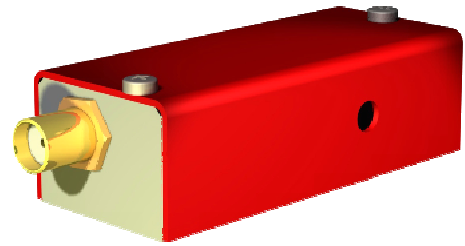


Glass modulator for 1300-1550 nm lasers

- 1.3 μm • 1.55 μm • Random Polar

These modulators have been specially designed for Low infrared range operation from 1300 to 1600 nm.

They can also be used as fixed frequency shifters @80 Mhz, @110 MHz, as well as variable frequency shifters with a frequency range up to 80 +/- 2 MHz or 110 +/- 2 MHz.



Specifications

	MGAS80	MGAS110
Material-Acoustic mode		Dopped glass
Acoustic Velocity		Nom V=2520 m/s
Optical Wavelength range		1300-1600 nm
Transmission		> 95 %
Optical Input / Output polarizations		Random or Linear
Aperture		1 x 2 mm ²
Carrier frequency / Frequency shift	80 MHz	110 MHz
Separation angle	41.3 mrd @1300 nm	56.7 mrd @1300 nm
Diffraction efficiency (with TEM00 beam, M² ≤ 1.1)		> 80 %
Rise time		270 ns /mm (min 160 ns)
Amplitude modulation bandwidth		> 3 MHz (-3 dB, @600 μm)
Static extinction ratio		> 2000/1
Max optical power density		0.5 W / mm ²
Input impedance		Nom 50 Ω
V.S.W.R.		Nom < 1.5/1
RF Power		Nom 0.3 W, ≤ 0.5 Watt
Connector		SMA
Size / Weight		(Lxlxh) 50.9 x 22.4 x 15.8 mm ³ / 50 g
Operating Temperature		10 to 40 °C

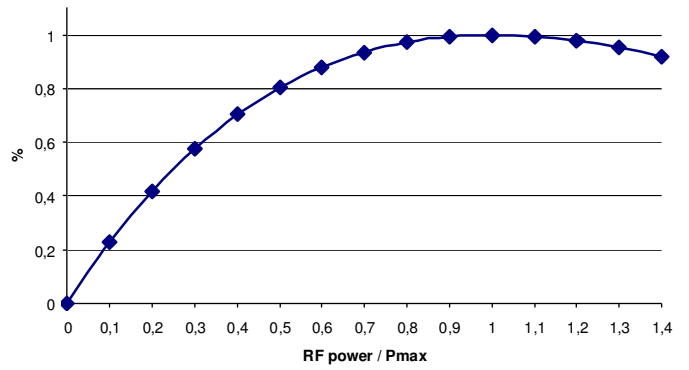
Relative Diffraction Efficiency vs RF Power

→ Separation angle ($\Delta\theta$) is wavelength (λ) sensitive:

$$\Delta\theta = \frac{\lambda F}{V}$$

→ RF power (P) is wavelength (λ) sensitive:

$$\frac{P_1}{P_2} = \frac{\lambda_1^2}{\lambda_2^2}$$



MGASxx-Ay

xx = frequency MHz (80 or 110)

Y = (aperture, mm) = 1

Outline Drawing

sizes in mm

