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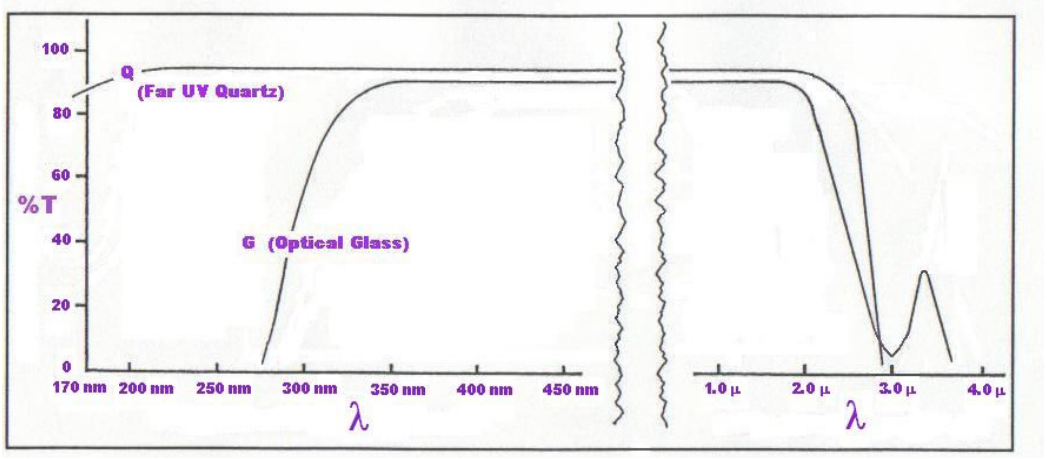
Properties of Cells

All New Era cells are thermally-fused completely with no adhesives used. *The optical windows are extremely parallel and flat* with a fine optical polish. By careful annealing, cell physical strength is maximized to permit safe exposure to slightly higher and lower temperatures, and to pressure differentials of up to 3 atmospheres. *The cell materials are chemically resistant* to most solvents, acids and bases. Acids, such as HF, and strong bases (pH ≥9) should not come into contact with the cells.

Transmission of Cell Materials



Material	Transmission Range	Matching Tolerance	Pathlength Range	Pathlength Tolerance
Optical Glass (G)	340 nm - 2.3 µ	0.5% @ 350 nm	<10 mm 10 mm - 20 mm 50 mm - 100 mm	± 0.02 mm ± 0.1 mm ± 0.2 mm
Far UV Quartz (Q)	170 nm - 2.7 µ	1.5% @ 200 nm	≤0.05 mm 0.1 mm - <0.5 mm 0.5 mm - 20 mm 50 mm - 100 mm	± 0.002 mm ± 0.005 mm ± 0.01 mm ± 0.02 mm

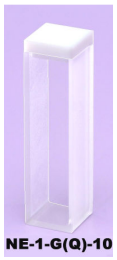
Cell Dimensions

External Height .. excludes lids, stoppers, screw cap necks, tubes and valves unless specified.
Pathlength ..... distance between inside window surfaces parallel to the incident beam.
External Length .. distance between outside window surfaces parallel to the incident beam or pathlength.
Internal Width ..... distance between inside window surfaces perpendicular to the incident beam or pathlength.
External Width .... distance between outside window surfaces perpendicular to the incident beam or pathlength.
Base Thickness .. distance between sample chamber bottom and cell base.
Z-Dimension ..... distance between cell base and vertical center of sample chamber.
Cell Volumes ..... the listed volumes are ~85% of sample chamber volume (excluding tubes and necks) unless otherwise stated or dead volume is significant.
Matching ..... difference in measured %Transmission of cells. Match code numbers are assigned to cells when %T values vary outside the established tolerance. Equal match code numbers, or no match code numbers, indicate the cells are within the established tolerance. Because of window surface degradation, a used cell may not necessarily match a new cell with the same code number. When two or more cells are ordered, they are supplied as matched at no extra charge.

Rectangular Cell with Teflon Lid / Stopper

Two opposite windows polished
External Width - 12.5mm
Internal Width - 10mm


NE-1-G(Q)-2


NE-1-G(Q)-10


NE-21-G(Q)-1


NE-21-G(Q)-10

Space Compensators

For properly positioning 1, 2 and 5mm pathlength cells in a 10mm pathlength sample cavity.

Cat. No.	For Cell Path
77000-1	1mm
77000-2	2mm
77000-3	5mm

Price / each $57.00

Pathlength (mm)	1	2	5	10	1	2	5	10
Approx. Volume (ml)	0.4	0.7	1.7	3.5	0.4	0.7	1.7	3.5
External Height (mm)	45	45	45	45	55	55	48	48
External Length (mm)	3.5	4.5	7.5	12.5	3.5	4.5	7.5	12.5
G (Optical Glass)								
Cat. No.	NE-1-G-1	NE-1-G-2	NE-1-G-5	NE-1-G-10	NE-21-G-1	NE-21-G-2	NE-21-G-5	NE-21-G-10
Q (Far UV Quartz)								
Cat. No.	NE-1-Q-1	NE-1-Q-2	NE-1-Q-5	NE-1-Q-10	NE-21-Q-1	NE-21-Q-2	NE-21-Q-5	NE-21-Q-10

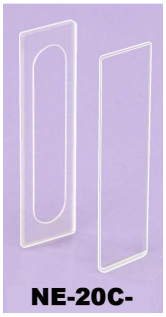
Demountable Rectangular Cells

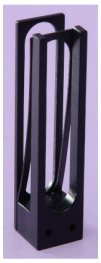

NE-20O-

Two opposite windows polished
External Height - 45mm
External Width - 12.5mm

(NE-20O-) **One End Open**
Internal Width - 10mm
Internal Sample Height - 40mm

(NE-20C-) **Both Ends Closed**
Internal Width - 8mm
Internal Sample Height - 38mm


NE-20C-



Cell Holder

For clamping and properly positioning NE-20O- and NE-20C- cells in a 10mm pathlength sample cavity.
External dimensions are 12.5mm x 12.5mm x 52mm. Base thickness is 9mm.

