

**CV10Q7FA - August 30, 2023**

Item CV10Q7FA was discontinued on August 30, 2023. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

**SYNTHETIC QUARTZ GLASS CUVETTES WITH 10 MM PATH LENGTH**

- Optical Synthetic Quartz Glass Cuvettes
- Versions with Two or Four Polished Windows Available
- Super Micro, Micro, and Macro Cuvettes with 100  $\mu$ L, 700  $\mu$ L, 1400  $\mu$ L, or 3500  $\mu$ L Capacity



**CV10Q1**  
Super Micro  
Cuvette, 100  $\mu$ L



**CV10Q7A**  
Micro Cuvette,  
700  $\mu$ L



**CV10Q35EP**  
Enhanced Chemical  
Resistance Macro  
Fluorescence Cuvette 3500  $\mu$ L



**Application Idea**  
CV10Q35 Cuvette in a CVH100  
Compatible Cuvette Holder

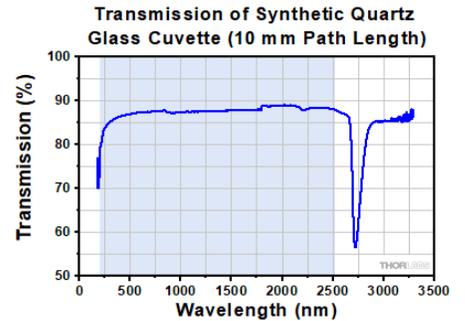
**OVERVIEW**

**Features**

- Crafted from Synthetic Quartz Glass for the 190 nm - 2.5  $\mu$ m Wavelength Range
- Versions with Two or Four Polished Windows for Spectroscopy Applications
- 100  $\mu$ L, 700  $\mu$ L, 1400  $\mu$ L, and 3500  $\mu$ L Capacities Available
- Standard 12.5 mm Square Profile with 10.00 mm Transmitted Path Length
- Available with PTFE Top Caps, Stoppers, or Septum Screw Caps



Click to Enlarge  
Outer Surfaces of the  
Cuvettes Feature an  
Engraved Part Number  
and a "Q" Indicating  
their Quartz  
Construction



Click to Enlarge  
Click for Raw Data  
Typical transmission measured through an empty 10 mm cuvette in air. The shaded region indicates the 190 nm to 2.5  $\mu$ m wavelength range.

Our cuvettes are high-quality cells designed to hold liquid samples. The synthetic quartz glass construction allows these cuvettes to be used with UV light at wavelengths as low as 190 nm, as well as with visible and infrared light up to 2.5  $\mu$ m. Thorlabs offers cuvettes with either two

polished sides, for use in absorption spectroscopy experiments, or four polished sides, for use in fluorescence spectroscopy. The polished sides can be cleaned using standard optics cleaning procedures. Versions are also available with one of three PTFE tops: a cap to block dust and other particles, a stopper to prevent evaporation and provide a seal, or a septum screw cap to provide an airtight seal and prevent contamination until a needle is inserted.

The standard 12.5 mm square outside dimension and 10.00 mm transmitted path length through the sample make these cuvettes compatible with most spectrophotometers as well as our cage-compatible Cuvette Holder, Fiber Optic Filter and Cuvette Mount, and Holder for Integrating Spheres. We offer macro, micro, and super micro sizes (see the tables below for more information), sold in packs of two. The 100  $\mu$ L cuvettes with four polished sides as well as all 3500  $\mu$ L cuvettes are also available in a version with enhanced chemical resistance. All cuvettes are engraved on the outer surface with the Item # and a letter "Q" designating synthetic quartz glass construction and the typical input side.

The super micro and micro cuvettes with two polished sides are assembled with glue. Our other cuvettes are assembled by heating the quartz glass to a high temperature and applying pressure to adhere the pieces together. Of these, micro cuvettes that are polished on four sides and all standard macro cuvettes have a quartz glass powder applied to the edges before heating, while the enhanced-chemical-resistance super micro and macro cuvettes are constructed by finely polishing the quartz glass before heating.

### Solvent Compatibility

All standard cuvettes should not be used with benzene, toluene, aqua regia, ethanol, corrosive solutions, or other similar substances, as they may degrade the bonds between the pieces and cause the cuvette to leak. The cuvettes with enhanced chemical resistance are compatible with corrosive solutions such as aqua regia. Contact Tech Support for instructions on cleaning the cuvettes found on this page.

For applications that require cuvettes with an enhanced chemical resistance and a shorter optical path length, we offer Enhanced Chemical Resistance Cuvettes with  $\leq 2$  mm Path Length. These cuvettes are made from either synthetic quartz glass or borosilicate glass and are available with 350  $\mu$ L or 700  $\mu$ L capacity.

