

SZPHOTON

FIBER OPTIC PLATE



What is Fiber Optic Plate?

A fiber optic plate is a transparent plate that consists of many optical fibers and can transfer an image from the input face to the output face one-to-one with high efficiency, low distortion and compactness. They can be used as optical elements that replace lenses, or for high-resolution image transmission devices such as LCDs, CCD coupling, X-ray imaging, etc.

What are applications of Fiber Optic Plates?

Some applications of fiber optic plates are:

- Intra-oral dental sensor: Fiber optic plates can protect the sensor from X-ray damage and improve the signal-to-noise ratio by absorbing stray light.
- High-speed X-ray imaging: Fiber optic plates can couple the image plane to the sensor surface with high efficiency and save space for the apparatus.
- Fluorescence imaging: Fiber optic plates can be used as optical isolators and filters to block unwanted light and enhance contrast.

The benefits of fiber optic plates for these applications are:

- They can provide accurate one-to-one image transfer with low distortion.
- They can be made with different shapes and sizes to fit different designs.
- They can withstand high radiation and temperature without degradation.

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Common Specification of Fiber Optic Plates

Parameters	Value	Description
Single Fiber Diameter	3,4,6,25,100(μm)	The Fiber element size used on Fiber Optic Plate
Fiber Optic Plate Dimension	Maximum to 200mm x 200mm	The outer dimension of Fiber Optic Plate
Numerical Aperture	0.19,0.8,1.0	The acceptance angle of Fiber element
EMA Absorber	Yes / No	Interstitial Fibers for absorb stray light (for improving contrast)
Wavelength	400-1350 nm	The applicable wavelength range for fiber optic plates
Xray Shielding Ability	Yes / No	Special glass composite will be used for making xray shielding fiber optic plates

Common Configuration of Fiber Optic Plates

Item	Dimension(mm)	Thickness(mm)	Numerical Aperture	Fiber Diameter(um)
rhfop1	25.4x25.4	2	1.00	6.00
rhfop2	17.7x20	10	1.00	4.00
rhfop3	17.7x20	10	0.15	4.00
rhfop4	25x25	2	1.00	6.00
rhfop5	D25	2	1.00	6.00
rhfop6	23.1x23.1	11	0.15	4.00
rhfop10	23.1x23.1	15	1.00	4.00
rhfop11	118x118	6	1.00	6.00
elrhfop1	480 x 210	15	0.80	6.00
elrhfop2	480 x 210	15	0.80	10.00
elrhfop3	480 x 210	15	0.80	10.00
elrhfop4	147 x 126	3	1.00	10.00
elrhfop5	144.2x123	3	1.00	6.00
elrhfop6	50 x 50	3	1.00	6.00
elrhfop7	147.5. x 115.0	4	1.00	8.00