Cat. No.	Description	
77001	Cell Holder	

Cells will form the best seal with aqueous and higher viscosity type samples and solvents.

Pathlength (mm)	0.01	0.1	0.2	0.5	1.0
Approx. Volume	4 µl	40 µl	80 µl	0.2 ml	0.4 ml
External Length (mm)	2.5	2.6	2.7	3.0	3.5
Q (Far UV Quartz)					
Cat. No.	NE-20O-Q-0.01	NE-20O-Q-0.1	NE-20O-Q-0.2	NE-20O-Q-0.5	NE-20O-Q-1.0

Pathlength (mm)	0.01	0.1	0.2	0.5	1.0
Approx. Volume	3 µl	30 µl	60 µl	0.15 ml	0.3 ml
External Length (mm)	2.5	2.6	2.7	3.0	3.5
Q (Far UV Quartz)					
Cat. No.	NE-20C-Q-0.01	NE-20C-Q-0.1	NE-20C-Q-0.2	NE-20C-Q-0.5	NE-20C-Q-1.0

Rectangular Cell with Screw Cap

For samples where a controlled atmosphere is required. Volatile, hazardous and unstable type samples (such as air-sensitive) are ideally accommodated by these cells.

Use of a smaller screw neck on these cells eliminates the bulky/heavy top, found with other cells on the market.

Two opposite windows polished
External Height - ≈ 55mm
External Height (Cell) - 40mm
External Width - 12.5mm
Internal Width - 10mm

A solid Teflon lined cap or an open-top cap with a Teflon/Silicone septum (for needle injection/withdrawal) is included with each cell.


NE-1SC-Q-1


NE-1OC-Q-10

Space Compensators

For properly positioning 1, 2 and 5mm pathlength cells in a 10mm pathlength sample cavity.

Cat. No.	For Cell Path
77000-1	1mm
77000-2	2mm
77000-3	5mm

Price / each $57.00

Extra Caps and Septums

Cat. No.	Description	
3108T	Solid Cap (Teflon lined)	
3008	Open-Top Cap	
3208	Teflon/Silicone Septum	

Pathlength (mm)	1	2	5	10
Approx. Volume (ml)	0.4	0.7	1.7	3.5
External Length (mm)	3.5	4.5	7.5	12.5
Q (Far UV Quartz)				
Cat. No. - Solid Cap	NE-1SC-Q-1	NE-1SC-Q-2	NE-1SC-Q-5	NE-1SC-Q-10
Cat. No. - Open-Top Cap	NE-1OC-Q-1	NE-1OC-Q-2	NE-1OC-Q-5	NE-1OC-Q-10

Rectangular Cell with Graded Seal (Quartz-to-Pyrex)


NE-1GS-Q-1


NE-1GS-Q-10

Two opposite windows polished
External Height of Cell - 40mm
Tube Length - 70mm
Tube OD - 8mm
Tube ID - 6mm
External Width - 12.5mm
Internal Width - 10mm

Space Compensators

For properly positioning 1, 2 and 5mm pathlength cells in a 10mm pathlength sample cavity.

Cat. No.	For Cell Path
77000-1	1mm
77000-2	2mm
77000-3	5mm

Price / each $57.00

Pathlength (mm)	1	2	5	10
Approx. Volume (ml)	0.4	0.7	1.7	3.5
External Length (mm)	3.5	4.5	7.5	12.5
Q (Far UV Quartz)				
Cat. No.	NE-1GS-Q-1	NE-1GS-Q-2	NE-1GS-Q-5	NE-1GS-Q-10

Flat Rectangular Flow Cell


NE-48-Q-

Two opposite windows polished
External Height - 45mm
Sample Chamber Height - 40mm
External Width - 12.5mm
Internal Width - 8mm
Length of Tubes - 16mm
OD of Tubes - 4.2mm
ID of Tubes - 2.0mm

The spectrometer sample cavity should have a minimum pathlength of 40mm in order to permit tubular connections.

These cells are not useable in sample compartments with a "Z" Dimension = 8.5mm
(see **Page 5**).

Cell Holder

For clamping and properly positioning NE-48- cells in the sample cavity.
External dimensions are 12.5mm x 12.5mm x 52mm. Base thickness is 9mm.

Cat. No.	Description	
77001	Cell Holder	

Pathlength (mm)	0.1	0.2	0.5	1	2	5
Approx. Volume	30 µl	60 µl	0.15 ml	0.3 ml	0.6 ml	1.5 ml
External Length (mm)	2.6	2.7	3.0	3.5	4.5	7.5
Q (Far UV Quartz)						
Cat. No.	NE-48-Q-0.1	NE-48-Q-0.2	NE-48-Q-0.5	NE-48-Q-1	NE-48-Q-2	NE-48-Q-5

Rectangular Cell with Valve (Quartz-to-Pyrex)

Constructed of Pyrex, the valve is a Teflon-Glass system with Viton O-Rings for seals, making it inert and ideal for attaching to laboratory glass systems. Cells can withstand pressures of 2-3 atmospheres and evacuation of 10^{-7} Torr.