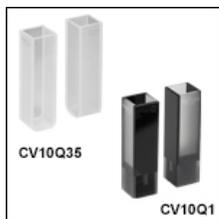
## SPECIFICATIONS

Item #	Min Volume	Length/Width	Path Length	Height	Assembly Process	Material	Wavelength Range
<b>Cuvettes with Caps, 2 Polished Sides</b>							
CV10Q1	100 $\mu$ L	12.5 $\pm$ 0.2 mm	10.00 $\pm$ 0.08 mm	45.0 $\pm$ 0.3 mm	Glue <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu$ m
CV10Q7	700 $\mu$ L						
CV10Q14	1400 $\mu$ L				Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q35	3500 $\mu$ L						
CV10Q35E	3500 $\mu$ L	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm		Monolithically Co-Fired <sup>c</sup>		
<b>Cuvettes with Airtight Stoppers, 2 Polished Sides</b>							
CV10Q1A	100 $\mu$ L	12.5 $\pm$ 0.2 mm	10.00 $\pm$ 0.08 mm	45.0 $\pm$ 0.3 mm	Glue <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu$ m
CV10Q7A	700 $\mu$ L						
CV10Q14A	1400 $\mu$ L				Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q35A	3500 $\mu$ L						
CV10Q35AE	3500 $\mu$ L	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm		Monolithically Co-Fired <sup>c</sup>		
<b>Cuvettes with Septum Screw Caps, 2 Polished Sides</b>							
CV10Q35EP	3500 $\mu$ L	12.5 $\pm$ 0.1 mm	10.00 $\pm$ 0.05 mm	46.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>c</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu$ m
<b>Cuvettes with Caps, 4 Polished Sides</b>							
CV10Q1FE	100 $\mu$ L	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm	45.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>c</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu$ m
CV10Q7F	700 $\mu$ L	12.5 $\pm$ 0.2 mm	10.00 $\pm$ 0.08 mm		Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q14F	1400 $\mu$ L						
CV10Q35F	3500 $\mu$ L				Monolithically Co-Fired <sup>c</sup>		
CV10Q35FE	3500 $\mu$ L	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm		Monolithically Co-Fired <sup>c</sup>		
<b>Cuvettes with Airtight Stoppers, 4 Polished Sides</b>							
CV10Q1FAE	100 $\mu$ L	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm	45.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>c</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu$ m
CV10Q7FA	700 $\mu$ L	12.5 $\pm$ 0.2 mm	10.00 $\pm$ 0.08 mm		Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q14FA	1400 $\mu$ L						
CV10Q35FA	3500 $\mu$ L				Monolithically Co-Fired <sup>c</sup>		
CV10Q35FAE	3500 $\mu$ L	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm		Monolithically Co-Fired <sup>c</sup>		
<b>Cuvettes with Septum Screw Caps, 4 Polished Sides</b>							
CV10Q35FEP	3500 $\mu$ L	12.5 $\pm$ 0.1 mm	10.00 $\pm$ 0.05 mm	46.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>c</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu$ m

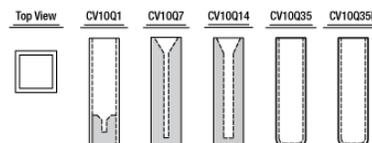
a. The four sides of these cuvettes are assembled with glue.

- b. A quartz glass powder is applied to the edges of the quartz glass pieces. Then, the quartz glass is heated to a high temperature and pressure is applied to adhere the pieces together.
- c. The quartz glass pieces that make up these cuvettes are finely polished before heating. After being heated to a high temperature, pressure is applied to adhere the pieces together.

## Synthetic Quartz Glass Cuvettes with Caps, 2 Polished Sides



- ▶ Two Polished Windows for Absorption Spectroscopy
- ▶ PTFE Cap Included with Each Cuvette to Block Dust or Other Particles
- ▶ Fabricated from Synthetic Quartz Glass (190 nm - 2.5 μm)
- ▶ Four Capacities Available: 100 μL, 700 μL, 1400 μL, and 3500 μL
- ▶ Cuvette with Enhanced Chemical Resistance Available with a 3500 μL Capacity
- ▶ Sold in Packs of 2



Click for Details

See the Red Docs Icon (  ) for complete mechanical drawings of each cuvette.

These Synthetic Quartz Glass Cuvettes have two polished sides for use in absorption spectroscopy experiments and two frosted sides for handling. For the super micro (100 μL) and micro (700 or 1400 μL) cuvettes, the unused areas of the polished, optical surfaces are blackened to reduce scattered light. The polished sides can be cleaned using standard optics cleaning procedures. Since these cuvettes only have two polished windows, they are not appropriate for use in fluorescence spectroscopy where it is necessary to have four polished windows to allow measurement of the fluorescence at right angles to the beam path. Thorlabs also offers cuvettes with four polished sides below.



