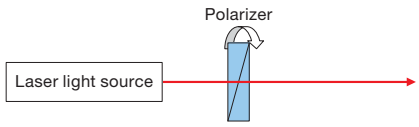
Polarizers Selection Guide

Human eyes have no ability to perceive the polarization of light. Also, the most of the optical detectors do not carry sensitivity of the polarization. For this reason, filters that selectively transmit the light with specific polarization or optics that can change the polarization state become necessary. In this page, a guidance is provided for finding a suitable application for the variety of polarization optics.

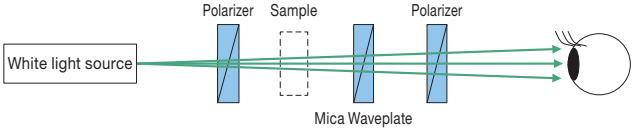
Type of Polarizers	Type of Waveplates	Products	Features	Accuracy	Application
Plastic Sheet Polarizers (USP)			Low cost, Lightweight	Inferior	Variable adjustment of laser intensity
	Mica Waveplates (WPM)		Substitute use as optical retarder Substitute use as phase sensitive color plate (visually intensify the retardance distribution)		Observation of stress (birefringence) distribution
Polarizing Beamsplitters (PBS)			Combine or separate the polarized beam		
Visible Sheet Polarizers (SPF)			Provide stationary linear polarization light in visible region		A simple polarization experimental setup, Polarizing optical systems (Variable attenuator, Polarization interferometer, Optical isolator)
	Quartz Waveplates (WPQ)		Provide exact optical retardation for each wavelength of laser		
Glan Thompson Prisms (GTPC)			Provide linearly polarized light with excellent extinction ratio in visible region		Polarization measurements (Extinction ratio, Optical retardation)
	Fresnel Rhombs Retarders (FRB)		Provide stationary optical retardation in a broad wavelength range.	Superior	

A typical applications for polarized light

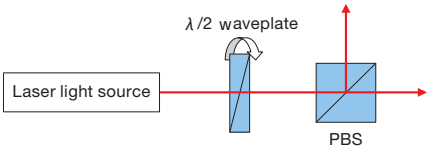
Variable adjustment of laser intensity



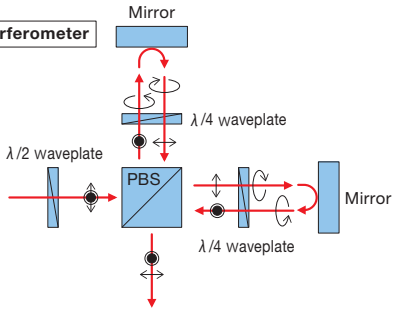
Observation of birefringence distribution using white light



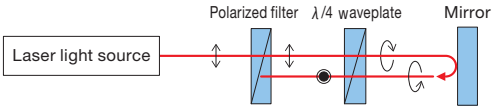
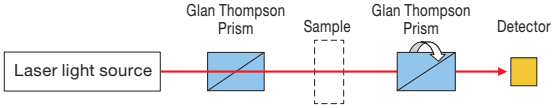
Polarization variable attenuator



Polarization Interferometer



Optical isolator



Polarimetry