Two opposite windows polished
External Height of Cell - 40mm
Overall Height - ≈155mm
Height of Side Arm - ≈105mm
Length of Side Arm - 50mm
Valve Bore - 0 to 3mm
Internal Width - 10mm
External Width - 12.5mm
Side Arm ID - 6mm
Side Arm OD - 8mm

Space Compensators

For properly positioning 1, 2 and 5mm pathlength cells in a 10mm pathlength sample cavity.

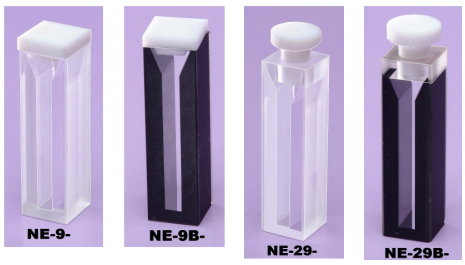
Cat. No.	For Cell Path
77000-1	1mm
77000-2	2mm
77000-3	5mm

Price / each $57.00

Pathlength (mm)	1	2	5	10
Approx. Volume (ml)	0.4	0.7	1.7	3.5
External Length (mm)	3.5	4.5	7.5	12.5
Q (Far UV Quartz)				
Cat. No.	NE-1V-Q-1	NE-1V-Q-2	NE-1V-Q-5	NE-1V-Q-10

Semi-Micro Cell with Teflon Lid / Stopper

Two opposite windows polished
External Width - 12.5mm
External Length - 12.5mm
Pathlength - 10mm
Base Thickness - 2.5mm



Micro Cell with Teflon Lid / Stopper

Internal Width (mm)	4	4	4	4	2	2	2	2
External Height (mm)	45	45	48	48	45	45	48	48
Approx. Volume (ml)	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.7
G (Optical Glass)								
Cat. No.	NE-9-G-10	NE-9B-G-10	NE-29-G-10	NE-29B-G-10	NE-18-G-10	NE-18B-G-10	NE-28-G-10	NE-28B-G-10
Q (Far UV Quartz)								
Cat. No.	NE-9-Q-10	NE-9B-Q-10	NE-29-Q-10	NE-29B-Q-10	NE-18-Q-10	NE-18B-Q-10	NE-28-Q-10	NE-28B-Q-10

Semi-Micro Cell with Teflon Lid / Stopper

(Reduced Volumes)

Two opposite windows polished
External Width - 12.5mm
External Length - 12.5mm
Pathlength - 10mm
Base Thickness - 9mm

Micro Cell with Teflon Lid / Stopper

Internal Width (mm)	4	4	4	4	2	2	2	2
External Height (mm)	45	45	48	48	45	45	48	48
Approx. Volume (ml)	0.95	0.95	0.95	0.95	0.48	0.48	0.48	0.48
G (Optical Glass)								
Cat. No.	NE-9/9-G-10	NE-9B/9-G-10	NE-29/9-G-10	NE-29B/9-G-10	NE-18/9-G-10	NE-18B/9-G-10	NE-28/9-G-10	NE-28B/9-G-10
Q (Far UV Quartz)								
Cat. No.	NE-9/9-Q-10	NE-9B/9-Q-10	NE-29/9-Q-10	NE-29B/9-Q-10	NE-18/9-Q-10	NE-18B/9-Q-10	NE-28/9-Q-10	NE-28B/9-Q-10

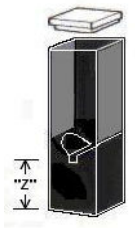
Note: "Reduced Volume" Cells are not useable in sample compartments with a "Z" Dimension=8.5mm (see top section of Page 5).

Sub-Micro Cell with Teflon Lid / Stopper

For investigations where small quantities only are available (e.g. DNA / RNA and proteins).

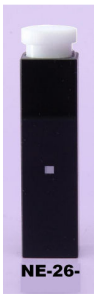
No special cell holders or adapters are necessary.

A pipet or syringe is used to fill or empty the sample chamber. For aqueous samples, ≈15% additional sample volume is needed to establish the correct meniscus level.



Two opposite windows polished
External Height - 45mm
External Width - 12.5mm
External Length - 12.5mm
Pathlength - 10mm

Z-Dimension- Distance between cell base and vertical center of sample chamber.



Z-Dimension	Instrument Models
8.5mm	Beckman, BioRad, Hitachi, Spectronic, Turner
15mm	Perkin-Elmer, Hewlett-Packard, Agilent, GBC, Shimadzu, Pharmacia, Jasco
20mm	Varian Cary

The NE-16- Cells are exactly equivalent to the Perkin-Elmer and Varian Cary cells, and include a **"liquid-tight" Polyethylene Lid** in addition to the Teflon Lid.

The NE-26- Cells are exactly equivalent to the Varian Cary cells and include an elongated **"liquid-tight" Teflon Stopper** to compensate for the dead volume space above the sample chamber.