Click to Enlarge  
The dust cap rests on top of the cuvette.

These cuvettes have standard 12.5 mm square outer dimensions, a 10.00 mm transmitted path length through the sample, and are available with 100 μL, 700 μL, 1400 μL, or 3500 μL capacities. The 3500 μL cuvettes are available in a standard version (Item # C10Q35) as well as a version with enhanced chemical resistance (Item # C10Q35E). Each cuvette is engraved with the Item # as well as a letter "Q" that designates its synthetic quartz glass construction and the typical input side, and each comes with a PTFE cap to prevent contamination by dust or other particles.

The 100 μL, 700 μL, and 1400 μL cuvettes (Item # CV10Q1, CV10Q7, and CV10Q14, respectively) are assembled with glue, which can be destroyed by benzene or other solutions with strong corrosive characteristics. Both 3500 μL cuvettes are assembled by first heating the quartz glass to a high temperature and then applying pressure to adhere the pieces together, eliminating the need for glue. The standard 3500 μL cuvette (Item # CV10Q35) has quartz glass powder applied to the edges before heating, whereas the 3500 μL cuvette with enhanced chemical resistance is made by finely polishing the quartz glass pieces before attaching, consequently providing smoother seams. This method allows the cuvette with enhanced chemical resistance to hold solutions with corrosive properties, similar to those of nitrohydrochloric acid (aqua regia), without being damaged.

Please note that the standard cuvettes should not be used with benzene, toluene, aqua regia, ethanol, corrosive solutions, or other similar substances, as they may degrade the bonds between the pieces and cause the cuvette to leak.

Item #	Type	Volume	Length/Width	Path Length	Height	Assembly Process	Material	Wavelength Range
CV10Q1	Standard Super Micro	100 μL	12.5 ± 0.2 mm	10.00 ± 0.08 mm	45.0 ± 0.3 mm	Glue <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 μm
CV10Q7	Standard Micro	700 μL						
CV10Q14	Standard Micro	1400 μL						
CV10Q35	Standard Macro	3500 μL	12.5 ± 0.2 mm	10.00 ± 0.08 mm	45.0 ± 0.3 mm	Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q35E	Enhanced Chemical Resistance Macro	3500 μL	12.5 +0.0 / -0.2 mm	10.00 ± 0.05 mm	45.0 ± 0.3 mm	Monolithically Co-Fired <sup>c</sup>		

- a. The four sides of these cuvettes are assembled with glue.
- b. A quartz glass powder is applied to the edges of the quartz glass pieces. Then, the quartz glass is heated to a high temperature and pressure is applied to adhere the pieces together.
- c. The quartz glass pieces that make up these cuvettes are finely polished before heating. After being heated to a high temperature, pressure is applied to adhere the pieces together.

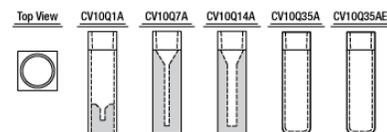
Part Number	Description	Price	Availability
CV10Q1	Customer Inspired! 100 μL Super Micro Cuvette with Cap, 8.5 mm Beam Height, 10 mm Path Length, 2 Pack	\$158.06	Today
CV10Q7	Customer Inspired! 700 μL Micro Cuvette with Cap, 10 mm Path Length, 2 Pack	\$99.30	Today

CV10Q14	Customer Inspired! 1400 µL Micro Cuvette with Cap, 10 mm Path Length, 2 Pack	\$99.30	Today
CV10Q35	Customer Inspired! 3500 µL Macro Cuvette with Cap, 10 mm Path Length, 2 Pack	\$52.70	Today
CV10Q35E	Customer Inspired! 3500 µL Enhanced Chemical Resistance Macro Cuvette with Cap, 10 mm Path Length, 2 Pack	\$133.25	Today

## Synthetic Quartz Glass Cuvettes with Stoppers, 2 Polished Sides



- ▶ Two Polished Windows for Absorption Spectroscopy
- ▶ PTFE Stopper Included with Each Cuvette
- ▶ Fabricated from Synthetic Quartz Glass (190 nm - 2.5 µm)
- ▶ Four Capacities Available: 100 µL, 700 µL, 1400 µL, and 3500 µL
- ▶ Cuvette with Enhanced Chemical Resistance Available with a 3500 µL Capacity
- ▶ Sold in Packs of 2



Click for Details

See the Red Docs Icon (  ) for complete mechanical drawings of each cuvette.

