

SCHOTT® X-Large Format Fiber Optic Faceplates

High Resolution Image Transfer for Digital X-Ray



Performance Characteristics

Faceplates are of a single piece construction (no tiling)

Available in a variety of sizes up to 325 mm x 325 mm. Larger sizes by request.

Can be manufactured with fiber optic elements ranging from 4 microns in diameter to 25 microns, or larger

Faceplate sizes are intended to serve the digital x-ray market as well as displays for commercial and defense applications

3 Functions of SCHOTT's fiber optic for the digital x-ray market:

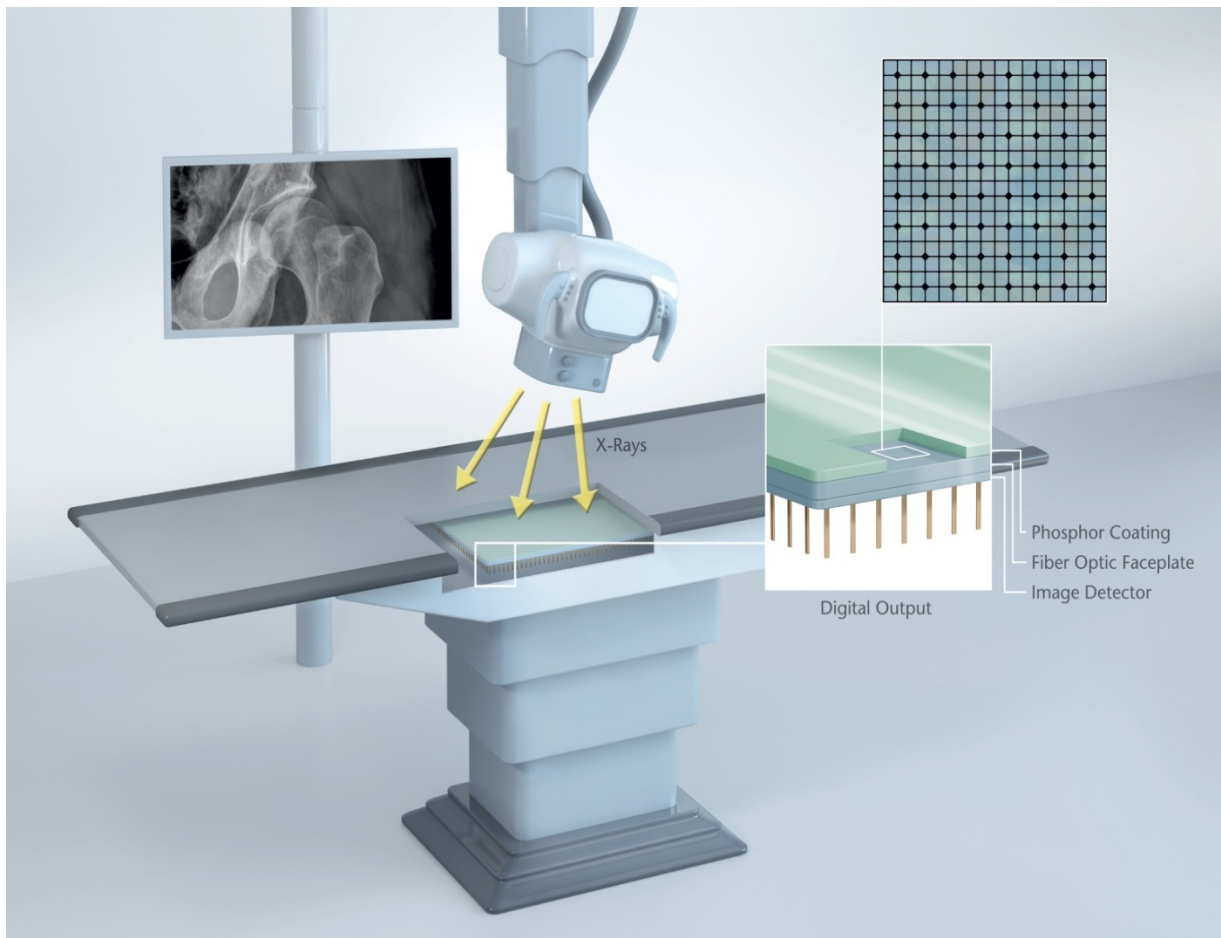
- substrates onto which scintillating coatings are deposited
- light guides which efficiently couple the scintillating screen to the photosensitive device, such as a CMOS or CCD detector, delivering high resolution images and improved contrast
- x-ray absorption properties of the fiber optic plates protect the photodetectors from damage and prevent extraneous noise from compromising the images

SCHOTT offers customized solutions for medical and industrial x-ray imaging

Changes to the fiber optic design and glass composition result in faceplate materials with high optical transmission (HT) and resistance to x-ray browning (RH). (See charts on reverse)

Typical Faceplate Specifications

Glass Type			
Typical Performance Parameters	47A	47A HT	47A RH
Fiber Size (μm)/Resolution (lp/mm)	6/83	6/83	6/83 12/32
Numerical Aperture	1.0	1.0	1.0
Stray Light Control (EMA)	Yes	Yes	Yes
Collimated Transmission at 550 nm: 3 mm Thick (%)	73	85	69
Coefficient of Thermal Expansion ($\times 10^{-7}/\text{K}$)	68	70	68
Maximum Formats (mm)	325 x 325	325 x 325	325 x 325
Density, g/cm^3	4.15	4.50	4.15
Core/Clad Ratio	75/25	90/10	75/25 90/10
Lead Free	Yes	Yes	Yes
Phosphor Compatible	Yes	Yes	Yes



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