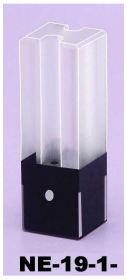
Approx. Volume (µl)	160	100	50	40	10
Sample Chamber Height (mm)	8	5	2.5	2	1
Sample Chamber Width (mm)	2	2	2	2	1
Q (Far UV Quartz)					
Cat. No. (Z = 8.5mm)	NE-16-1-Q-10-A	NE-16-2-Q-10-A	NE-16-3-Q-10-A	NE-16-4-Q-10-A	NE-16-5-Q-10-A
Cat. No. (Z = 15mm)	NE-16-1-Q-10-B	NE-16-2-Q-10-B	NE-16-3-Q-10-B	NE-16-4-Q-10-B	NE-16-5-Q-10-B
Cat. No. (Z = 20mm)	NE-16-1-Q-10-C	NE-16-2-Q-10-C	NE-16-3-Q-10-C	NE-16-4-Q-10-C	NE-16-5-Q-10-C
Q (Far UV Quartz)					
Cat. No. (Z = 8.5mm)	NE-26-1-Q-10-A	NE-26-2-Q-10-A	NE-26-3-Q-10-A	NE-26-4-Q-10-A	NE-26-5-Q-10-A
Cat. No. (Z = 15mm)	NE-26-1-Q-10-B	NE-26-2-Q-10-B	NE-26-3-Q-10-B	NE-26-4-Q-10-B	NE-26-5-Q-10-B
Cat. No. (Z = 20mm)	NE-26-1-Q-10-C	NE-26-2-Q-10-C	NE-26-3-Q-10-C	NE-26-4-Q-10-C	NE-26-5-Q-10-C

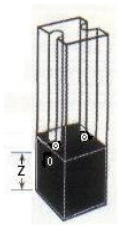
Sub-Micro Cell (Cylindrical / Small Pathlength Sample Chamber)

For investigations where small quantities only are available (e.g. DNA / RNA and proteins).

No special cell holders or adapters are necessary.

A pipet or syringe is used to fill or empty the sample chamber.





Two opposite windows polished
External Width - 12.5mm
External Length - 12.5mm
External Height - 40mm (Z=8.5mm)
External Height - 40mm (Z=15mm)
External Height - 45mm (Z=20mm)

Z-Dimension - Distance between cell base and vertical center of sample chamber.

Z-Dimension	Instrument Models
8.5mm	Beckman, BioRad, Hitachi, Spectronic, Turner
15mm	Perkin-Elmer, Hewlett-Packard, Agilent, GBC, Shimadzu, Pharmacia, Jasco
20mm	Varian Cary

The NE-19-1-Q-10- Cells are exactly equivalent to cells offered by Perkin-Elmer and Varian Cary.

The NE-19-3-Q-1- Cells are exactly equivalent to cells offered by Perkin-Elmer.

Pathlength (mm)	10
Sample Chamber Volume (µl)	5
Fill Volume (µl)	10
Sample Chamber Dia. (mm)	0.8
Q (Far UV Quartz)	
Cat. No. (Z = 8.5mm)	NE-19-1-Q-10-A
Cat. No. (Z = 15mm)	NE-19-1-Q-10-B
Cat. No. (Z = 20mm)	NE-19-1-Q-10-C

Pathlength (mm)	1
Sample Chamber Volume (µl)	5
Fill Volume (µl)	10
Sample Chamber Height (mm)	1
Sample Chamber Width (mm)	5
Q (Far UV Quartz)	
Cat. No. (Z = 8.5mm)	NE-19-3-Q-1-A
Cat. No. (Z = 15mm)	NE-19-3-Q-1-B

Cylindrical Cell with Teflon Stopper

End windows polished
External Height - 32mm
External Diameter - 22mm
Internal Diameter - 19mm


NE-32-

Pathlength (mm) Approx. Volume (ml) External Length (mm)	10 2.8 12.5	20 5.6 22.5
G (Optical Glass)		
Cat. No.	NE-32-G-10	NE-32-G-20
Q (Far UV Quartz)		
Cat. No.	NE-32-Q-10	NE-32-Q-20

Cylindrical Cell with Two Teflon Stoppers

End windows polished
External Height - 32mm
External Diameter - 22mm
Internal Diameter - 19mm


NE-34-

Pathlength (mm) Approx. Volume (ml) External Length (mm)	50 14.1 52.5	100 28.2 102.5
G (Optical Glass)		
Cat. No.	NE-34-G-50	NE-34-G-100
Q (Far UV Quartz)		
Cat. No.	NE-34-Q-50	NE-34-Q-100

Cylindrical Cell with Pyrex Tube


NE-37-G(Q)-2


NE-37-G(Q)-10

End windows polished
External Diameter - 22mm
Internal Diameter - 19mm

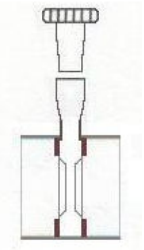
Tube Length - 70mm
Tube OD - 4mm
Tube ID - 2mm

Pathlength (mm) Approx. Volume (ml) External Length (mm)	1 0.3 3.5	2 0.6 4.5	5 1.4 7.5	10 2.8 12.5
G (Optical Glass)				
Cat. No.	NE-37-G-1	NE-37-G-2	NE-37-G-5	NE-37-G-10
Q (Far UV Quartz) (Quartz-to-Pyrex Graded Seal)				
Cat. No.	NE-37-Q-1	NE-37-Q-2	NE-37-Q-5	NE-37-Q-10

Micro Cylindrical Cell with Teflon Stoppers

Two round windows polished
External Height - 37mm
External Diameter - 22mm
Internal Diameter - 13mm
External Length - 22.5mm


NE-31B-Q-



Compatible with Varian Cary 1, 3, 4, 5, 50, 100, 300, 400, 500, 4000, 5000, 6000i.

