

## Product Overview

Based on TeO<sub>2</sub>, these modulators/shifters use the slow shear mode interaction and hence one can benefit from its large active aperture, large separation angle, high diffraction efficiency as well as the low RF power consumption. Common applications include bio photonics, interferometry and many others.

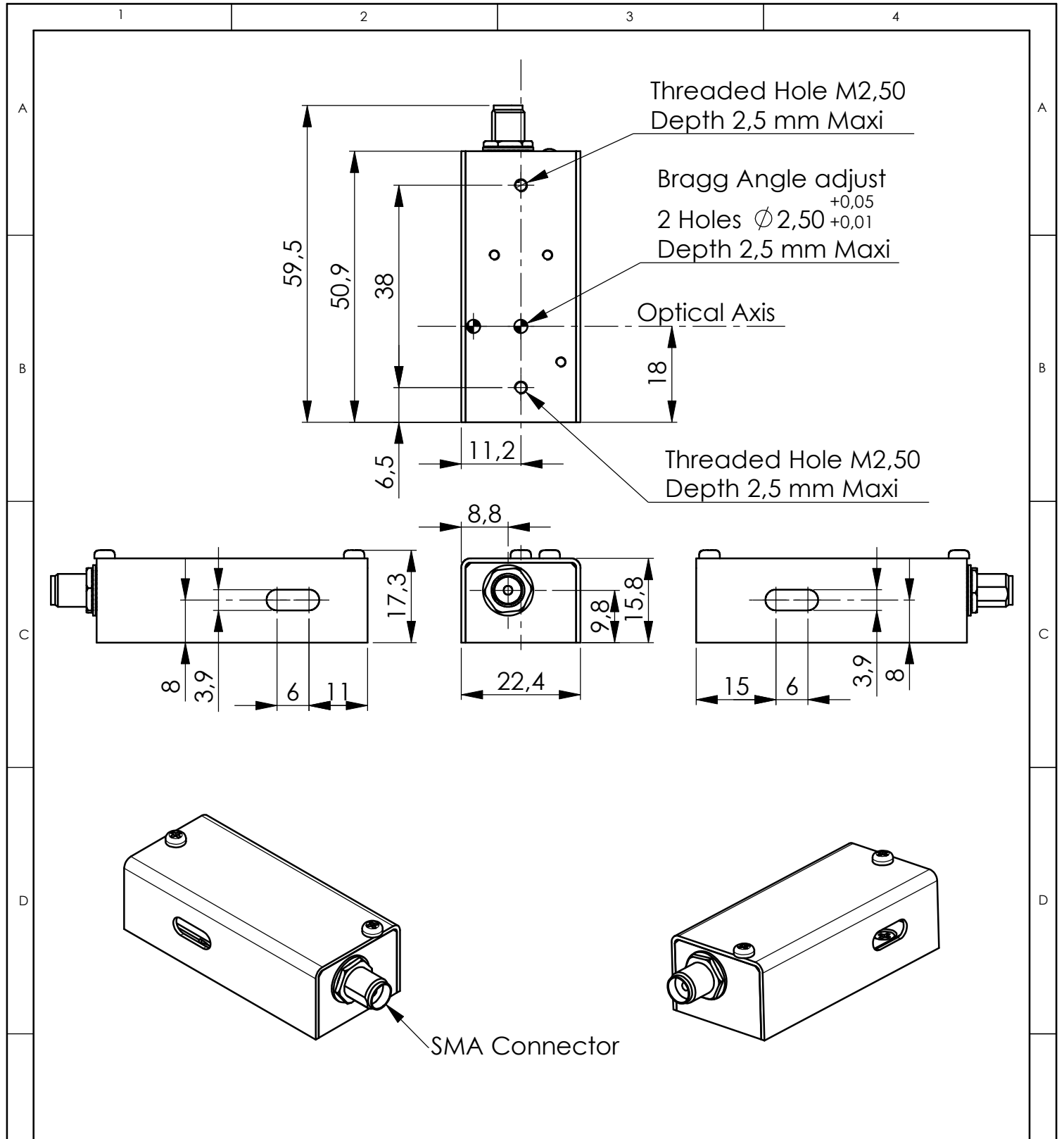
## Features


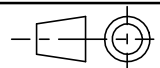
- Large active aperture & separation angle.
- Linear polarization.
- High diffraction efficiency.
- Low RF power consumption.



	Units	Min	Nom	Max
Material-Acoustic mode-Velocity		TeO <sub>2</sub> [S] – 650 m/s		
Optical Wavelength range ( AR coated) (λ)	nm	750	-	850
Carrier Frequency / Frequency shift	MHz	+/-40		
Transmission	%	95	98	-
Input / Output Polarization		Linear/Polarization flip≈ 90°		
Active Aperture	mm <sup>2</sup>	3 x 3		
Beam diameter (1/e <sup>2</sup> )(φ)	mm	0.5		2.5
Rise/fall time (T <sub>r</sub> )	μs	0.5		2.5
Analog Amplitude Modulation Bandwidth (-3dB) (F <sub>-3dB</sub> )	kHz			960
Separation Angle (0-1)	mrd	46	-	52.3
Static Extinction Ratio	dB	30		
Diffraction Efficiency (η)	%	85	90	
Max optical power density	W/mm <sup>2</sup>	-	-	10
Input impedance	Ω	-	50	-
V.S.W.R.			< 1.2:1	
RF Power (P)	W			1
Connector		SMA female		
Size	mm <sup>3</sup>	50.9 x 22.4 x 17.3		
Weight	g		50	
Packaging		IN PRO 050		
Operating Temperature (non condensing)	°C	+10	+25	+40
Storage Temperature (non condensing)	°C	-40		+65
RoHS Compliance		Yes		

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



B	31/01/07	E.D	Mise en page
A	28/03/06	A.A	Plan initial / Initial Drawing
Index	Date	Auteur Author	Modifications
Conception Design	E.D	<b>PLAN D'INTERFACE / OUTLINE DRAWING</b>  Référence / Reference <b>IN-PRO-050</b>	
Vérification Checking	L.F		
Tolérance Tolerance	ISO 2768mK		
Echelle Scale	1:1	 <b>OPTO-ELECTRONIC</b> A.A. SA OPTO-ELECTRONIQUE DIVISION 18, rue Nicolas Appert F-91898 ORSAY tel : 08 11 09 76 76 fax : 01 76 91 50 31	
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