

Product Overview

This modulator has been specially designed to operate in the far infrared region most particularly in the wavelength range of 1950-2100 nm. It can be used as an intensity/amplitude modulator as well as a frequency shifter.

Features

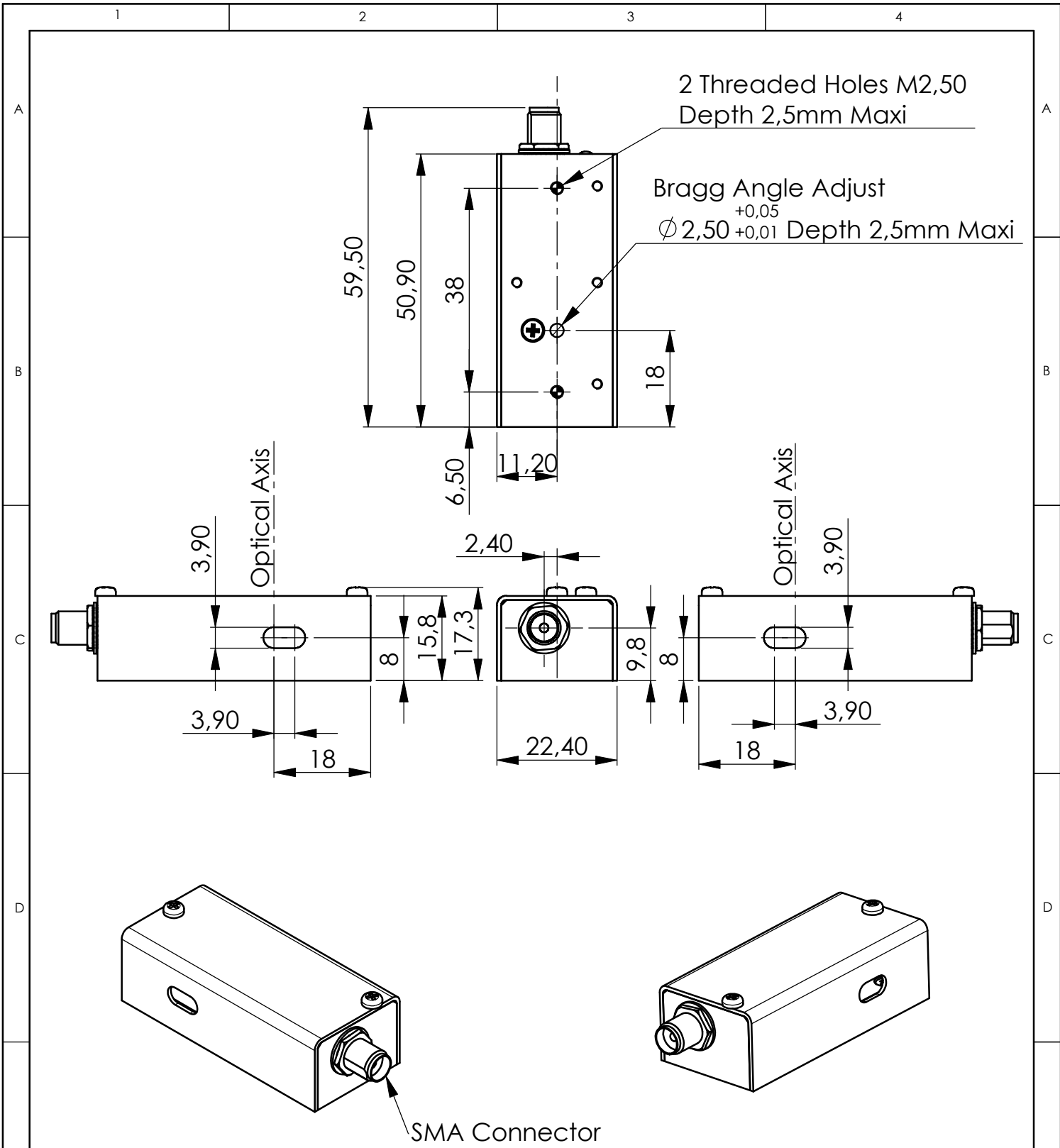
- Small rise time
- Linear polarization
- High diffraction efficiency



	Units	Min	Nom	Max
Material-Acoustic mode-Velocity		TeO2 [L] – 4200 m/s		
Optical Wavelength range (AR coated) (λ)	nm	1950		2100
Carrier Frequency / Frequency shift	MHz	+/-80		
Transmission	%	95	98	
Input / Output Polarization		Linear / Linear		
Active Aperture	mm ²	0.4 x 2		
Beam diameter (1/e ²)(φ)	mm	0.2		0.3
Rise/fall time (T _r)	ns	32		48
Analog Amplitude Modulation Bandwidth (-3dB) (F _{-3dB})	MHz			15
Separation Angle (0-1)	mrd	37		38
Static Extinction Ratio	dB	30		
*Diffraction Efficiency (η)	%	65	70	
Optical power density	W/mm ²			10
Input impedance	Ω		50	
V.S.W.R.			< 1.2:1	
RF Power (P)	W		2.2	2.5
Connector		SMA female		
Size	mm ³	50.9 x 22.4 x 17.3		
Weight	g		50	
Packaging		IN PRO 005		
Operating Temperature (non condensing)	°C	+10	+25	+40
Storage Temperature (non condensing)	°C	-20		+50
RoHS Compliance		Yes		
OPTION MT80-B30A0.4-200		Frequency range 80+/-15MHz, Scan angle 14mrd @2μm, Efficiency >50% @2μm over full range		

* Diffraction efficiency is beam diameter and wavelength dependent.

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



B	18/12/06	E.D	Reprise mise en plan
A	15/10/03	F.C	Plan initial / Initial Drawing
Index	Date	Auteur Author	Modifications
Conception Design	E.D	PLAN D'INTERFACE / OUTLINE DRAWING	
Vérification Checking	L.F		
Tolérance Tolerance	ISO 2768mK	Référence / Reference	
Echelle Scale	1:1	IN-PRO-005	
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