These Synthetic Quartz Glass Cuvettes have two polished sides for use in absorption spectroscopy experiments and two frosted sides for handling. For the super micro (100 µL) and micro (700 or 1400 µL) cuvettes, the unused areas of the polished, optical surfaces are blackened to reduce scattered light. The polished sides can be cleaned using standard optics cleaning procedures. Since these cuvettes only have two polished windows, they are not appropriate for use in fluorescence spectroscopy where it is necessary to have four polished windows to allow measurement of the fluorescence at right angles to the beam path. Thorlabs offers cuvettes with four polished sides below.

These cuvettes have a standard 12.5 mm square outer dimension, a 10.00 mm transmitted path length through the sample, and are available with 100 µL, 700 µL, 1400 µL, or 3500 µL capacities. The 3500 µL cuvettes are available in a standard version (Item # C10Q35A) as well as a version with enhanced chemical resistance (Item # C10Q35AE). Each cuvette is engraved with the Item # as well as a letter "Q" that designates its synthetic quartz glass construction and the typical input side, and each comes with a PTFE stopper to create a seal and to prevent evaporation and atmospheric contamination of the contents. The stopper should be inserted gently into the top of the cuvette; excessive force will cause difficulty with removing the stopper.



Click to Enlarge  
The stopper wedges into the top of the cuvette.

The standard 100 µL, 700 µL, and 1400 µL cuvettes (Item # CV10Q1A, CV10Q7A, and CV10Q14A, respectively) are assembled with glue, which can be destroyed by benzene or other solutions with strong corrosive characteristics. Both 3500 µL cuvettes are assembled by first heating the quartz glass to a high temperature and then applying pressure to adhere the pieces together, eliminating the need for glue. The standard 3500 µL cuvette (Item # CV10Q35A) has quartz glass powder applied to the edges before heating, whereas the 3500 µL cuvette with enhanced chemical resistance is made by finely polishing the quartz glass pieces before attaching, consequently providing smoother seams. This method allows the cuvette with enhanced chemical resistance to hold solutions with corrosive properties, similar to those of nitrohydrochloric acid (aqua regia), without being damaged.

Please note that the standard cuvettes should not be used with benzene, toluene, aqua regia, ethanol, corrosive solutions, or other similar substances, as they may degrade the bonds between the pieces and cause the cuvette to leak.

Item #	Type	Volume	Length/Width	Path Length	Height	Assembly Process	Material	Wavelength Range
CV10Q1A	Standard Super Micro	100 µL	12.5 ± 0.2 mm	10.00 ± 0.08 mm	45.0 ± 0.3 mm	Glue <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 µm
CV10Q7A	Standard Micro	700 µL						
CV10Q14A	Standard Micro	1400 µL						
CV10Q35A	Standard Macro	3500 µL	12.5 ± 0.2 mm	10.00 ± 0.08 mm	45.0 ± 0.3 mm	Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q35AE	Enhanced Chemical Resistance Macro	3500 µL	12.5 +0.0 / -0.2 mm	10.00 ± 0.05 mm	45.0 ± 0.3 mm	Monolithically Co-Fired <sup>c</sup>		

- a. The four sides of these cuvettes are assembled with glue.
- b. A quartz glass powder is applied to the edges of the quartz glass pieces. Then, the quartz glass is heated to a high temperature and pressure is applied to adhere the pieces together.
- c. The quartz glass pieces that make up these cuvettes are finely polished before heating. After being heated to a high temperature, pressure is applied to adhere the pieces together.

Part Number	Description	Price	Availability
CV10Q1A	Customer Inspired! 100 µL Super Micro Cuvette with Stopper, 8.5 mm Beam Height, 10 mm Path Length, 2 Pack	\$210.95	Today
CV10Q7A	Customer Inspired! 700 µL Micro Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$133.46	Lead Time

CV10Q14A	Customer Inspired! 1400 µL Micro Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$133.46	Today
CV10Q35A	Customer Inspired! 3500 µL Macro Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$112.19	Today
CV10Q35AE	Customer Inspired! 3500 µL Enhanced Chemical Resistance Macro Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$337.94	Today

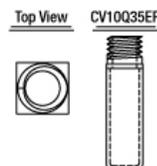
### Synthetic Quartz Glass Cuvettes with Septum Screw Caps, 2 Polished Sides



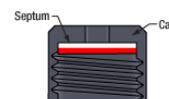
- ▶ Two Polished Windows for Absorption Spectroscopy
- ▶ PTFE Septum Screw Cap Included with Each Cuvette
  - ▶ Red PTFE/ White Silicon Septum
- ▶ Fabricated from Synthetic Quartz Glass (190 nm - 2.5 µm)
- ▶ Enhanced Chemical Resistance Cuvette with a 3500 µL Capacity
- ▶ Sold in Packs of 2



Click to Enlarge  
The septum screw top is threaded onto the top of the cuvette.



