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGoldtm, protected multilayer Temperature Range: durable native Pressure Range: ambient-200 C. vacuum-45 p.s.i.</p>	\$10,200.00



<u>Part Number</u>	<u>Description</u>	<u>Price</u>
MARS-0.375L/4.2M	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 4.2 meters, fixed Volume: 0.375 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$7,800.00
MARS-0.375L/4.2M-SS	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 4.2 meters, fixed Volume: 0.375 liters Cell Body: stainless steel, electropolished Cell Hardware: stainless steel, electropolished Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$10,800.00
MARS-0.75L/6.4M-AL	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 6.4 meters, fixed Volume: 0.75 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$9,200.00
MARS-0.75/6.4V-AL	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 1.6 to 6.4 meters, variable Volume: 0.75 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$10,200.00



<u>Part Number</u>	<u>Description</u>	<u>Price</u>
MARS-0.75L/6.4M-SS	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 6.4 meters, fixed Volume: 0.75 liters Cell Body: stainless steel, electropolished Cell Hardware: stainless steel, electropolished Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$13,200.00
MARS-2L/10M-AL	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 10 meters, fixed Volume: approx. 2 liters Cell Body: stainless steel, electropolished Cell Hardware: stainless steel, electropolished Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$10,800.00
MARS-2L/10V-AL	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 1 to 10 meters, variable Volume: 2 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$11,600.00
MARS-2L/10M-SS	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with ¼" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 10 meters, fixed Volume: Approx. 2 liters Cell Body: stainless steel, electropolished Cell Hardware: stainless steel, electropolished Optical Coating: GemGoldtm, protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$15,800.00



<u>Part Number</u>	<u>Description</u>	<u>Price</u>
MARS 8L/20M-AL	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 20 meters, fixed Volume: 8 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGold[™], protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$14,600.00
MARS 8L/20V-AL	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 2 to 20 meters, variable Volume: 8 liters Cell Body: aluminum electroless nickel Cell Hardware: aluminum electroless nickel Optical Coating: GemGold[™], protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$15,400.00
MARS-8L/20M-SS	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 1/4" Swagelok connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 20 meters, fixed Volume: 8 liters Cell Body: stainless steel, electropolished Cell Hardware: stainless steel, electropolished Optical Coating: GemGold[™], protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$19,600.00
MARS-8L/40V-SS	<p>MARS Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 1/4" VCR valves, sample line connections and flow tube. Comes with two 25mm x 4mm KBr windows as standard.</p> <p>Pathlength: 12 to 48 meters, fixed or variable Volume: approx. 8 liters Cell Body: stainless steel, electropolished Cell Hardware: stainless steel, electropolished Optical Coating: GemGold[™], protected multilayer Temperature Range: ambient-200 C. Pressure Range: vacuum-45 p.s.i.</p>	\$21,200.00



Part Number

Description

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SATURN Series Gas Cells

SAT-18L/80V	<p>Saturn Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 3/8" Swagelok connections and flow tube. Comes with two 37.5mm x 4mm KBr windows as standard.</p> <p>Pathlength: 8 to 80 meters, variable Volume: Approx. 18 liters. Cell Body: Borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: GeminiSilvertm, protected multilayer Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$18,800.00
SAT-25L/100V	<p>Saturn Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 3/8" Swagelok connections and flow tube. Comes with two 37.5mm x 4mm KBr windows as standard.</p> <p>Pathlength: 10 to 100 meters, variable Volume: Approx. 25 liters. Cell Body: Borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: GeminiSilvertm, protected multilayer Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$20,200.00
SAT-50L/200V	<p>Saturn Series Long Path Gas Absorption Cell for FTIR gas analysis. Mounting fixture and transfer optics for center-focus FTIR. Optics mounted on easily removable sub-assemblies. SS valves and fittings with 3/8" Swagelok connections and flow tube. Comes with two 37.5mm x 4mm KBr windows as standard.</p> <p>Pathlength: 20 to 200 meters, variable Volume: approx. 50 liters. Cell Body: Borosilicate glass (pyrex) Cell Hardware: aluminum black anodized Optical Coating: GeminiSilvertm, protected multilayer Temperature Range: ambient Pressure Range: vacuum-ambient</p>	\$26,400.00



Accessories for Gas Cells

Heating Jackets for Gas Cells

Many of the gas cells can be heated up to 200 C. Heaters listed below, with some exceptions, include a fiberglass fabric heating mantle with a nominal thickness of 1". Mantles are supplied with "J" type thermocouple. Available in 110 or 220 volt. Please specify when ordering. Custom heaters also available. Call for pricing.

