

DEVICE SPECIFICATIONS

MODEL NUMBER:

35110-3-244-BR-KrF

DOCUMENT NUMBER: 56A14319H

<u>PARAMETER</u>	<u>SPECIFICATION</u>
Interactive Material	KrF Grade Fused Silica
Acoustic Mode	Longitudinal
Operating Wavelength	244 to 260 nm
Window Configuration	Brewster
Static Transmission	$\geq 99 \%$
Operating Frequency	110 MHz
Diffraction Efficiency	$\geq 70 \%$ with linear polarization perpendicular to acoustic propagation
Acoustic Aperture Size (in Air)	2 mm
Rise Time	110 ns/ mm Beam Diameter
Deflection Angle	4.5 mrad @ 244 nm
RF Power Level	≤ 4 Watts
Impedance	50 Ohms nominal
VSWR	$\leq 1.5:1$ from 95 – 125 MHz
Package	53D3926

For More Information, Contact: sales@goochandhousego.com www.goochandhousego.com

As part of our policy of continuous product improvement we reserve the right to change specifications at any time.

SPECIFICATIONS

AO Medium	Crystalline Quartz
Acoustic Velocity	5.74 mm/μs
Active Aperture*	2.5 mm 'L' X .25 mm 'H'
Center Frequency (Fc)	200 MHz
RF Bandwidth	100 MHz @ -5 dB Return Loss
Input Impedance	50 Ohms Nominal
VSWR @ Fc	1.5:1 Max
Wavelength	257 nm
Insertion Loss	5 % Max
Reflectivity per Surface	1 % Max
Anti-Reflection Coating	MIL-C-48497
Optical Power Density	N/A W/mm ²
Contrast Ratio	1000:1 Min
Polarization	90 ° To Mounting Plane

PERFORMANCE VS WAVELENGTH

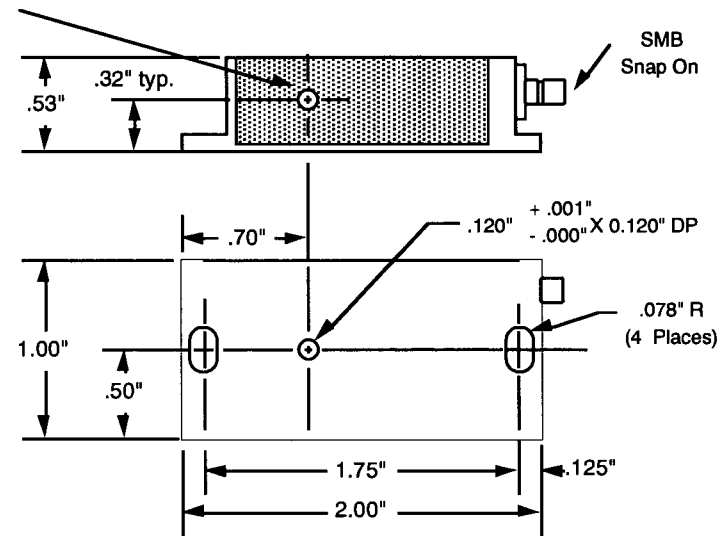
Wavelength (nm)	257
Operational RF Power (W)	1.
Bragg Angle (mr)	4.5
Beam Separation (mr)	9

PERFORMANCE VS BEAM DIAMETER

Beam Diameter (μm)	70
<i>at Wavelength (nm)</i>	257
Diffraction Efficiency (%)	75
Rise Time (nsec)	10
Modulation Bandwidth	NA
Beam Ellipticity	NA

*Active Aperture: Aperture over which performance specifications apply.

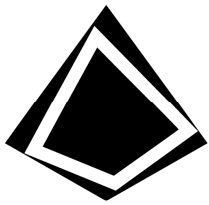
Outline Drawing: Package Style 2B



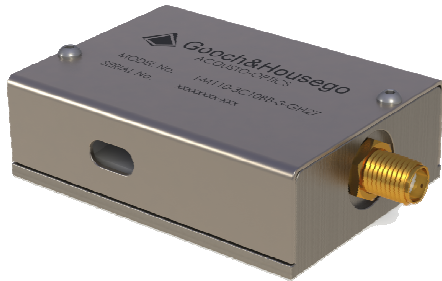
Notes:
 * Saturation RF Power is 1 Watts
 DE is measured @488, DE @488 ≥ 32%, 70 micron spot, 1 watt RF.

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TOLERANCES: .XX ± .01 .XXX ± .005	DR	G. Scholz 4/10/2006	Crystal Technology, Inc.	
MATERIAL:	CHK		DESCRIPTION: AOMO 3200-1220 257 nm (UV)	
FINISH:	APP		PART NUMBER: 97-02513-01	REV: A
			SHEET 1 OF 1	



Gooch & Housego



300 – 400nm Acousto-Optic Modulator

I-M110-3C10BB-3-GH27

An acousto-optic modulator for use in the 300 – 400nm wavelength range, ideal for frequency tripled Nd:YAG and Nd:YVO₄ lasers, or 351 / 364nm Argon lasers.

Manufactured in Crystal Quartz for improved thermal management and efficiency. This modulator combines high quality optical finishing with high grade anti-reflection coatings to maintain superior beam quality and high optical throughput.

In addition to the specifications indicated, we also offer alternative wavelengths, RF frequencies, active apertures & a wide range of custom housing configurations. We also offer full custom design & manufacturing, enabling our customers to achieve the perfect solution.