Click to Enlarge  
Cuvettes with an engraved "Q" are constructed from synthetic quartz glass.



Click to Enlarge  
Cross-Sectional View of the Septum Screw Cap

This Synthetic Quartz Glass Cuvette has two polished sides for use in absorption spectroscopy experiments and two frosted sides for handling. The polished sides can be cleaned using standard optics cleaning procedures. Since this cuvette only has two polished windows, they are not appropriate for use in fluorescence spectroscopy where it is necessary to have four polished windows to allow measurement of the fluorescence at right angles to the beam path. Thorlabs offers cuvettes with four polished sides below.

This cuvette, which has enhanced chemical resistance, has a 3500 µL capacity, a standard 12.5 mm square outer dimension, and a 10.00 mm transmitted path length through the sample. Each cuvette is engraved with the Item # as well as a letter "Q" that designates its synthetic quartz glass construction and the typical input side.

A PTFE septum screw cap is included with each cuvette, which creates an airtight seal to prevent evaporation and atmospheric contamination of the contents. The cap includes a red PTFE/ white silicon septum with a 50 °shore hardness, which provides provide a leakproof seal until a needle is pierced through the top.

Designed for enhanced chemical resistance, this cuvette is assembled by first heating the quartz glass to a high temperature and then applying pressure to adhere the pieces together, eliminating the need for glue. The quartz glass pieces are finely polished before attaching, consequently providing smoother seams. This method allows the cuvette to hold solutions with corrosive properties, similar to those of nitrohydrochloric acid (aqua regia), without being damaged.

Item #	Type	Volume	Length/Width	Path Length	Height	Assembly Process	Material	Wavelength Range
CV10Q35EP	Enhanced Chemical Resistance Macro	3500 µL	12.5 mm ± 0.1 mm	10.00 mm ± 0.05 mm	46.0 mm ± 0.3 mm	Monolithically Co-Fired <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 µm

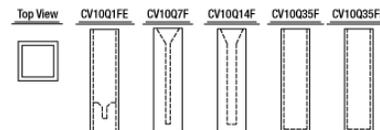
- a. The quartz glass pieces that make up these cuvettes are finely polished before heating. After being heated to a high temperature, pressure is applied to adhere the pieces together.

Part Number	Description	Price	Availability
CV10Q35EP	Customer Inspired! 3500 µL Enhanced Chemical Resistance Macro Cuvette with Septum Screw Cap, 10 mm Path Length, 2 Pack	\$431.34	7-10 Days

### Synthetic Quartz Glass Cuvettes with Caps, 4 Polished Sides



- ▶ Four Polished Windows for Fluorescence Spectroscopy
- ▶ PTFE Cap Included with Each Cuvette to Block Dust or Other Particles
- ▶ Fabricated from Synthetic Quartz Glass (190 nm - 2.5 µm)
- ▶ Four Capacities Available: 100 µL, 700 µL, 1400 µL, and 3500 µL
- ▶ Cuvettes with Enhanced Chemical Resistance Available with a 100 µL or 3500 µL Capacity
- ▶ Sold in Packs of 2



Click for Details

See the Red Docs Icon ( ) for complete mechanical drawings of each cuvette.

These Synthetic Quartz Glass Cuvettes have four polished sides for use in fluorescence spectroscopy experiments. The four polished

windows allow measurement of the fluorescence at right angles to the beam path and can be cleaned using standard optics cleaning procedures. While these cuvettes are designed for use in fluorescence, the through beam windows can be used independently for other spectroscopic applications. Thorlabs also offers cuvettes with two polished sides and two frosted sides designed specifically for these other applications (sold above).



Click to Enlarge  
The dust cap rests on top of the cuvette.

These cuvettes have a standard 12.5 mm square outer dimension, a 10.00 mm transmitted path length through the sample, and are available with 100  $\mu\text{L}$ , 700  $\mu\text{L}$ , 1400  $\mu\text{L}$ , or 3500  $\mu\text{L}$  capacities. Each cuvette is engraved with the Item # as well as a letter "Q" that designates its synthetic quartz glass construction and the optical window axis, and each comes with a PTFE cap to prevent contamination by dust or other particles.

The cuvettes are assembled by first heating the quartz glass to a high temperature and then applying pressure to adhere the pieces together, eliminating the need for glue. For the standard 700  $\mu\text{L}$ , 1400  $\mu\text{L}$ , and 3500  $\mu\text{L}$  cuvettes (Item # CV10Q7F CV10Q14F, and CV10Q35F, respectively), quartz glass powder is applied to the edges of the pieces prior to heating. For the cuvettes with enhanced chemical resistance, available in 100  $\mu\text{L}$  or 3500  $\mu\text{L}$  capacities, the quartz glass pieces are finely polished before attaching, consequently providing smoother seams. This method allows the enhanced-chemical-resistance cuvettes to hold solutions with corrosive properties, similar to those of nitrohydrochloric acid (aqua regia), without being damaged.

