

AA.MTS.130

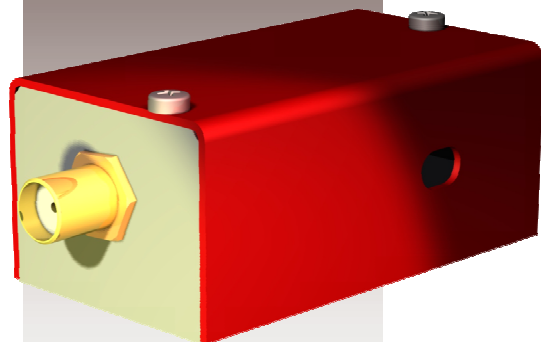
AO modulator / shifter 405 nm

Features and Description

- Large aperture • Linear Polar • High efficiency

These modulators have been specially designed for large beam diameters without additioning optics. Their high efficiency and low drive power will suit most of the low speed applications. Suitable for 405 nm applications.

They can also be used as fixed frequency shifters around 130 MHz, as well as variable frequency shifters with a frequency range up to +/- 2 MHz.



Spécifications

Material-Acoustic mode	TeO2 [S]
Acoustic Velocity	Nom V=650 m/s
Optical Wavelength range	400-442 nm
Transmission	> 90 % (nom 95 %)
Optical Input / Output polarizations	Linear // / Linear ⊥ (1 st order)
Aperture	3 x 3 mm ²
Carrier frequency / Frequency shift	In 120-140 MHz
Separation angle	Nom 4.2 degrees @405 nm
Diffraction efficiency (with TEM00 beam, M ² ≤ 1.1)	Nom 90 %
Rise time	1 μs /mm
Amplitude modulation bandwidth	> 960 KHz (-3 dB, @500μm)
Static extinction ratio	> 2000/1
Max optical power density	0.5 W / mm ²
Input impedance	Nom 50 Ω
V.S.W.R.	Nom < 2/1
RF Power	≤ 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

→ Associated RF driver: AA.MOD.1C

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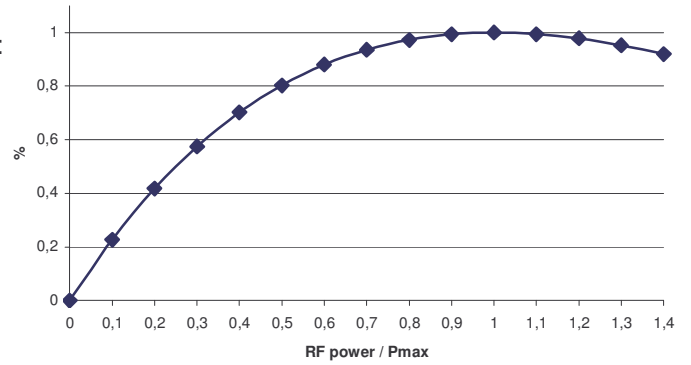
→ Separation angle ($\Delta\theta$) is wavelength (λ) sensitive:

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

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

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

Relative Diffraction Efficiency vs RF Power



AA.MTS.130/Ax/By-zz

X (aperture, mm) = 3

Y = frequency range (MHz) if any

ZZ = LVIS (400-442 nm)

Outline Drawing (sizes in mm)

