

# PHOTONICS TECHNOLOGIES

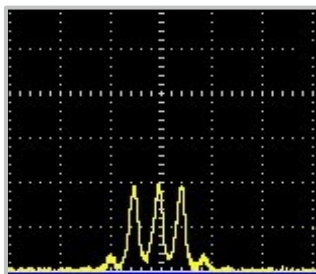
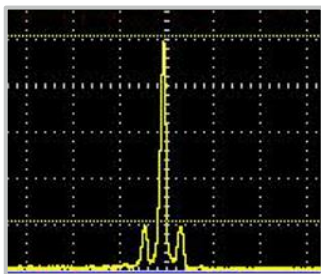
The perfect solution for stabilisation of a  
single-frequency laser

## ELECTRO-OPTICAL MODULATOR (EOM)

The Electro-Optical Modulator is a phase modulator for a variety of modulation frequencies between 3 and 25 MHz. The 6.25MHz and the 12.5MHz frequencies are specifically designed for use with the TOPTICA Photonics Digilock Module.

The laser wavelength range can also vary between 400-700nm, 650-1000nm and 1000-1500nm.

### ELECTRO-OPTICAL MODULATOR (EOM)



### Features

- Fixed frequency modulation without high voltage drivers
- Fits into standard 1" mirror mount for easy integration into your optical system
- The unit may be supplied with a suitable optional low-voltage oscillator

### Applications

- Generation of side-bands on single-frequency lasers for high resolution locking techniques, such as pound drever hall locking and frequency modulation saturation spectroscopy. In this case the EOM will modulate a probe beam while leaving the main beam unmodulated
- Stabilization of an optical resonator
- Use in research when wavelength stabilisation of single-frequency laser beam is required
- Ideal to combine with spectroscopic cells for laser locking to atomic or molecular transitions



# ELECTRO-OPTICAL MODULATOR (EOM)

## Specifications and Options

Modulation Frequency (MHz)	Laser Wavelength Range (nm)		
	V / 650 - 1000	U / 400 - 700	IR / 1000 - 1500
3	EOM-02-3-V	EOM-02-3-U	EOM-01-3-IR
5	EOM-02-5-V	EOM-02-5-U	EOM-01-5-IR
6.25	EOM-02-6.25-V	EOM-02-6.25-U	EOM-01-6.25-IR
10	EOM-02-10-V	EOM-02-10-U	EOM-01-10-IR
12.5	EOM-02-12.5-V	EOM-02-12.5-U	EOM-01-12.5-IR
20	EOM-02-20-V	EOM-02-20-U	EOM-01-20-IR
25	EOM-02-25-V	EOM-02-25-U	

## Standard Characteristics

Aperture Diameter	3mm
Crystal Material	Lithium Niobate
Crystal Flatness	Lambda/10
SWR at resonance	<1.12:1
Diameter	25.4mm (1")
Length	35mm



## Optional Driver

Manufacturer	Thurlby Thandar
Model	TG120
Description	Function Generator
Frequency	0.2Hz to 20MHz
Output Voltage	10mV to 20V (pk-pk)

## Optional Amplifier

Frequency Response	0.4-150 MHz
Gain	20dB
Max Input	1 V
Max Output	10 V
Input/Output Impedance	50 Ω/50 Ω
Dimensions mm (HxWxL)	67 x 204 x 180
Weight	1.6 kg
Power Supply	240Vac(Max power 50VA)

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