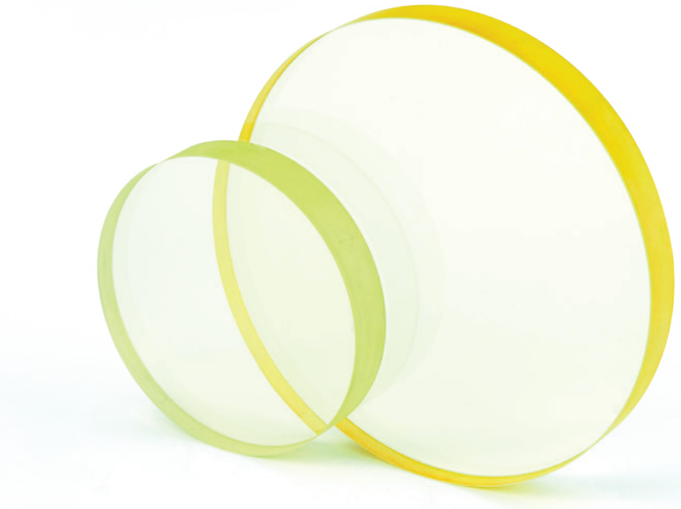
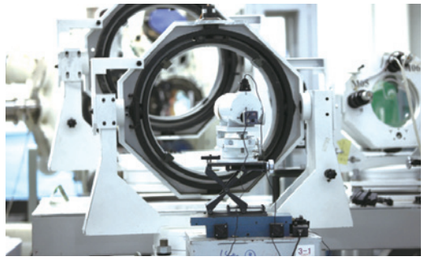
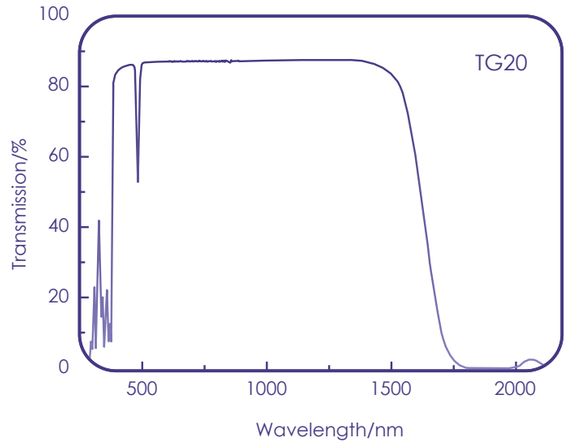
Faraday Rotator Glass

Faraday rotator glass is developed for magneto-optical isolator, switch, modulator and sensor. SIOM initiated the development of Faraday rotator glass in the 1990s. TG20 glass can be customized with the maximum size of 300 mm in diameter. Large aperture disks of TG20 were used as isolator material for High Power Laser Facility in China and abroad.







	TG20	TG28
Verdet constant		
V@632.8nm (min/Oe.cm)	-0.258	-0.361
V@632.8nm (min/Oe.cm)	-0.075	-0.106
Optical Specifications		
Refractive index (1064nm)	1.6721	1.736
Refractive index (d 589.3nm)	1.6888	1.7500
Nonlinear refractive index (10^{-13} e.s.u.)	2.46	2.42
Abbe value	53.14	50.98
Thermal Specifications		
Thermal coefficient of refractive index (10^{-7}/ K)	74	
Thermal coefficient of optical path (10^{-7}/ K)	105	
Transmission window (nm)	520-1400	520-1400
Coefficient of thermal expansion (10^{-7}/ K)	51.3	69.0
Transition temperature (°C)	760	759
Sag temperature (°C)	800	800
Other Specifications		
Density(g/cm^3)	4.32	4.99
Young's modulus (G Pa)	108	
Posson's ratio	0.22	
Knoop hardness (kg/cm^2)	760	