

The perfect solution for stabilisation of a single-frequency laser

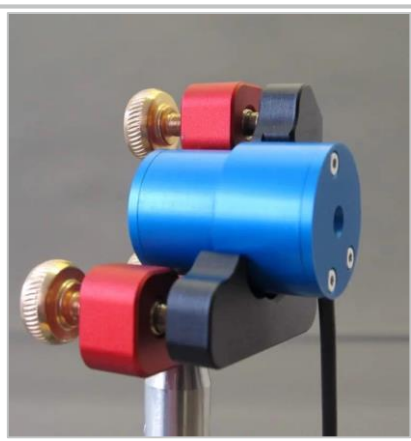
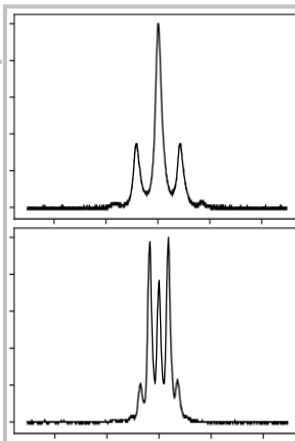
ELECTRO-OPTICAL MODULATOR (EOM)

EOM-01-XX-YY EOM-02-XX-YY

- The EOM is a phase modulator for a variety of modulation frequencies between 3 and 25 MHz (other frequencies possible on request).
- The laser wavelength range can also vary between 400-700nm, 650-1000nm, and 1000-1500nm. Coatings for different wavelength ranges are available.
- The EOM can be mounted in a standard 1-inch optical mirror mount, allowing for simple placement and alignment within your optical setup.

Applications

- Generation of side-bands on single-frequency lasers for high resolution locking techniques, such as frequency modulation saturation spectroscopy or stabilization to an optical resonator.
- Ideal to combine with spectroscopic cells for laser locking to atomic or molecular transitions
- The 6.25MHz, 12.5MHz and 25 MHz frequencies are specifically designed for use with the Digilock Module. It is the perfect solution for researchers wishing to stabilise single-frequency lasers by modulating a probe beam in a Frequency Modulation spectroscopy set-up, while leaving the main beam unaffected.



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	LiNbO3 (EOM 1) MgO:LiNbO3 (EOM 2)
Crystal Flatness	$\lambda/10$
SWR at resonance	<1.1:1
Diameter	25.4mm (1")
Length	35mm
Impedance at resonance	50 Ω (nominal)
Modulation Bandwidth	~3.3% of resonant frequency (-3dB)

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)
Connectors	BNC Input and Output