Pathlength (mm) Approx. Volume (ml)	0.1 0.17	0.2 0.19	0.5 0.28	1.0 0.42	2.0 0.70	5.0 1.6
Q (Far UV Quartz)						
Cat. No.	NE-31B-Q-0.1	NE-31B-Q-0.2	NE-31B-Q-0.5	NE-31B-Q-1.0	NE-31B-Q-2.0	NE-31B-Q-5.0

Square / Semi-Micro / Micro Fluorometer Cell with Teflon Lid / Stopper

Raman IR Spectroscopy

Being fluorescence-free, the cells listed on this page are ideal for Raman IR applications where square cells are required.

Four windows and .....
..... base polished
External Width - 12.5mm
Pathlength - 10mm
External Length - 12.5mm

NE-9F-, NE-29F-
NE-18F-, NE-28F-
Base Thickness - 2.5mm

Internal Width (mm)	10	10
External Height (mm)	45	48
Approx. Volume (ml)	3.5	3.5
G (Optical Glass)		
Cat. No.	NE-3-G-10	NE-23-G-10
Q (Far UV Quartz)		
Cat. No.	NE-3-Q-10	NE-23-Q-10

4	4	2	2
45	48	45	48
1.4	1.4	0.7	0.7
G (Optical Glass)			
NE-9F-G-10	NE-29F-G-10	NE-18F-G-10	NE-28F-G-10
Q (Far UV Quartz)			
NE-9F-Q-10	NE-29F-Q-10	NE-18F-Q-10	NE-28F-Q-10

Semi-Micro / Micro Fluorometer Cell with Teflon Lid / Stopper (Reduced Volumes)

Raman IR Spectroscopy

Being fluorescence-free, the cells listed on this page are ideal for Raman IR applications where square cells are required.

Four windows and base polished
External Width - 12.5mm
Pathlength - 10mm
External Length - 12.5mm
Base Thickness - 9mm

Note: "Reduced Volume" Cells are not useable in sample compartments with a "Z" Dimension=8.5mm (see top section of Page 5).

Internal Width (mm)	4	4
External Height (mm)	45	48
Approx. Volume (ml)	0.95	0.95
Q (Far UV Quartz)		
Cat. No.	NE-9F/9-Q-10	NE-29F/9-Q-10

2	2
45	48
0.48	0.48
Q (Far UV Quartz)	
NE-18F/9-Q-10	NE-28F/9-Q-10

Square Fluorometer Cell with Graded Seal (Quartz-to-Pyrex)

Four windows and base polished
External Height of Cell - 40mm
Tube Length - 70mm
Tube OD - 8mm
Tube ID - 6mm
External Width - 12.5mm
External Length - 12.5mm
Pathlength - 10mm

Internal Width (mm)	10
Approx. Volume (ml)	3.5
Q (Far UV Quartz)	
Cat. No.	NE-3GS-Q-10

Square Fluorometer Cell with Screw Cap

For samples where a controlled atmosphere is required. Volatile, hazardous and unstable type samples (such as air-sensitive) are ideally accommodated by these cells.

Two opposite windows polished
External Height - ≈ 55mm
External Height (Cell) - 40mm
External Width - 12.5mm
External Length - 12.5mm
Pathlength - 10mm

Extra Caps and Septums

Cat. No.	Description	
3108T	Solid Cap (Teflon lined)	
3008	Open-Top Cap	
3208	Teflon/Silicone Septum	

A solid Teflon lined cap or an open-top cap with Teflon/Silicone septum (for needle injection/withdrawal) is included with each cell.

Use of a smaller screw neck on this cell eliminates the bulky heavy top, found with other cells on the market.

Internal Width (mm)	10
Approx. Volume (ml)	3.5
Q (Far UV Quartz)	
Cat. No. – Solid Cap	NE-3SC-Q-10
Cat. No. – Open-Top Cap	NE-3OC-Q-10

Rectangular Fluorometer Cell with Valve (Quartz-to-Pyrex)

Constructed of Pyrex, the valve is a Teflon-Glass system with Viton O-Rings for seals, making it inert and ideal for attaching to laboratory glass systems. Cells can withstand pressures of 2-3 atmospheres and evacuation of 10^{-7} Torr.

Four windows and base polished
External Height of Cell - 40mm
Overall Height - ≈155mm
Height of Side Arm - ≈105mm
Length of Side Arm - 50mm
Valve Bore - 0 to 3mm
Internal Width - 10mm
External Width - 12.5mm
Side Arm ID - 6mm
Side Arm OD - 8mm

Pathlength (mm)	10
Approx. Volume (ml)	3.5
External Length (mm)	12.5
Q (Far UV Quartz)	
Cat. No.	NE-3V-Q-10

Cryogenic Fluorometer Cell with Teflon Lid

Extra strength rounded corners on the cell allow for use from ~ -210°C to ~ 200°C.

Caution must be taken to prevent thermal shock.

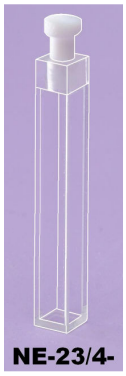
Four windows and base polished
External Height - 45mm
External Width - 12.5mm
Internal Width - 10mm
External Length - 12.5mm

Pathlength (mm)	10
Approx. Volume (ml)	3.5
Q (Far UV Quartz)	
Cat. No.	NE-3C-Q-10

Square Micro Fluorometer Cell with Open-Top / Teflon Stopper

Four Windows and base polished

Cell Holders are available and **ordered separately** to properly position these cells in a 10mm pathlength sample compartment cavity. See **below**.



