

Non-resonant phase modulator

General Situation

Phase modulator is a modulation device developed based on electro-optic effect and high frequency resonator theory, which can phase modulate polarized light. It is often used in precision optics systems such as laser interference, optical frequency combs, laser frequency stabilization, atomic cooling, and quantum state controlling.

Description

When an electrical signal of a specific frequency is injected into the high-frequency resonant cavity, the electromagnetic wave will be continuously reflected in the cavity to form a standing wave, resulting in electromagnetic resonance. The electro-optic crystal produces a birefringence effect under the action of electromagnetic resonance, which eventually leads to the phase change of the light.



Goptica's Phase Modulators use a variety of electro-optical crystals such as MLN, DKDP, KTP, LT, etc. The wavelength covers 350–3000 nm, the frequency covers 1–4 GHz, and the modulation depth is up to 2π rad.

Product specifications

Product Code	Working Wavelength (nm)	Active Aperture (mm)	Operating Frequency	Optical Material	Half-wave voltage (V)	Heat dissipation method
PMN0006-L10M-020-780	780	2	100MHz	MLN	166	Conduction-cooled
PMN0008-L02G-020-780	780	2	2.5GHz	MLN	60	Conduction-cooled