

GASIR®3 - Infrared transmitting Glass

GASIR®3/0906

Physical Data & Typical Characteristics



Mechanical properties

Density	4,79(±0,01)x10 ³	kg/m ³
Compression resistance	135	MPa
Young's modulus	19.2	GPa
Torsion modulus	7.5	GPa
Flexion resistance	23	MPa
Poisson's ratio	0,27	
Hardness	140	Hv

Thermal properties

Glass temperature	483	K
Upper use temperature	440	K
Thermal expansion coefficient (300K)	17 x 10 ⁻⁶	K ⁻¹
Thermal conductivity (288 – 307K)	0,17	W/m.K

Optical properties

Refractive index n (296 K)	λ (μm)	Refractive Index
	1.54	2.6680
	2	2.6500
	3	2.6349
	4	2.6287
	5	2.6253
	6	2.6223
	7	2.6195
	8	2.6168
	9	2.6138
	10	2.6105
	11	2.6068
	12	2.6028

Refractive index variation between lots < 10 x 10⁻⁴

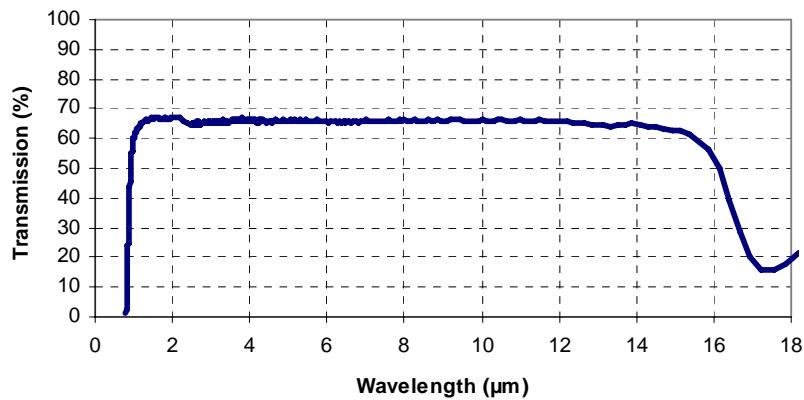
Temperature coefficient of refractive index dn/dt @ 293 K

$\lambda = 10.6 \mu\text{m}$ $5.3 \times 10^{-5} \text{ K}^{-1}$ (@ 293 K)

Optical Specifications (20 °C)

Transmission	λ (μm)	Transmission %
	3	65,3
	4	66,2
	5	66,0
	6	66,1
	7	66,5
	8	66,2
	9	66,1
	10	66,1
	11	66,2
	12	66,1
	13	64,5
	14	64,4

Uncoated plano disc polished both side, thickness 2.0 mm; double beam IR spectrometer: Perkin Elmer 882, air reference method, slit dimension: diameter 8 mm



Formats

Disks, blanks

Moulded spherical, aspherical and diffractive lenses

For coating options, please consult our data sheets on www.optics.umicore.com

Sizes :

diameters up to 150 mm

Additional Information

Special demands outside the scope of above-mentioned specifications and limits upon request