Note that all standard cuvettes should not be used with benzene, toluene, aqua regia, ethanol, corrosive solutions, or other similar substances, as they may degrade the bonds between the pieces and cause the cuvette to leak.

Item #	Type	Volume	Length/Width	Path Length	Height	Assembly Process	Material	Wavelength Range
CV10Q1FE	Enhanced Chemical Resistance Super Micro	100 $\mu\text{L}$	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm	45.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu\text{m}$
CV10Q7F	Standard Micro	700 $\mu\text{L}$	12.5 $\pm$ 0.2 mm	10.00 $\pm$ 0.08 mm	45.0 $\pm$ 0.3 mm	Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q14F	Standard Micro	1400 $\mu\text{L}$						
CV10Q35F	Standard Macro	3500 $\mu\text{L}$						
CV10Q35FE	Enhanced Chemical Resistance Macro	3500 $\mu\text{L}$	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm	45.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>a</sup>		

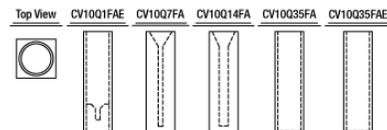
- The quartz glass pieces that make up these cuvettes are finely polished before heating. After being heated to a high temperature, pressure is applied to adhere the pieces together.
- A quartz glass powder is applied to the edges of the quartz glass pieces. Then, the quartz glass is heated to a high temperature and pressure is applied to adhere the pieces together.

Part Number	Description	Price	Availability
CV10Q1FE	Customer Inspired! 100 $\mu\text{L}$ Enhanced Chemical Resistance Super Micro Fluorescence Cuvette with Cap, 8.5 mm Beam Height, 10 mm Path Length, 2 Pack	\$405.96	Today
CV10Q7F	Customer Inspired! 700 $\mu\text{L}$ Micro Fluorescence Cuvette with Cap, 10 mm Path Length, 2 Pack	\$210.95	Today
CV10Q14F	Customer Inspired! 1400 $\mu\text{L}$ Micro Fluorescence Cuvette with Cap, 10 mm Path Length, 2 Pack	\$210.95	Today
CV10Q35F	Customer Inspired! 3500 $\mu\text{L}$ Macro Fluorescence Cuvette with Cap, 10 mm Path Length, 2 Pack	\$115.70	Today
CV10Q35FE	Customer Inspired! 3500 $\mu\text{L}$ Enhanced Chemical Resistance Macro Fluorescence Cuvette, 10 mm Path Length, 2 Pack	\$289.66	Today

### Synthetic Quartz Glass Cuvettes with Stoppers, 4 Polished Sides



- ▶ Four Polished Windows for Fluorescence Spectroscopy
- ▶ PTFE Stopper Included with Each Cuvette
- ▶ Fabricated from Synthetic Quartz Glass (190 nm - 2.5  $\mu\text{m}$ )
- ▶ Four Capacities Available: 100  $\mu\text{L}$ , 700  $\mu\text{L}$ , 1400  $\mu\text{L}$ , and 3500  $\mu\text{L}$
- ▶ Cuvettes with Enhanced Chemical Resistance Available with a 100  $\mu\text{L}$  or 3500  $\mu\text{L}$  Capacity
- ▶ Sold in Packs of 2



Click for Details  
See the Red Docs Icon (📄) for complete mechanical drawings of each cuvette.

These Synthetic Quartz Glass Cuvettes have four polished sides for use in fluorescence spectroscopy experiments. The four polished

windows allow measurement of the fluorescence at right angles to the beam path and can be cleaned using standard optics cleaning procedures. While these cuvettes are designed for use in fluorescence, the through beam windows can be used independently for other spectroscopic applications. Thorlabs also offers cuvettes with two polished sides and two frosted sides designed specifically for these other applications (sold above).



Click to Enlarge  
The stopper wedges into the top of the cuvette.

These cuvettes have a standard 12.5 mm square outer dimension, a 10.00 mm transmitted path length through the sample, and are available with 100  $\mu\text{L}$ , 700  $\mu\text{L}$ , 1400  $\mu\text{L}$ , or 3500  $\mu\text{L}$  capacities. Each cuvette is engraved with the Item # as well as a letter "Q" that designates its synthetic quartz glass construction and the optical window axis, and each comes with a PTFE stopper to create a seal and to prevent evaporation and atmospheric contamination of the contents. The stopper should be inserted gently into the top of the cuvette; excessive force will cause difficulty with removing the stopper.