Pathlength (mm)	3	3	4	5
Approx. Volume (ml)	0.2	0.3	0.5	0.8
External Height (mm)	30	45	45	45
External Width (mm)	5.5	5.5	6.5	7.5
Internal Width (mm)	3	3	4	5
External Length (mm)	5.5	5.5	6.5	7.5
G (Optical Glass)				
Cat. No.	NE-3/3-G-3-30	NE-3/3-G-3	NE-3/4-G-4	NE-3/5-G-5
Q (Far UV Quartz)				
Cat. No.	NE-3/3-Q-3-30	NE-3/3-Q-3	NE-3/4-Q-4	NE-3/5-Q-5

3	4	5
0.3	0.5	0.8
45	45	45
5.5	6.5	7.5
3	4	5
5.5	6.5	7.5
G (Optical Glass)		
NE-23/3-G-3	NE-23/4-G-4	NE-23/5-G-5
Q (Far UV Quartz)		
NE-23/3-Q-3	NE-23/4-Q-4	NE-23/5-Q-5

Square Micro Cell Holders

For correctly positioning small external length/width micro cells with the excitation and emission beams in a 10mm pathlength sample cavity. Constructed of black anodized aluminum to eliminate stray light effects.

Three apertures
External Width - 12.5mm
External Length - 12.5mm
Distance between holder base…
…and aperture bottom - 5.5mm

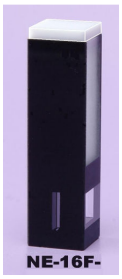
External Height (mm)	30	45	45	45
Aperture Width (mm)	2.5	2.5	3.5	4.5
Aperture Height (mm)	11	21	21	21
For Cell Cat. Nos.	NE-3/3-G(Q)-3-30	NE-3/3-G(Q)-3, NE-23/3-	NE-3/4-, NE-23/4-	NE-3/5-, NE-23/5-
Cat. No.	77002-1	77002-2	77002-3	77002-4

Sub-Micro Fluorometer Cell with Teflon Lid / Stopper

For investigations where small quantities only are available (e.g. DNA / RNA and proteins).

No special cell holders or adapters are necessary.

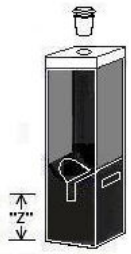
A pipet or syringe is used to fill or empty the sample chamber. For aqueous samples, ≈15% additional sample volume is needed to establish the correct meniscus level.



Z-Dimension	Instrument Models
8.5mm	Beckman
15mm	Perkin-Elmer, Shimadzu, Molecular Devices (SpectraMax), SLM (Aminco) Spectronic, Spex (Jobin-Yvon), Jasco, PTI (Photon Technology)
20mm	Varian Cary

Two opposite windows and emission window polished
External Width - 12.5mm
External Length - 12.5mm
Pathlength - 10mm
External Height - 45mm (NE-16F-)
External Height - 48mm (NE-26F-)

Z-Dimension - Distance between cell base and vertical center of sample chamber.



The NE-16F- Cells are compatible with Varian Cary Eclipse and include a **"liquid-tight" Polyethylene Lid** in addition to the Teflon Lid.

The NE-26F- Cells are compatible with Perkin-Elmer.

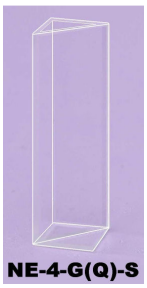
Approx. Volume (µl)	160	100	50	40	10
Sample Chamber Height (mm)	8	5	2.5	2	1
Sample Chamber Width (mm)	2	2	2	2	1
Q (Far UV Quartz)					
Cat. No. (Z = 8.5mm)	NE-16F-1-Q-10-A	NE-16F-2-Q-10-A	NE-16F-3-Q-10-A	NE-16F-4-Q-10-A	NE-16F-5-Q-10-A
Cat. No. (Z = 15mm)	NE-16F-1-Q-10-B	NE-16F-2-Q-10-B	NE-16F-3-Q-10-B	NE-16F-4-Q-10-B	NE-16F-5-Q-10-B
Cat. No. (Z = 20mm)	NE-16F-1-Q-10-C	NE-16F-2-Q-10-C	NE-16F-3-Q-10-C	NE-16F-4-Q-10-C	NE-16F-5-Q-10-C
Q (Far UV Quartz)					
Cat. No. (Z = 8.5mm)	NE-26F-1-Q-10-A	NE-26F-2-Q-10-A	NE-26F-3-Q-10-A	NE-26F-4-Q-10-A	NE-26F-5-Q-10-A
Cat. No. (Z = 15mm)	NE-26F-1-Q-10-B	NE-26F-2-Q-10-B	NE-26F-3-Q-10-B	NE-26F-4-Q-10-B	NE-26F-5-Q-10-B
Cat. No. (Z = 20mm)	NE-26F-1-Q-10-C	NE-26F-2-Q-10-C	NE-26F-3-Q-10-C	NE-26F-4-Q-10-C	NE-26F-5-Q-10-C

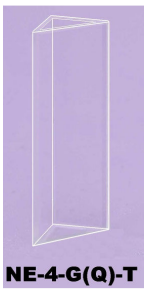
Triangular Cells

Triangular Fluorometer Cell

Three windows and base polished
External Height - 45mm
External Width - 12.5mm
Internal Widths - 10mm x 10mm …
…x 14mm
External Length - 12.5mm

Compatible with Varian Cary Eclipse.



