

SCHOTT® Fiber Optic Faceplates

Now introducing our NEW glass compositions for high resolution image transfer!



NEW Glass Compositions for Faceplates

NEW Glass Types				
Typical Performance Parameters	RFG 85	RFG 88	RFG 92	RFG 95
Fiber size (μm)/Resolution lp/mm	6/102	6/102 4/128	6/102	6/102
Numerical Aperture	0.85	0.88	0.92	0.95
Stray Light Control (EMA)	Yes	Yes	Yes	Yes
Collimated Transmission @ 550nm (10mm thick) – normal (%)	NA	73	83 (@ 3mm thick)	NA
Coefficient of Thermal Expansion (x10 ⁻⁷ /°C)	NA	63	80	NA
Density (g/cm ³)	3.0	3.41	3.69	3.0
Core/Clad Ratio	70/30 75/25	70/30	75/25 90/10	70/30 72/25
Lead Free	Yes	Yes	Yes	No
Phosphor Compatible	NA	Yes (photo-cathode compatible)	Yes	NA
Twist/Stretch Capability	TBD	Yes	TBD	TBD
Maximum Square Formats (mm)	NA	NA	NA	NA

Performance Characteristics

Faceplates are used for high resolution, “zero thickness” image transfer applications that include CCD and CMOS coupling, CRT/LCD displays, image intensification, remote viewing, field flattening and x-ray imaging. In opto-electronic applications, faceplates are used as both input and output image intensifier windows.

All SCHOTT faceplates are fabricated to customer-specific requirements. Typical shapes are round or rectangular, and in a variety of sizes up to 300 mm² formats with special sizes to 450 mm². Typical element sizes range from as small as 2.5 μm to 25 μm or larger.

Faceplates can be manufactured to be vacuum tight.

Typical Faceplate Specifications

Typical Performance Parameters	Glass Type*								
	47A	47ARH Radiation hardened	24A	24AS	24C	75A	75C	55A	55C
Fiber size (µm)/Resolution lp/mm**	6/102 4/128	6/102	25/23 10/64 8/72 6/102	8/72 6/102 4/128 2.5/203	10/64 6/102 4/128	27/23	6/102	60/10	60/10
Numerical Aperture	1.0	1.0	1.0	1.0	1.0	0.58	0.58	0.28	0.28
Stray Light Control (EMA)	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No
Collimated Transmission @ 550nm (10mm thick) – normal (%)	70	68	70	70	85	68	80	68	80
Coefficient of Thermal Expansion (x10 ⁻⁷ /°C)	68	68	68	68	68	61	61	78	80
Density (g/cm ³)	4.15	4.16	4.0	4.0	4.0	3.05	3.05	2.4	2.4
Core/Clad Ratio	75/25	75/25	70/30	70/30	70/30	75/25	75/25	75/25	75/25
Lead Free	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes
Phosphor Compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Twist/Stretch Capability	No	No	Yes	Yes	Yes	No	No	No	No
Maximum Square Formats (mm)	300	300	300	≤31	300	300	300	300	300



* Other special glass types available upon customer's request

** Resolution Measurement performed with a 1951 USAF Resolution Target using diffuse white light illumination. Resolution may vary with other wavelengths.

All specifications are subject to change without prior notice.
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