The cuvettes are assembled by first heating the quartz glass to a high temperature and then applying pressure to adhere the pieces together, eliminating the need for glue. For the standard 700  $\mu\text{L}$ , 1400  $\mu\text{L}$ , and 3500  $\mu\text{L}$  cuvettes (Item # CV10Q7FA, CV10Q14FA, and CV10Q35FA, respectively), quartz glass powder is applied to the edges of the pieces prior to heating.

We also offer enhanced, chemically resistant cuvettes in capacities of 100  $\mu\text{L}$  and 3500  $\mu\text{L}$ . Both types of cuvettes are assembled by first heating the quartz glass to a high temperature and then applying pressure to adhere the pieces together, eliminating the need for glue. For the cuvettes with enhanced chemical resistance, available in 100  $\mu\text{L}$  and 3500  $\mu\text{L}$  capacities, the quartz glass pieces are finely polished before attaching, consequently providing smoother seams. This method allows the cuvettes with enhanced chemical resistance to hold solutions with corrosive properties, similar to those of nitrohydrochloric acid (aqua regia), without being damaged.

Please note that the standard cuvettes should not be used with benzene, toluene, aqua regia, ethanol, corrosive solutions, or other similar substances, as they may degrade the bonds between the pieces and cause the cuvette to leak.

Item #	Type	Volume	Length/Width	Path Length	Height	Assembly Process	Material	Wavelength Range
CV10Q1FAE	Enhanced Chemical Resistance Super Micro	100 $\mu\text{L}$	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm	45.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu\text{m}$
CV10Q7FA	Standard Micro	700 $\mu\text{L}$	12.5 $\pm$ 0.2 mm	10.00 $\pm$ 0.08 mm	45.0 $\pm$ 0.3 mm	Fused with Quartz Glass Powder <sup>b</sup>		
CV10Q14FA	Standard Micro	1400 $\mu\text{L}$						
CV10Q35FA	Standard Macro	3500 $\mu\text{L}$						
CV10Q35FAE	Enhanced Chemical Resistance Macro	3500 $\mu\text{L}$	12.5 +0.0 / -0.2 mm	10.00 $\pm$ 0.05 mm	45.0 $\pm$ 0.3 mm	Monolithically Co-Fired <sup>a</sup>		

- The quartz glass pieces that make up these cuvettes are finely polished before heating. After being heated to a high temperature, pressure is applied to adhere the pieces together.
- A quartz glass powder is applied to the edges of the quartz glass pieces. Then, the quartz glass is heated to a high temperature and pressure is applied to adhere the pieces together.

Part Number	Description	Price	Availability
CV10Q1FAE	Customer Inspired! 100 $\mu\text{L}$ Enhanced Chemical Resistance Super Micro Fluorescence Cuvette with Stopper, 8.5 mm Beam Height, 10 mm Path Length, 2 Pack	\$504.55	7-10 Days
CV10Q7FA	Customer Inspired! 700 $\mu\text{L}$ Micro Fluorescence Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$250.23	Lead Time
CV10Q14FA	Customer Inspired! 1400 $\mu\text{L}$ Micro Fluorescence Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$250.23	Today
CV10Q35FA	Customer Inspired! 3500 $\mu\text{L}$ Macro Fluorescence Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$163.46	Today
CV10Q35FAE	Customer Inspired! 3500 $\mu\text{L}$ Enhanced Chemical Resistance Macro Fluorescence Cuvette with Stopper, 10 mm Path Length, 2 Pack	\$451.27	Today

### Synthetic Quartz Glass Cuvettes with Septum Screw Caps, 4 Polished Sides

- ▶ Four Polished Windows for Fluorescence Spectroscopy
- ▶ PTFE Septum Screw Cap Included with Each Cuvette
  - ▶ Red PTFE/ White Silicon Septum
- ▶ Fabricated from Synthetic Quartz Glass (190 nm - 2.5  $\mu\text{m}$ )



- ▶ Enhanced Chemical Resistance Cuvette with a 3500  $\mu\text{L}$  Capacity
- ▶ Sold in Packs of 2



Click to Enlarge  
The septum screw top is threaded onto the top of the cuvette.



Click to Enlarge  
Cuvettes with an engraved "Q" are constructed from synthetic quartz glass.



Click to Enlarge  
Cross-Sectional View of the Septum Screw Cap

This Synthetic Quartz Glass Cuvette has four polished sides for use in fluorescence spectroscopy experiments. The four polished windows allow measurement of the fluorescence at right angles to the beam path and can be cleaned using standard optics cleaning procedures. While this cuvette is designed for use in fluorescence, the through beam windows can be used independently for other spectroscopic applications. Thorlabs also offers cuvettes with two polished sides and two frosted sides designed specifically for these other applications (sold above).

