

FUNCTIONAL MATERIAL

CAPILLARY PLATE

J5022 SERIES

OVERVIEW

Capillary plates are essentially circular or rectangular glass plates on which tiny glass capillaries or tubes are arrayed in two-dimensions at regular spaced intervals.

From a variety of lineup, optimum hole diameters, lengths (thickness), and outer dimensions can be selected according to the application. Capillaries have superb linearity and high accuracy. Standard open area ratios of capillary plates are as large as 55 % or more.

Material in standard capillary products uses lead glass containing 40 % to 50 % lead.

Hamamatsu accepts special orders for capillaries with super-tiny holes diameters ranging from one to several hundred micrometers.

Hamamatsu also offers capillary plates that were anti-statically treated on the plate front, rear and inner wall surfaces.



FEATURES AND CUTAWAY VIEW

- **Uniform hole sizes**
Hole diameter: 1 μm to several hundred μm
- **Open area ratio of 55 % or more**
- **Capable of giving directivity to charged particles or molecules**
- **Capable of collimating light**
- **Highly heat resistant up to 430 °C**

0.2 mm to several mm

▲ Enlarged view of capillaries

TMCP0083EA

APPLICATIONS

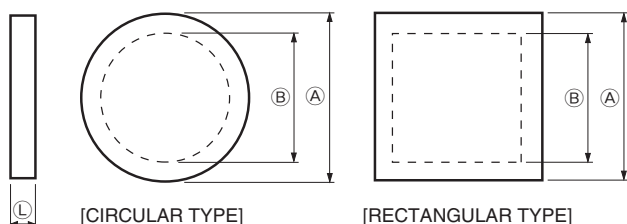
- **Liquid and gas filters**
- **Differential pumping window material**
- **Orifices for mass spectrometry**
- **Optical and X-ray collimators**

SIZE VARIATIONS

Type No.	Outer dimension (mm) ^(A)	Effective area (mm) ^(B)	Hole diameter (μm)	Length (Thickness) (mm) ^(L)
J5022-09	φ25	φ20	6	1.0
J5022-11	φ25	φ20	10	0.4
J5022-16	φ33	φ27	10	1.0
J5022-21	φ87	φ77	25	1.0
J5022-19	60 × 60	53 × 53	20	1.0

Note: The above J5022 series does not have anti-static treatment. The J5112 series is an anti-statically treated type. For other information such as dimensional tolerances, please contact us.

Feel free to consult with us if you require special order products.



TMCPA0039EA

APPLICATION DESCRIPTION

Application	Application description	Features	Application example
Filters	<p>TMPC0084EA</p>	<ul style="list-style-type: none"> Induces laminar flow of fluid Particle selection capability 	<ul style="list-style-type: none"> Filters Flow rate meters
Differential pumping window material	<p>TMPC0085EA</p>	<ul style="list-style-type: none"> Capillary plate having tiny diameter holes and adequate thickness (high aspect ratio) doesn't easily allow gas to pass but lets light and X-rays pass through freely. So this can be utilized as window material between air and vacuum. Capable of withstanding temperatures to a maximum of 430 °C 	<ul style="list-style-type: none"> Window material for vacuum UV light sources and soft X-ray sources
Collimators	<p>TMPC0086EA</p>	<ul style="list-style-type: none"> Capillary plate passes just light input in parallel to the capillaries. Capable of orienting the direction of beams of various types including atoms, molecules, charged particles, and X-rays 	<ul style="list-style-type: none"> Ion energy analyzers Spectrometers 2D imaging X-ray spectrometers
Others		<ul style="list-style-type: none"> Capable of maintaining a constant ultra-slow leak state 	<ul style="list-style-type: none"> Ultra-slow leak valves Semiconductor film forming devices

Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office.

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