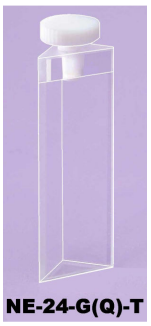


G (Optical Glass)	
Cat. No. - Square Base	NE-4-G-S
Cat. No.- Triangular Base	NE-4-G-T
Q (Far UV Quartz)	
Cat. No. - Square Base	NE-4-Q-S
Cat. No.- Triangular Base	NE-4-Q-T

Triangular Fluorometer Cell with Teflon Stopper

Three windows and base polished
External Height - 48mm
External Width - 12.5mm
Internal Widths - 10mm x 10mm …
... x 14mm
External Length - 12.5mm

Compatible with Varian Cary Eclipse.

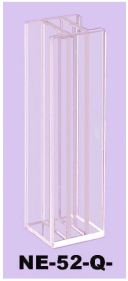


G (Optical Glass)	
Cat. No. - Square Base	NE-24-G-S
Cat. No.- Triangular Base	NE-24-G-T
Q (Far UV Quartz)	
Cat. No. - Square Base	NE-24-Q-S
Cat. No.- Triangular Base	NE-24-Q-T

Cells for Ultraviolet-Visible and Fluorescence

Dual Pathlength Cell

Four windows and base polished
External Height - 45mm
External Width - 12.5mm
External Length - 12.5mm



Pathlength (mm) Approx. Volume (ml)	1 or 10 0.4	2 or 10 0.8	5 or 10 2.0
Q (Far UV Quartz)			
Cat. No.	NE-52-Q-1	NE-52-Q-2	NE-52-Q-5

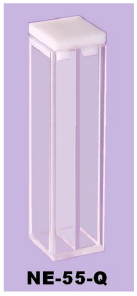
Dual Pathlength Cell with Teflon Stopper

Four windows and base polished
External Height - 48mm
External Width - 12.5mm
External Length - 12.5mm

Pathlength (mm) Approx. Volume (ml)	1 or 10 0.4	2 or 10 0.8	5 or 10 2.0
Q (Far UV Quartz)			
Cat. No.	NE-53-Q-1	NE-53-Q-2	NE-53-Q-5

Tandem-Divided Cell with Teflon Lid

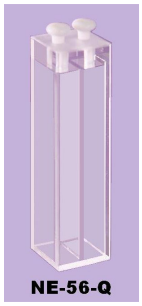
Five windows and base polished
External Height - 45mm
External Width - 12.5mm
External Length - 12.5mm
Inside Dimensions (per chamber)
Series - Internal Width - 10mm
Series - Pathlength - 4.4mm
Parallel - Internal Width - 4.4mm
Parallel - Pathlength - 10mm



Approx. Volume (per chamber)	1.5 ml
Q (Far UV Quartz)	
Cat. No.	NE-55-Q

Tandem-Divided Cell with Teflon Stoppers

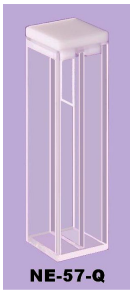
Five windows and base polished
External Height - 48mm
External Width - 12.5mm
External Length - 12.5mm
Inside Dimensions (per chamber)
Series - Internal Width - 10mm
Series - Pathlength - 4.4mm
Parallel - Internal Width - 4.4mm
Parallel - Pathlength - 10mm



Approx. Volume (per chamber)	1.5 ml
Q (Far UV Quartz)	
Cat. No.	NE-56-Q

Tandem-Divided Mixing Cell with Teflon Lid

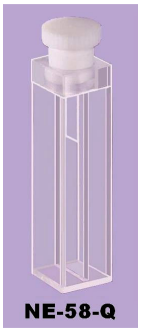
Five windows and base polished
External Height - 45mm
External Width - 12.5mm
External Length - 12.5mm
Inside Dimensions (per chamber)
Series - Internal Width - 10mm
Series - Pathlength - 4.4mm
Parallel - Internal Width - 4.4mm
Parallel - Pathlength - 10mm



Approx. Volume (per chamber)	1.0 ml
Q (Far UV Quartz)	
Cat. No.	NE-57-Q

Tandem-Divided Mixing Cell with Teflon Stopper

Five windows and base polished
External Height - 48mm
External Width - 12.5mm
External Length - 12.5mm
Inside Dimensions (per chamber)
Series - Internal Width - 10mm
Series - Pathlength - 4.4mm
Parallel - Internal Width - 4.4mm
Parallel - Pathlength - 10mm



Approx. Volume (per chamber)	1.0 ml
Q (Far UV Quartz)	
Cat. No.	NE-58-Q

Circular Dichroism Cells

Rectangular CD Cell with Teflon Stopper

All Circular Dichroism Cells have strain-free windows to eliminate birefringent lines over the material transmission range.

Two opposite windows polished
External Width - 12.5mm
Internal Width - 10mm

Space Compensators

For properly positioning 1, 2 and 5mm pathlength cells in a 10mm pathlength sample cavity.

Cat. No.	For Cell Path
77000-1	1mm
77000-2	2mm
77000-3	5mm

Price / each $57.00

Compatible with Jasco J-810, J-815 and J-700 Series and Aviv CD spectrometers including Models 202, 400, 420.