Key Features:

- Crystal Quartz
- 300 – 400nm
- High damage threshold
- 110MHz

Applications:

- Industrial (material processing):
 - Micromachining
 - Lithography
 - Patterning

General Specifications

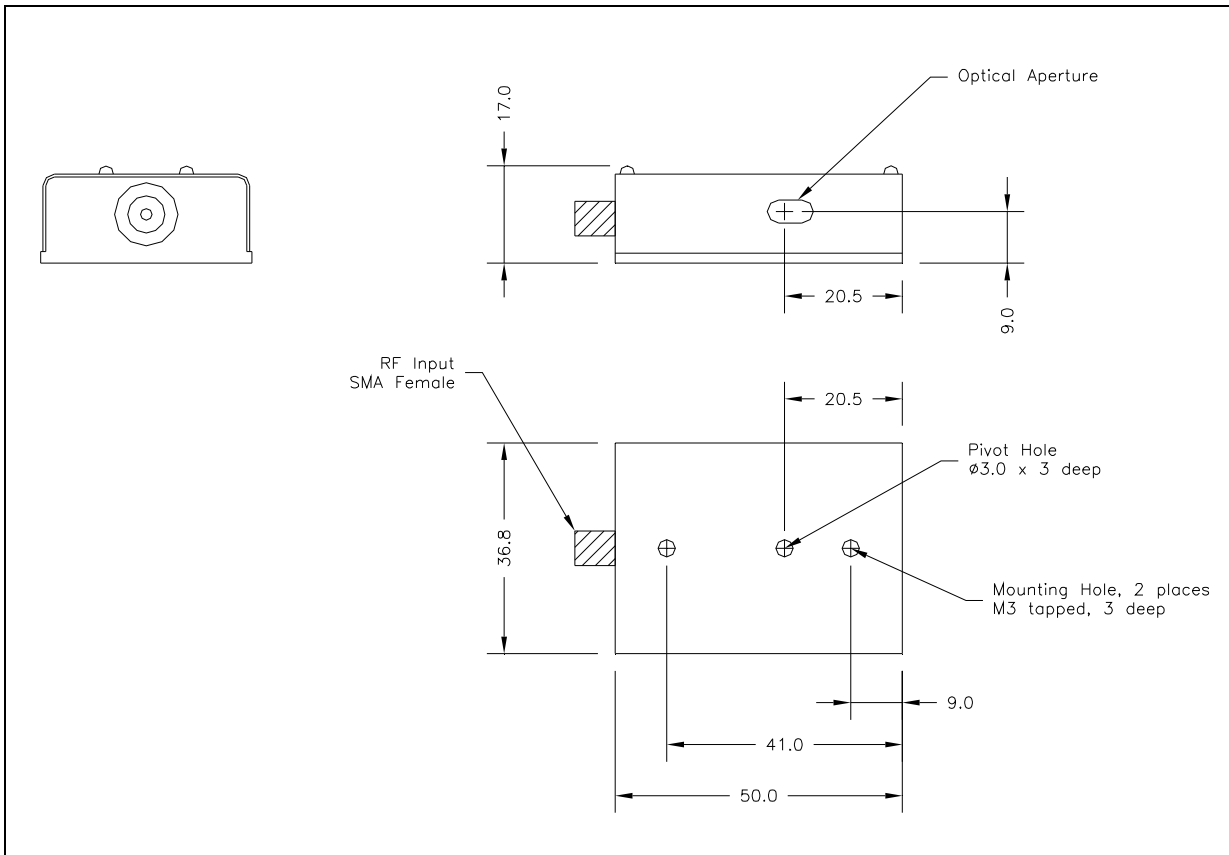
Interaction material:	Crystal Quartz
Wavelength:	300 - 400nm
Optical polarisation:	Linear, vertical to base
AR coating reflectivity:	< 0.5% per surface (< 0.3% at 355nm)
Damage threshold:	> 500MW/cm ² (pulsed)
Transmission (single pass):	> 99.0%
RF frequency:	110MHz
VSWR:	< 1.2:1
Active aperture:	3.0mm
Acoustic mode:	Compressional
Rise-time:	113ns/mm
Separation angle:	6.8mrad at 355nm
Diffraction Efficiency:	> 85%
RF power:	< 3W

Recommended RF Driver: A35110-S-1/50-P4K7U

Ordering Code

Explanation: I-M110-3C10BB-3-GH27 (Modulator, 110MHz, 3.0mm active aperture, compressional mode, Crystal Quartz, 300 - 400nm, SMA male bulkhead, GH27 housing).

I	-	M	1	1	0	-	3	C	1	0	B	B	-	3	-	G	H	2	7
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Gooch & Housego

DEVICE SPECIFICATIONS

MODEL NUMBER:

35210-BR

DOCUMENT NUMBER: 56A15506B

<u>PARAMETER</u>	<u>SPECIFICATION</u>
Interactive Material	Fused Silica
Acoustic Mode	Longitudinal
Operating Wavelength	300 to 700 nm
Window Configuration	Brewster
Static Transmission	$\geq 98\%$ @ 488 nm
Operating Frequency	210 MHz
Diffraction Efficiency	$\geq 70\%$ @ 488 nm with linear polarization perpendicular to acoustic propagation
Acoustic Aperture Size (in air)	0.13 mm
Rise Time	≤ 15 ns
Optical Waist Size to achieve Rise Time	0.1 mm
Deflection Angle	17 mrad @ 488 nm
RF Power Level	≤ 6 Watts
Impedance	50 Ohms nominal
VSWR	$\leq 1.5:1$
Package:	53B3408

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