

## Product Overview

These modulators have been specially designed for low infrared range operation from 1300-1600 nm. They are based on doped glass with the advantage of having a low RF power consumption and they are insensitive to polarisation. They can be used as intensity modulators and fixed as well as variable frequency shifters.



## Features

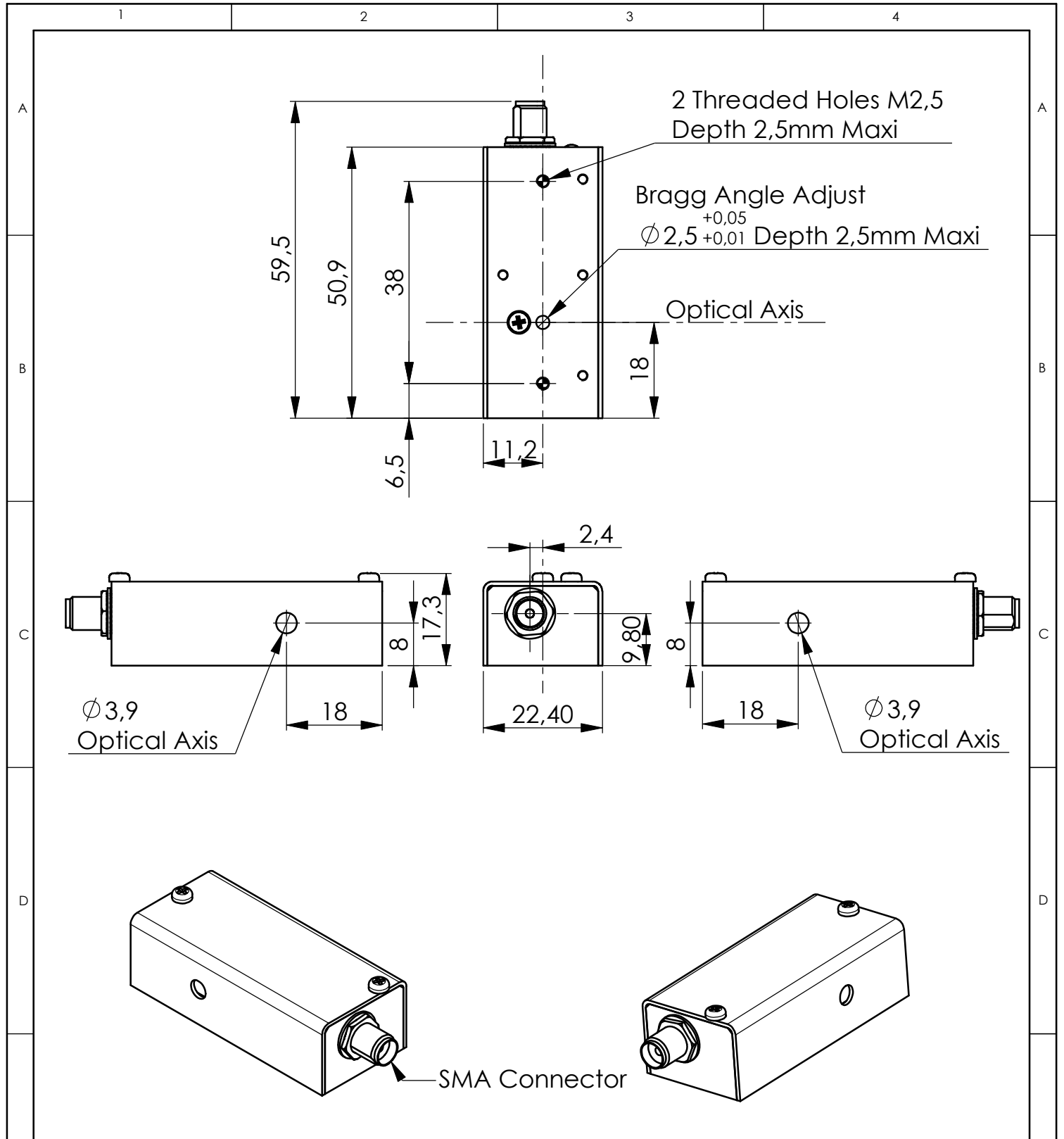
- Low RF power
- Insensitive to polarization
- High diffraction efficiency

	Units	Min	Nom	Max
Material-Acoustic mode-Velocity		Doped Glass] – 2520 m/s		
Optical Wavelength range ( AR coated) (λ)	nm	1300		1600
Transmission	%	93		
Input / Output Polarization with ref to baseplate		Random or linear		
Active Aperture	mm <sup>2</sup>	1 x 2		
Beam diameter (1/e <sup>2</sup> )(φ)	mm	0.6		1
Rise/fall time (T <sub>r</sub> )	ns	162		270
Analog Amplitude Modulation Bandwidth (-3dB) (F <sub>-3dB</sub> )	MHz			3
Static Extinction Ratio	dB	30		
* Diffraction Efficiency (η)	%	80	85	
Optical power density	W/mm <sup>2</sup>			0.5
Input impedance	Ω		50	
V.S.W.R.			< 1.2:1	
RF Power (P)	W			0.5
Connector		SMA female		
Size	mm <sup>3</sup>	50.9 x 22.4 x 17.3		
Weight	g		50	
Packaging		IN PRO 004		
Operating Temperature (non condensing)	°C	+10	+25	+40
Storage Temperature (non condensing)	°C	-40		+65
RoHS Compliance		Yes		

\*Diffraction efficiency is beam diameter dependant.

		MGAS110-A1	MGAS80-A1	MGAS40-A1
Carrier Frequency / Frequency shift	MHz	+/-110	+/- 80	+/- 40
Separation Angle (0-1)	mrd	69.8@1.6μm	50.8@1.6μm	25.4@1.6μm
OPTION MGAS110-B5A1, 110 +/- 2.5 MHz MGAS80-B5A1, 80 +/- 2.5 MHz MGAS40-B4A1, 40 +/- 2 MHz		Diffraction Efficiency >70% over full range		

$$T_r = 0.66 \frac{\phi}{v} * F_{-3dB} = \frac{0.48}{T_r} * \Delta\theta = \frac{\lambda F}{v} * \frac{P_1}{P_2} = \frac{\lambda_1}{\lambda_2}$$



B	18/12/06	E.D	Mise en page
A	15/10/03	OGB	Plan initial / Initial Drawing
Index	Date	Auteur Author	Modifications
Conception Design	E.D	<b>PLAN D'INTERFACE / OUTLINE DRAWING</b>	
Vérification Checking	E.D		
Tolérance Tolerance	ISO 2768mK	Référence / Reference	
Echelle Scale	1:1	<b>IN-PRO-004</b>	
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