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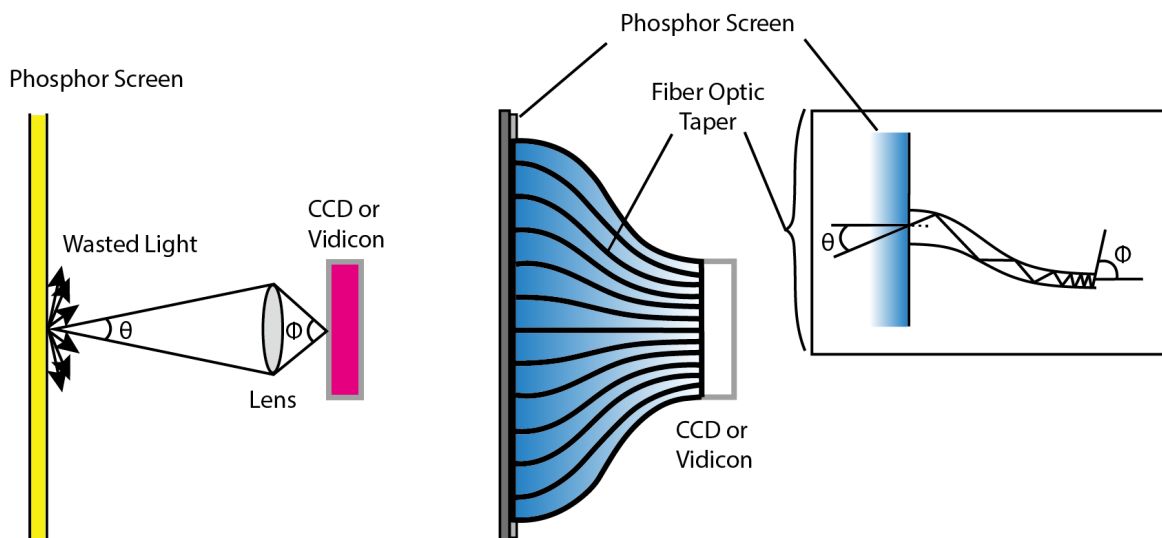
FIBER OPTIC TAPER

What is a Fiber Optic Taper

A fiber optic taper is a device that transmits either a magnified or reduced image from its input surface to its output surface using a coherent arrangement of optical fibers. It can be used for applications such as image magnification or reduction, sensor coupling, fluoroscopy, and light sensors. Fiber optic tapers can have different shapes and sizes, such as round-to-round, round-to-rectangular, or anamorphic tapers. They are usually made for visible or near-infrared light.



Advantages of Fiber Optic Taper



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Application of Fiber Optic Taper

Some applications of fiber optic tapers are:

- Image magnification or reduction, e.g. when adapting an image to an image sensor of a given size.
- Sensor coupling, e.g. transferring light from an X-ray scintillator crystal to the entrance of a microchannel plate detector¹.
- Fluoroscopy, e.g. using fiber optic tapers to couple X-ray images to CCD cameras.
- Light sensors, e.g. using fiber optic tapers to increase the light collection efficiency.
- X-ray imaging and image intensification, e.g. using fiber optic tapers to transfer the image from the phosphor screen of an image intensifier to a smaller image sensor.
- Soft robot and gripper applications, e.g. using fiber optic tapers as waveguide photo actuators that can bend and move in response to light.

Configuration of Fiber Optic Tapers

Item	Dimension(mm)	Thickness(mm)	Numerical Aperture	Fiber Diameter(um)
sfot1	54.27x30.02	19.52x10.8	2.78	6.00
sfot2	D18	5.7x3.3	2.73	6.00
sfot3	D70	14.5x14.5	2.60	6.00
sfot4	D23.2	7.5x5	2.50	6.00
sfot5	D39.72	12.4x9.945	2.50	6.00
sfot6	D20	6.4x4.8	2.50	6.00
sfot7	D20	6.4x4.8	2.50	6.00
sfot8	47.82x26.46	19.52x10.8	2.45	6.00
sfot9	D35	11.3x11.3	2.34	10.00
sfot10	D38	12.4x9.945	2.30	6.00

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sfot11	D25	D11	2.30	6.00
sfot13	D18	6.4x4.8	2.25	6.00
sfot14	D20	7.5x5	2.25	6.00
sfot15	D18	6.4x4.8	2.25	4.00
sfot16	D20	7.5x5	2.25	6.00
sfot17	D56	D25	2.24	10.00
sfot18	D25	8.8x6.6/ D11	2.20	6.00
sfot19	D27	D15	2.20	6.00
sfot20	D25	D11	2.20	6.00
sfot21	D35	11.3x11.3	2.20	6.00
sfot22	D17.5	6.4x4.8	2.10	6.00
sfot25	D20	7.5x5	2.00	6.00
sfot27	D31.78	12.4x9.945	2.00	6.00
sfot28	D20	D10	2.00	6.00
sfot29	D17.5	6.4x4.8	2.00	6.00
sfot30	D56	D28	2.00	6.00
sfot31	D18	9.00	2.00	6.00
sfot32	D17.5	6.4x4.8	2.00	6.00
sfot33	D27	11.5*7	2.00	6.00
sfot34	D16	6.4x4.8	2.00	6.00
sfot35	D22	D11	2.00	6.00
sfot37	D53.086	30.12	1.90	6.00
sfot38	D15.5	6.4x4.8	1.85	6.00
sfot40	D30	11.9x11.9	1.81	6.00
sfot41	D40	15.6x15.6	1.73	6.00
sfot42	27x27	15.6x15.6	1.73	6.00
sfot43	D18	7.2x5.3	1.70	6.00
sfot44	D18	8.8x6.6	1.63	6.00
sfot45	D40	D25	1.60	10.00

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sfot46	40x40	25x25	1.60	6.00
sfot47	40x40	25x25	1.60	10.00
sfot48	30x30	19x19	1.58	6.00
sfot49	30.06x16.63	19.52x10.8	1.54	6.00
sfot51	D18	5.7x3.3	2.73	6.00
exsfot1	D41.5	D15.5	3.04	6.00
exsfot2	D40	11.3x7.11	3.00	6.00
exsfot3	D41	D13.7	3.00	6.00
exsfot4	D52	D17.33	3.00	6.00
exsfot5	D18	6.00	3.00	6.00
exsfot6	D41	D13.7	3.00	6.00