

OPTICAL LENS FOR X-RAY

COLLIMATING CAPILLARY LENS

J12432-01

OVERVIEW

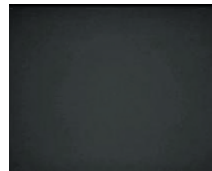
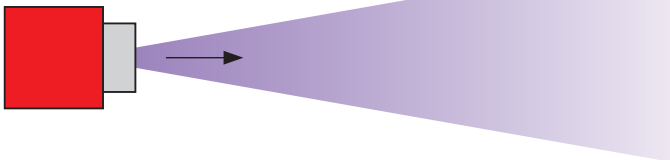
The J12432-01 capillary lens is an optical element for X-rays, consisting of a bundle of numerous hollow glass capillaries formed into a cylindrical shape with one end gently tapered. This lens enables X-ray collimating by using total reflection.



COLLIMATED X-RAY IMAGE AND BRIGHTNESS DISTRIBUTION OBTAINED WITH A CAPILLARY LENS

●Without capillary lens

X-ray source

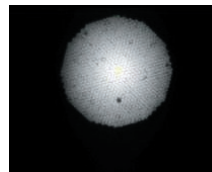
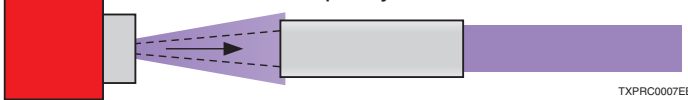


Divergent X-ray image

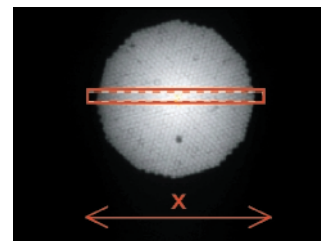
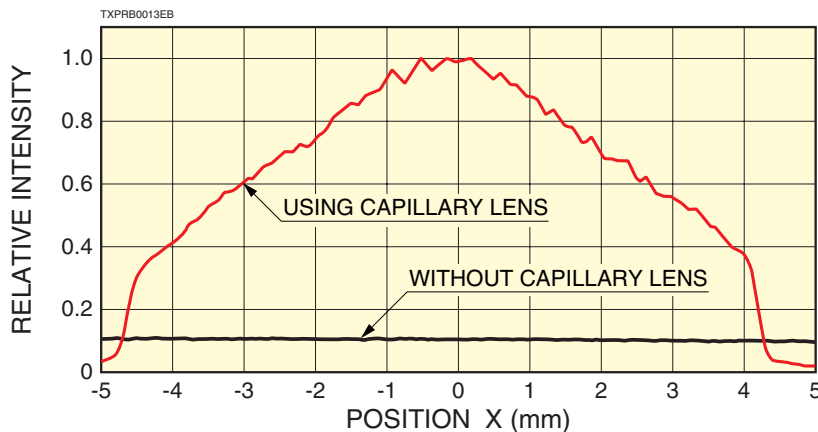
●Using capillary lens

X-ray source

Capillary lens



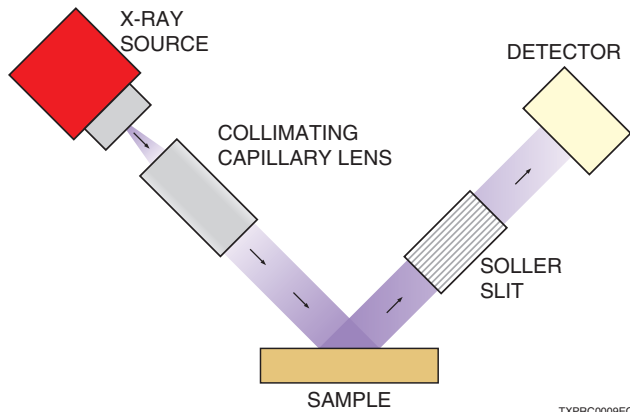
Collimated X-ray image



X-ray tube voltage: 20 kV
X-ray source to image sensor
distance: 300 mm

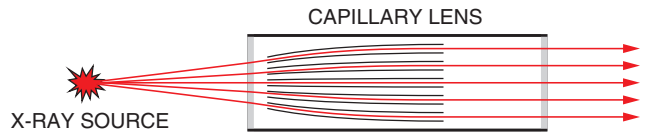
APPLICATIONS

● X-ray diffraction (XRD)



TXPRC0009EC

SCHEMATIC DIAGRAM OF X-RAY COLLIMATING



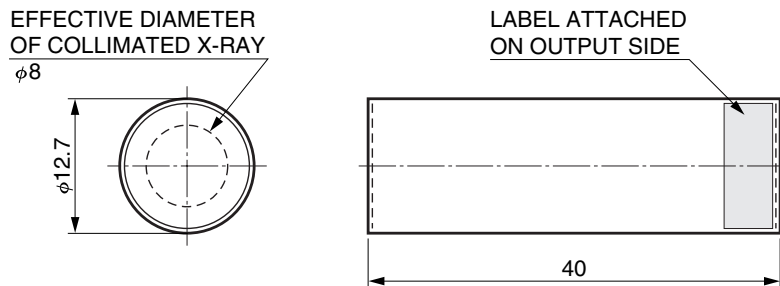
TXPRC0008EB

SPECIFICATIONS

Parameter		Description / Value	Unit
Input	Operating X-ray energy (recommended)	5 to 20	keV
	Focal length ^(A)	50	mm
Output	Effective diameter of collimated X-rays	φ8	mm
	Divergence angle of collimated X-rays (Max.)	0.2	degrees
Operating ambient temperature		0 to +50	°C
Input / output window material		Beryllium	—
Housing case material		SUS	—

NOTE: (A) Distance from X-ray tube target to capillary lens input end

DIMENSIONAL OUTLINES (Unit: mm)



TXPRA0011EA

* Please contact us for custom dimensions.

Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office. Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2017 Hamamatsu Photonics K.K.

HAMAMATSU PHOTONICS K.K. www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Electron Tube Division

314-5, Shimokanzo, Iwata City, Shizuoka Pref., 438-0193, Japan, Telephone: (81)539/62-5248, Fax: (81)539/62-2205

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658 E-mail: info@hamamatsu.de

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: info@hamamatsu.fr

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44)1707-294888, Fax: (44)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Torshamnsgatan 35 SE-164 40 Kista, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia S.r.l.: Strada della Moia, 1 int. 6, 20020 Arese (Milano), Italy, Telephone: (39)02-93581733, Fax: (39)02-93581741 E-mail: info@hamamatsu.it

China: Hamamatsu Photonics (China) Co., Ltd.: B1201 Jiaming Center, No.27 Dongsanhuan Beilu, Chaoyang District, Beijing 100020, China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

Taiwan: Hamamatsu Photonics Taiwan Co., Ltd.: 8F-3, No.158, Section2, Gongdao 5th Road, East District, Hsinchu, 300, Taiwan R.O.C. Telephone: (886)03-659-0080, Fax: (886)07-811-7238 E-mail: info@tw.hpk.co.jp

TXPR1022E02
MAR. 2017 IP