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 2 π rad.

Application

Goptical for precision optical systems such as laser interferometry, frequency stabilization, and atomic cooling

Product specifications

Product Code	Working Wavelength (nm)	Active Aperture (mm)	Operating Frequency	Optical Material	Maximum Modulation Depth (rad)	Cooling
PMR0013-L02M-030-780	780	3	25MHz	MLN	1	Conduction-cooled
PMR0014-L02M-030-420	420	3	25MHz	MLN	1.4	Conduction-cooled

格物光学
GOPTICA

Resonant phase modulator

Product Code	Working Wavelength (nm)	Active Aperture (mm)	Operating Frequency	Optical Material	Maximum Modulation Depth (rad)	Cooling
PMR0015-L02M-030-420	420	3	25MHz	MLN	1.4	Conduction-cooled
PMR0016-L02M-030-780	780	3	25MHz	MLN	1.2	Conduction-cooled
PMR0017-L02M-030-650	650	3	20MHz	MLN	1.3	Conduction-cooled
PMR0025-L00M-030-780	780	3	6.75MHz	MLN	3.14	Conduction-cooled
PMR0026-L02M-020-780	780	2	20MHz	MLN	22V	Conduction-cooled
PMR0027-L10M-030-780	780	3	100MHz	MLN	22V	Conduction-cooled
PMR0009-L01G-020-780	780	2	1GHz	MLN	1	Conduction-cooled
PMR0010-L01G-020-895	895	2	1GHz	MLN	0.87	Conduction-cooled
PMR0011-L02G-020-369	369	2	2.105GHz	MLN	2	Conduction-cooled
PMR0012-L03G-030-935	935	3	3.07GHz	MLN	1	Conduction-cooled
PMR0018-A03G-020-3432	3432	2	3.8GHz	LT	0.3	Conduction-cooled
PMR0019-L02G-020-532	532	2	1.75GHz	MLN	7.2	Conduction-cooled
PMR0020-L02G-020-633	633	2	1.75GHz	MLN	6	Conduction-cooled
PMR0021-L03G-020-670	670	2	3GHz	MLN	0.19	Conduction-cooled
PMR0022-L05G-020-760	760	2	5.25GHz	MLN	1	Conduction-cooled
PMR0023-L02G-010-532	532	1	1.75GHz	MLN	2	Conduction-cooled
PMR0024-L02G-010-633	633	1	1.75GHz	MLN	2	Conduction-cooled
PMR0028-L02G-010-780	780	1	1.74GHz	MLN	0.1	Conduction-cooled

Shanghai Goptica Co.,Ltd
CHINA · SHANGHAI
www. goptica.com

Tel: +86 150 0085 3620
E-mail: sales@goptica.com
Address: 2nd Floor, No. 46GuokangRoad,
Yangpu District, Shanghai, 200433PRC