

## Product Overview

This modulator has been specially designed for an operation with Ti:Sa laser in the range of 680-1300 nm. In combination with the AA MPDS driver, it offers a constant output angle for the whole wavelength range.

Common application can be Stimulated Emission Depletion (STED) microscopy, multiphoton imaging system and many others.



## Features

- Broad wavelength range: 680-1300 nm
- Constant output diffracted angle

	Units	Min	Nom	Max
Material-Acoustic mode-Velocity		TeO2 [L] – 4200 m/s		
Optical Wavelength range ( AR coated) ( $\lambda$ )	nm	680		1300
Carrier Frequency / Frequency shift	MHz	+/- (75.5-144.5)		
Transmission	%	80%@685 nm 95%@1064 nm 95%@1300 nm		
Input / Output Polarization		Linear / Linear		
Active Aperture	mm <sup>2</sup>	1.5 x 2		
Beam diameter (1/e <sup>2</sup> )( $\phi$ )	mm	0.8		1.2
Rise/fall time (T <sub>r</sub> )	ns	128		192
Analog Amplitude Modulation Bandwidth (-3dB) (F <sub>-3dB</sub> )	MHz			7.8
Separation Angle (0-1)	mrd		23.4	
Static Extinction Ratio	dB	33		
* Diffraction Efficiency ( $\eta$ )	%	75	80	
Optical power density	W/mm <sup>2</sup>	10		
Input impedance	$\Omega$		50	
V.S.W.R.			< 1.2:1	
RF Power (P)	W			2.5
Connector		SMA female		
Size	mm <sup>3</sup>	60.1 x 28.7 x 26.5		
Weight	g		50	
Packaging		IN PRO 046		
Temperature Stabilization		Passive Heatsink		
Operating Temperature (non condensing)	°C	+10	+25	+40
Storage Temperature (non condensing)	°C	-40		+65
RoHS Compliance		Yes		

\*Diffraction efficiency is beam diameter dependent.

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

1

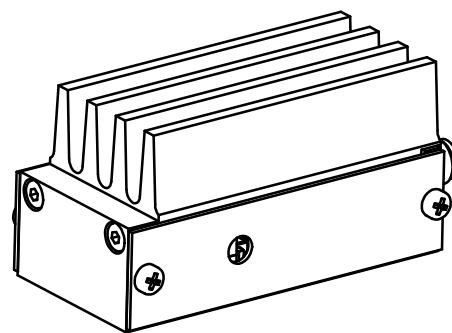
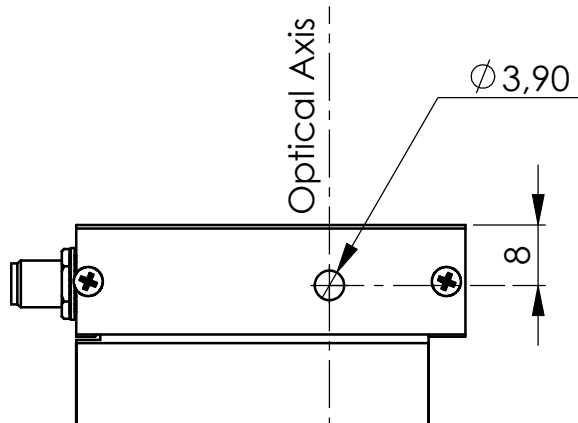
2

3

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A

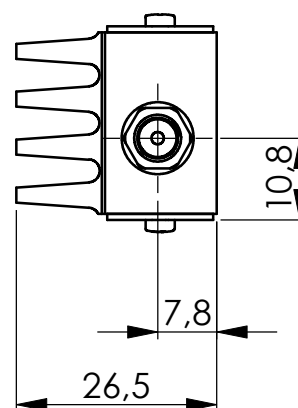
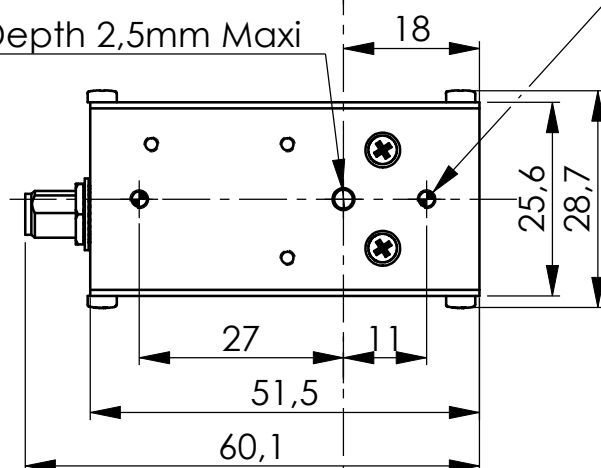
A



B

B

Bragg Angle Adjust

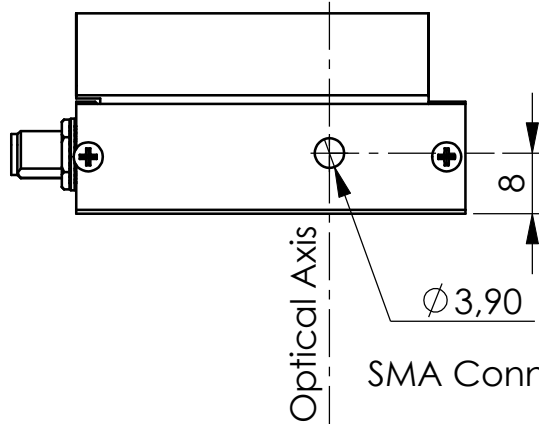
 $\varnothing 2,5^{+0,05}$  Depth 2,5mm Maxi
2 Threaded Holes M2,50  
Depth 2,5mm Maxi

C

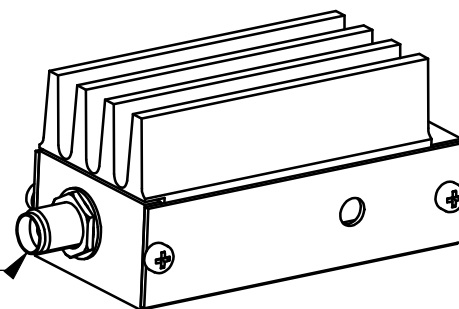
C

D

D




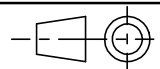
SMA Connector



C	10/01/07	E.D	Mise en page
B	20/04/06	A.A	Modification cotes : 6,5 -> 7mm 44,5 -> 45mm
A	11/10/04	O.G	Plan initial / Initial Drawing

Indice Index	Date	Auteur Author	Modifications
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Conception Design	E.D	<b>PLAN D'INTERFACE / OUTLINE DRAWING</b>  Référence / Reference  <b>IN-PRO-046</b>	 <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
Vérification Checking	L.F		
Tolérance Tolerance	ISO 2768mK		
Echelle Scale	1:1		

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