

Technical Information

PCAOM Color Modulators

A-A 4, A-A 6, A-A 8

Features

- ✓ Large aperture modulator
- ✓ High Efficiency
- ✓ Available as 4,6 or 8 Channel System
- ✓ Suitable for DPGL, Ar+, Mixed Glass, HeNe, Dye Lasers



Technical Specifications RF Cell

ACOUSTO-Optic		
Material-Acoustic mode		TeO ₂ -[S]
Acoustic velocity (typ)	m/s	675 (shear mode)
Optical wavelength range	nm	450 - 700
Optical Transmission	%	>95
Number of selected lines	n	4 / 6 / 8
Laser Power - for long term crystal handling - to avoid thermal effects	W	5 all lines
Laser polarization		IN – Linear OUT – Linear // (order -1)
Optical Aperture	ø mm	3
Separation Angle	degree	> 4.6
Angle Incident - Order -1	degree	2.4
Angle Incident - Order 0	degree	> 7
Chromatic Colinearity (order -1)	mrad	< 0.2
Random access time (to any line)	µs	2.2 @ ø1.5 mm
Rise time	µs	1.5 @ ø1.5 mm
Diffraction Efficiency	%	> 90 /line
Maximum optical power density	W/mm ²	typ 5
ELECTRICAL		
Input Impedance		50
RF frequency range	MHz	80-150
Maximum RF power (all lines)	W	1
V.S.W.R (typ)		< 2:1

PHYSICAL / ENVIRONMENTAL		
Connector type		SMA
Temperature stab. connector		SMC
Temperature stabilisation module	Standard	typ +/- 0.3 °C
Temperature stabilisation module	HP	typ +/- 0.05 °C
AOTF Diffraction efficiency (Bandwidth -0.7 dB) behaviour versus temperature	KHz / °C	160 - +/- 3
AOTF frequency drift versus temperature	KHz / °C	< 30
Size	mm ³	70 (L) x 37 (l) x 36 (h)
Weight	g	typ 100
Operating temperature	°C	10 to 40

Technical Specifications Driver Module

Number of channels (PLL)		8
Electrical/single channel		
Frequency range	MHz	80-150
Frequency step	KHz	5.4
Frequency stability (typ)	ppm / °C	+/- 1
Max RF power (typ)	DBm	22
Output impedance		50
Extinction ratio	dB	> 80 (MOD IN only) > 80 (BLANKING only) > 140 (MOD IN + BLANKING)
MODULATION INPUT		ANALOG or TTL
BLANKING		ANALOG or TTL
Modulation Bandwidth	KHz	> 100
Channel Adjustment		
Remote Controlled version		RC Version
RS232 version		RS232 Version
Laboratory version		Rack with front panel keys
Power Supply		
O.E.M. versions		VDC 24 1 A for 8 channels (+stab)
Laboratory and BOX versions		VAC 110 or 230 50-60 Hz
Environmental		
Size (O.E.M. version)	mm ³	234 x 145 x 40
Weight	g	1040
Operating temperature	°C	10 - 40

Technical Drawing

RF-Cell with Crystal