MERHJ-10CM	Heater for 10 cm Mercury Series gas cell	\$900.00
VENHJ-0.5L/4.8M	Heater for Venus Series 4.8 meter variable gas cell	\$980.00
VENHJ-0.75L/6.4M	Heater for Venus Series 6.4 meter variable gas cell	\$980.00
MRSHJ-0.375L/3M	Heater for MARS Series 3 meter variable gas cell	\$980.00
MRSHJ-0.75L/6.4M	Heater for MARS Series 6.4 meter gas cells	\$980.00
MRSHJ-2L/10M	Heater for MARS Series 10 meter gas cells	\$1,280.00
MRSHJ-8L/20M	Heater for MARS Series 20 meter gas cells	\$2,800.00
SATHJ-XXXX	Heaters for Saturn Series gas cells	Call for Price

Temperature Controllers

CNT-110	Digital controller, user programmable. 110 V with "J" type thermocouple.	\$1,080.00
CNT-220	Digital controller, user programmable. 220 V with "J" type thermocouple.	\$1,280.00

Infrared Transmitting Windows for Gas Cells

KBR -25X4	25mm x 4mm Potassium Bromide window.	\$60.00
KCL-25X4	25mm x 4 mm Potassium Chloride window.	\$45.00
BAF2-25X4	25mm x 4mm Barium Fluoride window.	\$180.00
CAF2-25X4	25mm x 4mm Calcium Fluoride window.	\$120.00
KRS5-25X4	25mm x 4mm KRS-5 window.	\$240.00
IRQ-25X4	25mm x 4mm Infrasil Quartz window.	\$110.00
ZNSE-25X4	25mm x 2mm Zinc Selenide window.	\$280.00
ZNSE-25X4-WDG-BBAR	25mm x 4mm Zinc Selenide window, wedged and AR coated one side	\$600.00
KBR-37x4	37.5mm x 4mm Potassium Bromide window.	\$80.00
KCL-37X4	37.5mm x 4mm Potassium Chloride window.	\$75.00
BAF2-37X4	37.5mm x 4mm Barium Fluoride window.	\$360.00
CAF2-37X4	37.5mm x 4mm Calcium Fluoride window.	\$240.00
KRS-37X4	37.5mm x 4mm KRS-5 window.	\$500.00
IRQ-37x4	37.5mm x 4mm Infrasil Quartz window.	\$220.00
ZNSE-37x4	37.5mm x 4mm Zinc Selenide window	\$600.00
ZNSE-25X4-WDG-BBAR	37.5mm x 4mm Zinc Selenide window, wedged and AR coated one side	\$900.00

Part Number

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Replacement O-Ring Kits

Replacement O-Ring Kits include 2 End, 2 Window and 3 Valve O-Rings.

ORK-0.375-V	Replacement O-Ring Set for MARS 0.375L Gas Cells-VITON	\$40.00
ORK-0.375-C	Replacement O-Ring Set for MARS 0.375L Gas Cells-CHEM REZ	\$470.00
ORK-0.375-K	Replacement O-Ring Set for MARS 0.375L Gas Cells-KAL REZ	\$570.00
ORK-0.75-V	Replacement O-Ring Set for MARS 0.75L Gas Cells-VITON	\$30.00
ORK-0.75-C	Replacement O-Ring Set for MARS 0.75L Gas Cells-CHEM REZ	\$780.00
ORK-0.75-K	Replacement O-Ring Set for MARS 0.75L Gas Cells-KAL REZ	\$880.00
ORK-2.0L-V	Replacement O-Ring Kit for MARS 2L Gas Cells-VITON	\$35.00
ORK-2.0L-C	Replacement O-Ring Kit for MARS 2L Gas Cells-CHEM REZ	\$900.00
ORK-2.0L-K	Replacement O-Ring Kit for MARS 2L Gas Cells-KAL REZ	\$1,200.00



For additional sizes and materials of available O-Rings please call for quote.

Visual Alignment Devices

VAD-1000	Battery-powered pen type laser and mounting collar for attachment to transfer slide of gas cell for visual verification (included on some models).	\$325.00
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Additional Products and Services: *Custom-Designed Gas Cells *Custom specialty optics for prototype, production and research *Integrated FTIR gas analysis systems using commercial spectrometers. *Optical recoating and repolishing services available. *Gas sampling accessories and software. *Replacement valves, o-rings and hardware available.

notes

