

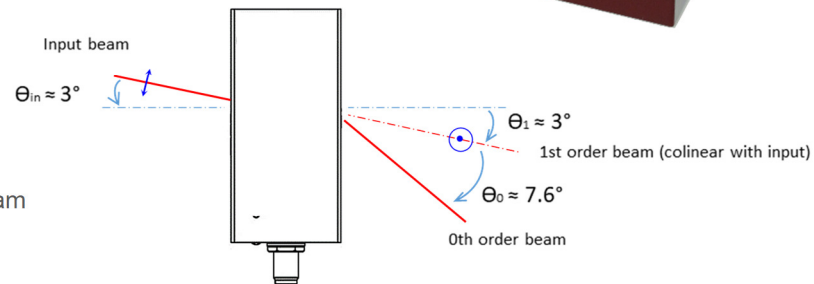
## Product Overview

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. Its particular design provides a collinearity between the incident and the diffracted beam.



## Features

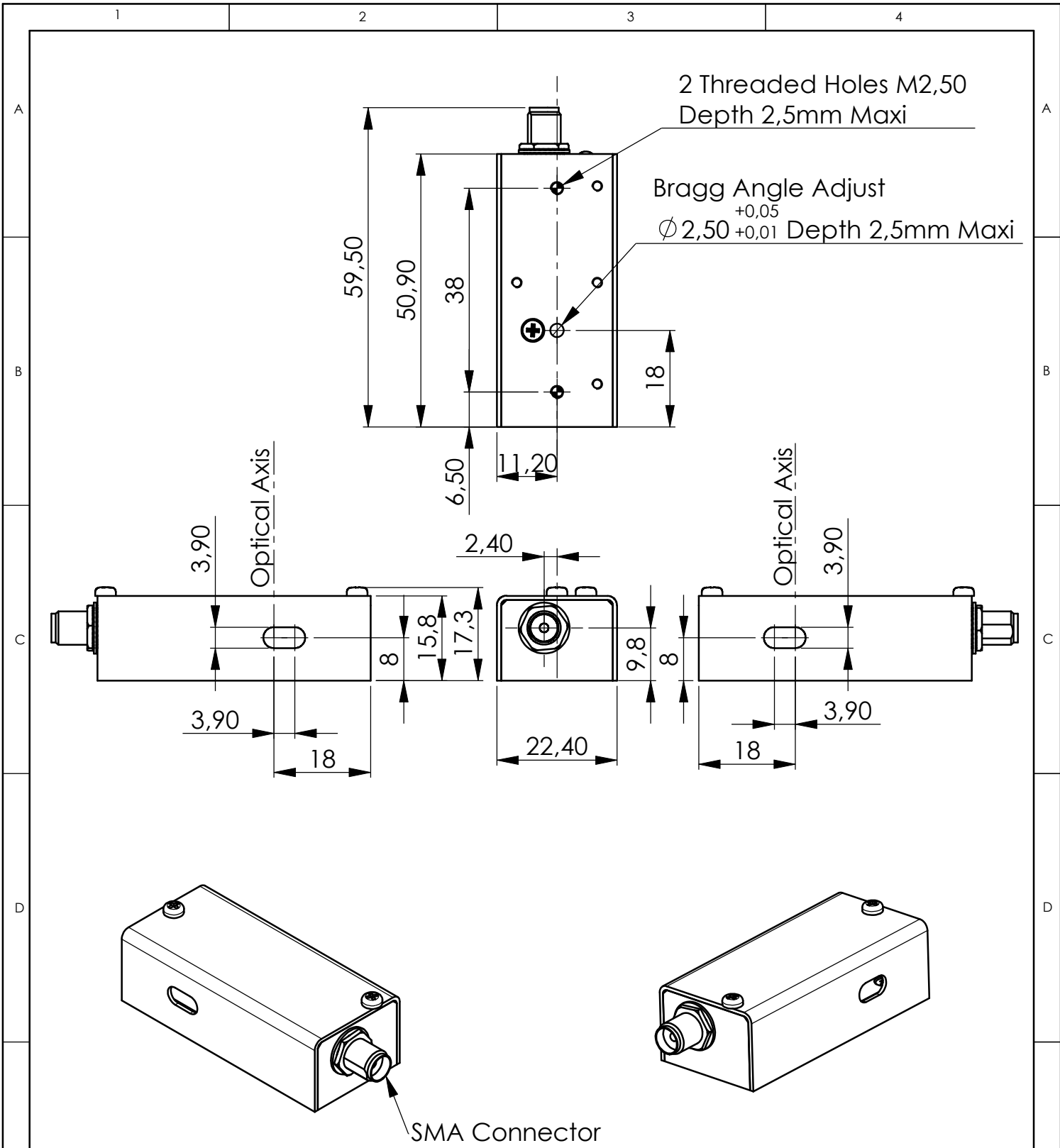
- Large active aperture & separation angle.
- Linear polarization.
- High diffraction efficiency.
- Collinearity between input & output diffracted beam
- Low RF power consumption.



Top view- angular sketch – MTS80-A3-1064Ac

	Units	Min	Nom	Max
Material-Acoustic mode-Velocity		TeO <sub>2</sub> [S] – 650 m/s		
Optical Wavelength range ( AR coated) (λ)	nm	1030	-	1080
Carrier Frequency / Frequency shift	MHz	+/-80		
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	126.7	-	133
Angular Collinearity		Input + output diffracted order		
Static Extinction Ratio	dB	33		
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 005		
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	18/12/06	E.D	Reprise mise en plan
A	15/10/03	F.C	Plan initial / Initial Drawing
Indice Index	Date	Auteur Author	Modifications
Conception Design	E.D	<b>PLAN D'INTERFACE / OUTLINE DRAWING</b>  Référence / Reference  <b>IN-PRO-005</b>	
Vérification Checking	L.F		
Tolérance Tolerance	ISO 2768mK		
Echelle Scale	1:1		
		Format A4	Ce document est la propriété de A.A.SA. Il est strictement interdit de reproduire ce document ou une partie sans l'autorisation de A.A.SA. This document is the property of A.A.SA. It is strictly prohibited to reproduce this document or a part without the authorization of A.A.SA.
		Folio / Sheet 1/1	Indice / Index B



**OPTO-ELECTRONIC**  
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