



Precision Apertures



STANDARD APERTURE RANGE

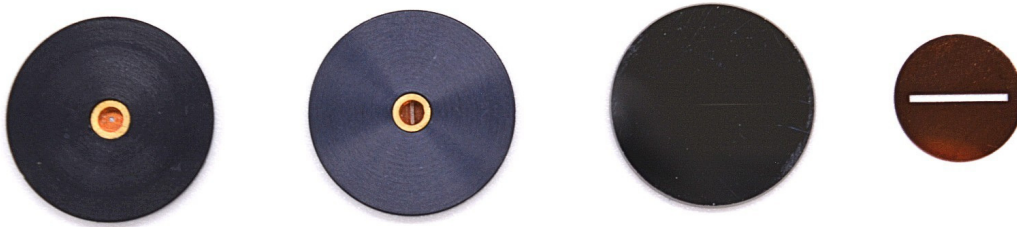
High Precision Electroformed Round Apertures Full range of precision pinholes in a choice of mounts/holders select your preferred aperture size from within the range.

High Precision Electroformed Rectangular Slits Full range of precision slits in a choice of mounts/holders. Select your preferred slit size from within the range.

Optical Slits High optical density opaque chrome on optical quality glass discs.

Optical Pinholes High optical density opaque chrome on optical quality glass discs

Unmounted Long Slit Foils Selection of slit widths [5 to 1000 microns] with lengths up to 7.5mm long normally supplied as unmounted 10mm diameter copper foils. Can be provided with 16mm aluminium mount/holder.



The optical industries demand for better quality apertures, has led Graticules Optics to introduce high definition pinholes and slits. Made to standard or custom designs, these precision apertures have excellent edge definition and exceptional shape accuracy.

With uses in refractometers and other devices, our apertures provide a well defined image without beam scatter (essential in quality laser benches). Ideal in the field of spectrometry, that demands high resolution spectrometer entrance slits, for greater wavelength definition.

The processes of electroforming foil products and vacuum deposition for glass products, are used to manufacture the aperture pattern required, with a very high degree of accuracy and repeatability.

Aperture sizes start from 1 micron for pinholes and 10 micron width for slits. Multiple and strip apertures can be supplied to customer specifications. Graticules Optics manufacture apertures in many types of metal foils and they can be fixed in mounts for added rigidity.

An alternative production technique where chrome is vacuum deposited on glass can provide users with aperture patterns of very high complexity.

'C' RANGE : High Precision High Power Round Apertures

- Precision electroformed apertures
- Blackened one side
- Sharp edge profile
- Foil thickness $19\mu\text{m}\pm 5\mu\text{m}$
- Other pinhole diameters available
- Mounted in 12.7mm, 16mm or 25mm diameter black anodised aluminium holders



Model	Pinhole Size	Size Tolerance	Roundness	Part Number (Add mount size after part numbers thus /16)
C 1	0.001mm (1 micron) diameter	+0.5 μm /-0	0.5 μm	04D00900
C 2	0.002mm (2 micron) diameter	$\pm 0.5\mu\text{m}$	0.5 μm	04D00901
C 5	0.005mm (5 micron) diameter	$\pm 0.5\mu\text{m}$	0.5 μm	04D00902
C 10	0.01mm (10 micron) diameter	$\pm 1.0\mu\text{m}$	0.5 μm	04D00903
C 25	0.025mm (25 micron) diameter	$\pm 1.0\mu\text{m}$	1.0 μm	04D00904
C 50	0.05mm (50 micron) diameter	$\pm 2.0\mu\text{m}$	1.0 μm	04D00905
C 100	0.1mm(100 micron) diameter	$\pm 3.0\mu\text{m}$	3.0 μm	04D00906
C 250	0.25mm(250 micron) diameter	$\pm 4.0\mu\text{m}$	3.0 μm	04D00907
C 1000	1.0mm(1000 micron) diameter	$\pm 5.0\mu\text{m}$	3.0 μm	04D00908

Other pinhole diameters available

'L' RANGE : High Precision High Power Rectangular Slits

- Precision electroformed copper slits
- Blackened one side
- Sharp edge profile
- Foil thickness $19\mu\text{m}\pm 5\mu\text{m}$
- Other slit widths available
- Mounted in 12.7mm, 16mm or 25mm diameter black anodised aluminium holders



Model	Slit Size	Size Tolerance	Straightness over length	Part Number (Add mount size after part numbers thus /16)
L 2	0.002mm (2 micron wide) x 1.0mm long	+0.5 μm	0.5 $\mu\text{m}/\text{mm}$	04D00950
L 5	0.005mm (5 micron wide) x 1.0mm long	$\pm 0.5\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00951
L10	0.01mm (10 micron wide) x 1.5mm long	$\pm 0.5\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00952
L 25	0.025mm (25 micron wide) x 1.5mm long	$\pm 1.0\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00953
L 50	0.05mm (50 micron wide) x 1.0mm long	$\pm 2.0\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00954
L 100	0.1mm (100 micron wide) x 1.0mm long	$\pm 3.0\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00955
L 250	0.25mm (250 micron wide) x 1.0mm long	$\pm 3.0\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00956

Other slit widths available

'LW' RANGE : Unmounted Long Slit Foils

- Precision electroformed copper slits
- Blackened one side
- Sharp edge profile
- 9.5mm foil diameter
- Unmounted



Model	Slit Size	Size Tolerance	Straightness over length	Part Number
LW 5	0.005mm wide x 3.0mm long rectangular slit	$\pm 0.5\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00980
LW 10	0.01mm wide x 3.0mm long rectangular slit	$\pm 0.5\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00981
LW 25	0.025mm wide x 5.0mm long rectangular slit	$\pm 1\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00982
LW 50	0.05mm wide x 5.0mm long rectangular slit	$\pm 2\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00983
LW 100	0.1mm wide x 7.5mm long rectangular slit	$\pm 3\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00984
LW 250	0.25mm wide x 7.5mm long rectangular slit	$\pm 3\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00985
LW 500	0.5mm wide x 7.5mm long rectangular slit	$\pm 3\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00986
LW 1000	1.0mm wide x 7.5mm long rectangular slit	$\pm 3\mu\text{m}$	0.5 $\mu\text{m}/\text{mm}$	04D00987

Other slit widths available

'LG' RANGE : Optical Slits on Glass

- Opaque chrome on optical quality glass discs
- 12.7mm, 16mm or 25.4mm diameter, 1.5mm thick, B270 glass



Model	Description	Part number
LG5	Chrome on glass slit 0.005mm wide x 10.0mm long	04B01000
LG10	Chrome on glass slit 0.01mm wide x 10.0mm long	04B01001
LG25	Chrome on glass slit 0.025mm wide x 10.0mm long	04B01002
LG100	Chrome on glass slit 0.1mm wide, full width	04B01003
LG200	Chrome on glass slit 0.2mm wide, full width	04B01004

'CG' RANGE : Optical Pinholes on Glass

- Opaque chrome on optical quality glass discs
- 12.7mm, 16mm or 25.4mm diameter, 1.5mm thick, B270 glass



Model	Description	Part number
CG05	Chrome on glass pinhole 0.005mm diameter	04B02005
CG10	Chrome on glass pinhole 0.01mm diameter	04B02010
CG20	Chrome on glass pinhole 0.02mm diameter	04B02020
CG25	Chrome on glass pinhole 0.025mm diameter	04B02025
CG50	Chrome on glass pinhole 0.05mm diameter	04B02050
CG100	Chrome on glass pinhole 0.1mm diameter	04B02100



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