This cuvette, which has enhanced chemical resistance, has a 3500  $\mu\text{L}$  capacity, a standard 12.5 mm square outer dimension, and a 10.00 mm transmitted path length through the sample. Each cuvette is engraved with the Item # as well as a letter "Q" that designates its synthetic quartz glass construction and the typical input side.

A PTFE septum screw cap is included with each cuvette, which creates an airtight seal to prevent evaporation and atmospheric contamination of the contents. The cap includes a red PTFE/ white silicon septum with a 50 °shore hardness, which provides provide a leakproof seal until a needle is pierced through the top.

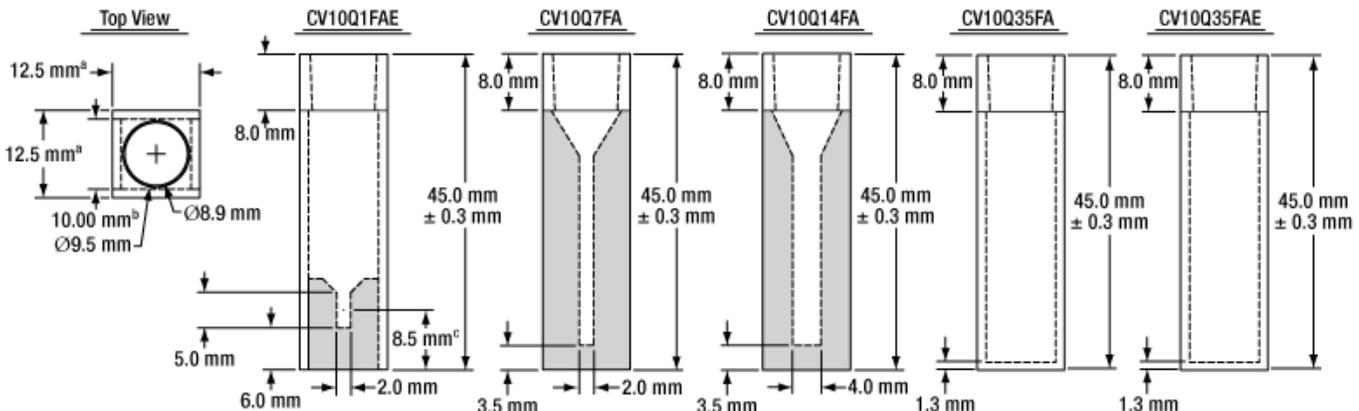
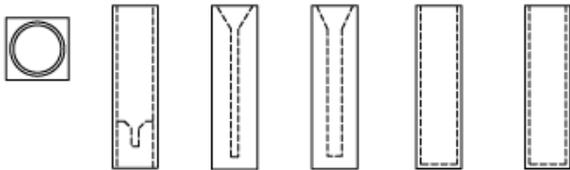
Designed for enhanced chemical resistance, this cuvette is assembled by first heating the quartz glass to a high temperature and then applying pressure to adhere the pieces together, eliminating the need for glue. The quartz glass pieces are finely polished before attaching, consequently providing smoother seams. This method allows the cuvette to hold solutions with corrosive properties, similar to those of nitrohydrochloric acid (aqua regia), without being damaged.

Item #	Type	Volume	Length/Width	Path Length	Height	Assembly Process	Material	Wavelength Range
CV10Q35FEP	Enhanced Chemical Resistance Macro	3500 $\mu\text{L}$	12.5 mm $\pm$ 0.1 mm	10.00 mm $\pm$ 0.05 mm	46.0 mm $\pm$ 0.3 mm	Monolithically Co-Fired <sup>a</sup>	Synthetic Quartz Glass	190 nm - 2.5 $\mu\text{m}$

- a. The quartz glass pieces that make up these cuvettes are finely polished before heating. After being heated to a high temperature, pressure is applied to adhere the pieces together.

Part Number	Description	Price	Availability
CV10Q35FEP	Customer Inspired! 3500 $\mu\text{L}$ Enhanced Chemical Resistance Macro Fluorescence Cuvette with Septum Screw Cap, 10 mm Path Length, 2 Pack	\$480.06	7-10 Days

Top View CV10Q1FAE CV10Q7FA CV10Q14FA CV10Q35FA CV10Q35FAE



- a.  $\pm$ 0.2 mm for Standard Cuvettes; +0.0/-0.2 mm for Cuvettes with Enhanced Chemical Resistance  
 b.  $\pm$ 0.08 mm for Standard Cuvettes;  $\pm$ 0.05 mm for Cuvettes with Enhanced Chemical Resistance  
 c. This is the Z dimension, which is the optimal beam height measured from the bottom of the cuvette.