

# OPTICAL LENS FOR X-RAY

# FOCUSING CAPILLARY LENS

## J12818-01

### OVERVIEW

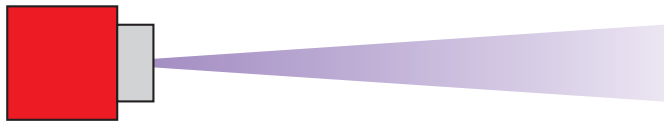
The J12818-01 focusing capillary lens is a focusing optics for X-rays, consisting of a bundle of numerous hollow glass capillaries formed into a cylindrical shape with its ends gently tapered.

This product utilizes total reflection of X-rays on the inner wall of each capillary to focus X-rays emitted from an X-ray source to a small spot.

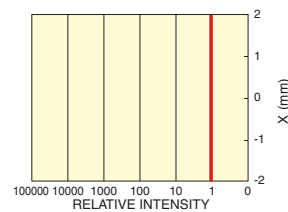


### X-RAY FOCUSING USING A FOCUSING CAPILLARY LENS

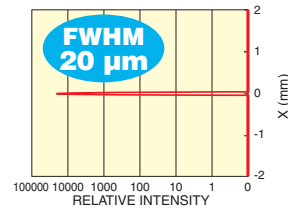
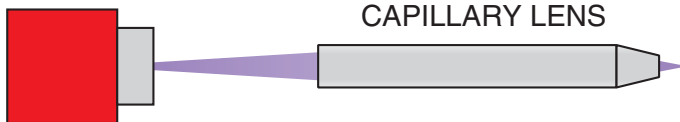
X-RAY SOURCE



● FOCUSED BEAM PROFILE



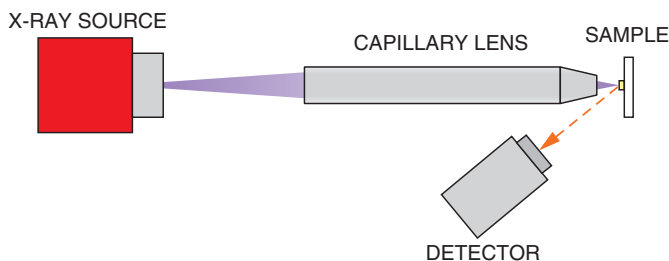
X-RAY SOURCE



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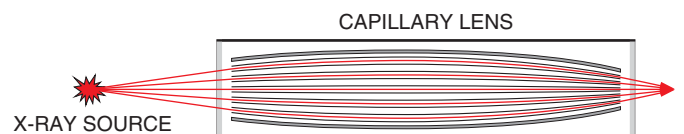
### APPLICATION

● X-ray fluorescence (XRF)



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### SCHEMATIC DIAGRAM



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# SPECIFICATIONS

Parameter	Description / Value	Unit
Operating X-ray energy (recommended)	3 to 25 <sup>①</sup>	keV
Input focal length	70 ± 10	mm
Output focal length	5 ± 2	mm
Focusing size (FWHM)	20	μm
Gain (Min.) <sup>②</sup>	@Cu-Kα (8.0 keV)	10 000
Operating ambient temperature	0 to +50	°C
Input / output window material	Polyimide film	—
Housing case material	Stainless steel	—

**NOTE:** ① Compatible with less than 3 keV when input/output windows are removed.

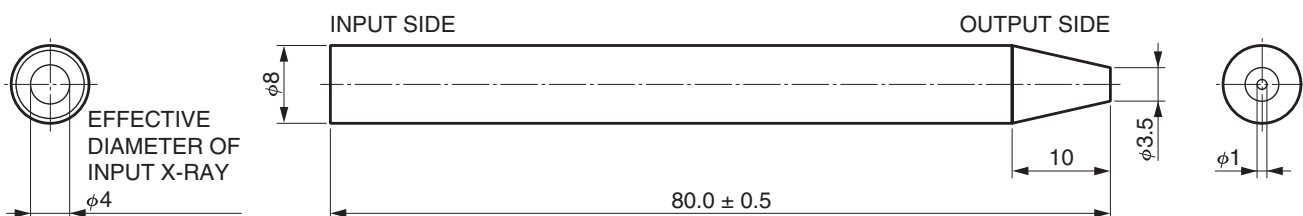
② Compared with a pinhole of the same size as the focusing size, placed at the focus position.  
An X-ray source with a focal spot size of 20 μm is used.

# OPTICAL DIMENSIONS (Unit: mm)



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# DIMENSIONAL OUTLINES (Unit: mm)



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