

DIGITAL RADIOGRAPHY FACEPLATE

Enabling the vision of tomorrow through enhanced digital radiography.

Incom's medical and dental fiber optic faceplates are a key technological component to the digital radiology industry. These faceplates enable doctors and dentists the ability to view instant, high resolution images while reducing the intensity of X-ray exposure to CCD and CMOS sensors. The fiber optic faceplate acts as a substrate for the scintillator in the detector system, while reducing noise, protecting the sensor, and improving contrast. Incom has the ability to create faceplates to any customizable size up to 49cm X 32cm.

FEATURES

- Extended sensor life
- Improved signal to noise ratio (SNR)
- Enables high-resolution images
- Physical layer of scintillating coating
- Available in sizes for full chest imaging

APPLICATIONS

- Intraoral
- Panoramic / Cephalometric
- Fluoroscopy
- Mammography
- Analytical radiology
- Nondestructive testing

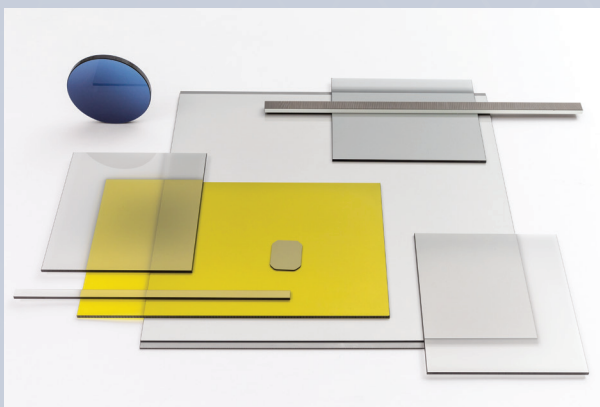
NORMAL ABDOMINAL X-RAY

IMAGED THROUGH AN INCOM FIBEROPTIC FACEPLATE ON A CMOS BASED DETECTOR



RADIATION HARD GLASS

Incom has created a low-browning glass fiber optic (Radiation Hard Glass) optimized for high radiation dose applications such as NDT. Many standard fiber optics not optimized like this material would brown over time and exhibit reduced transmission from what was originally measured. Incom's Radiation Hard Glass is manufactured to the same chemistry as their standard FOPs, but is chemically doped to keep the glass from browning—eliminating the concern.



MATERIAL SPECIFICATIONS

| | B7D61 | B7D62 | BYD61 | BYD62 |
|---|---------------------------|---------------------------|---------------------------|---------------------------|
| Index of Refraction of Core | 1.80 | 1.80 | 1.80 | 1.80 |
| Theoretical Core Percentage | 85% | 90% | 85% | 90% |
| EMA Type and Layout | Enhanced 1/61 statistical | Enhanced 1/61 statistical | Enhanced 1/61 statistical | Enhanced 1/61 statistical |
| Coefficient of Thermal Expansion ($\times 10^{-7}/C$) | 61 | 62 | 61 | 62 |
| Numerical Aperture | 1.00 | 1.00 | 1.00 | 1.00 |
| Density (g/cm ³) | 4.3 | 4.5 | 4.3 | 4.5 |
| Shear Distortion | <.002" | <.002" | <.002" | <.002" |
| Gross Distortion | <.004" | <.004" | <.004" | <.004" |
| Lead-Free Core | No | No | No | No |
| Fiber Size (microns) | 6 | 9 | 6 | 9 |
| X-ray Absorption | High | High | High | High |
| Low Browning | No | No | Yes | Yes |