Pathlength (mm)	1	2	5	10
Approx. Volume (ml)	0.4	0.7	1.7	3.5
External Height (mm)	55	55	48	48
External Length (mm)	3.5	4.5	7.5	12.5
G (Optical Glass)				
Cat. No.	NE-21CD-G-1	NE-21CD-G-2	NE-21CD-G-5	NE-21CD-G-10
Q (Far UV Quartz)				
Cat. No.	NE-21CD-Q-1	NE-21CD-Q-2	NE-21CD-Q-5	NE-21CD-Q-10

Ultraviolet - Visible Reference Standards

Wavelength Glass Filters

The following glass filters yield sharp, narrow, stable and evenly distributed peaks in the ultraviolet and/or visible wavelength ranges, making them ideal for instrument wavelength checks:

Holmium Oxide Glass - for ultraviolet and visible wavelengths
Didymium Glass - for visible wavelengths

All glass filters are mounted into holders, which are 12.5mm x 12.5mm x 45mm high and are the size of standard 10mm pathlength cells.
These standards are **not** NIST Certified and are intended for inexpensive, quick instrument λ checks.

A spectrum showing the wavelengths is provided.

Cat. No.	*Description*	*λ Range*	*≈ λ Peaks (nm)*	
71101-1	**Holmium Oxide** Glass Filter	240 nm – 640 nm	241 - 279 - 287 - 333 - 360 - 418 445 - 453 - 460 - 536 - 637	
71101-2	**Didymium** Glass Filter	400 nm – 900 nm	440 - 473 - 480 - 514 - 529 - 573 587 - 685 - 740 - 748 - 807 - 879	

Neutral Density Screens

For instrument Absorbance (or %T) "quick" checks in the ultraviolet and visible wavelength regions. Absorbance remains constant at all wavelengths.

The four different Absorbance values **(0.5A, 1.0A, 1.5A, 2.0A)** can also be used for evaluating linearity so as to conform with the Beer-Lambert Law (A=abc).
A linearity check will require at least three neutral density screens.

All neutral density screens are mounted into holders, which are 12.5mm x 12.5mm x 45mm high and are the size of standard 10mm pathlength cells.
These standards are **not** NIST Certified and are intended for inexpensive, quick instrument A(%T) checks.

A spectrum showing absorbance is provided.

Cat. No.	*Description*	*Absorbance*	
71102-1	**Neutral Density Screen**	0.5A	
71102-2	**Neutral Density Screen**	1.0A	
71102-3	**Neutral Density Screen**	1.5A	
71102-4	**Neutral Density Screen**	2.0A	

Ultraviolet-Visible Source Lamps

The source lamps below are **prealigned** (with some exceptions), requiring **no** further adjustments for direct replacement. Some lamps (mostly found in older spectrometers) were not initially prealigned by the instrument manufacturer; therefore, alignment adjustments made by the user may be necessary.

Perkin-Elmer

Cat. No.	Instrument Models	Lamp Type	Mfger. No.	
70101-1	Lambda 1, 3, 3A, 3B	Deuterium	C055-0505	
70101-2	Lambda 2, 5, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, Bio, 19, 20, 25, 35, 40, 45, 800, 900	Deuterium	B016-0917	
70201-2	Lambda 1, 2, 3, 3A, 3B, 5, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, Bio, 20, 25, 35, 40, 45, 800, 900	Tungsten	B011-4620	


70101-1


70101-2


70201-2

Beckman

Cat. No.	Instrument Models	Lamp Type	Mfger. No.	
70102-1	DU-40, -50	Deuterium	585699	
70102-2	DU-60, -62, -64, -65, -68	Deuterium	596791	
70102-3	DU-70	Deuterium	523253	
70102-4	DU-600, -620, -630, -640, -650, -7000, -7400, -7500	Deuterium	514366	
70202-1	DU-40, -50, -60, -62, -64, -65, -68, -70, -600, -620, -630, -640, -650, -7000, -7400, -7500	Tungsten	945672	


70102-1


70102-2


70102-3


70202-1


70102-4

Hewlett-Packard (Agilent)

Cat. No.	Instrument Models	Lamp Type	Mfger. No.	
70103-1	8450A	Deuterium	08450-60106	
70103-2	8451A	Deuterium	08451-60100	
70103-3	8452A	Deuterium	08452-60104	
70203-1	8450A	Tungsten	08450-60105	
70103-4	8453A, 8453E	Deuterium	2140-0605	
70203-2	8453A	Tungsten	G1103-60001	


70103-1


70103-2


70103-3


70203-1


70203-2


70103-4

Hitachi

Cat. No.	Instrument Models	Lamp Type	Mfger. No.	
70104-1	U-1000, -1100, -1500, -1800, -2000, -2001, -2800, -3010, -3210, -3310, -3410, -3501, -4001, -4100	Deuterium	885-3570	
70204-1	U-1000, -1100, -2000, -2001, -3010, -3310	Tungsten	-	
70204-2	U-1500, -1800, -2800, -3210, -3410, -3501, -4001, -4100	Tungsten	-	


70104-1


70204-1


70204-2

Shimadzu

Cat. No.	Instrument Models	Lamp Type	Mfger. No.	
70105-1	UV-120, -120-01, -140, -150, -160, -160A, -180, -190, -200, -202, -210, -210A, -240, -250, -260, -265, -350, -360, -365, -370, -1200, -1201, -1600, -2100, -3100 (&PC), -3101PC, Biospec 1601	Deuterium	062-65055-05	
70205-1	All above Models	Tungsten	062-65004-06	


70105-1


70205-1

Varian (Cary)

Cat. No.	Instrument Models	Lamp Type	Mfger. No.	
70106-1	Cary 1, 3, 4, 5, 100, 300, 400, 500	Deuterium	56-100218-00	
70206-1	All above Models	Tungsten	56-100217-00	


70206-1


70106-1