

### Product Overview

These free space modulators operate at 200MHz with a possible RF range +/- 50 MHz. They are provided at various wavelength ranges as from 450 nm up to 1100 nm. The intended application can be fast intensity modulation, pulse picking as well as frequency shifting (fixed and variable).



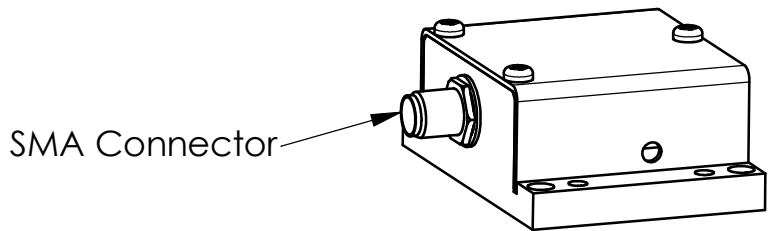
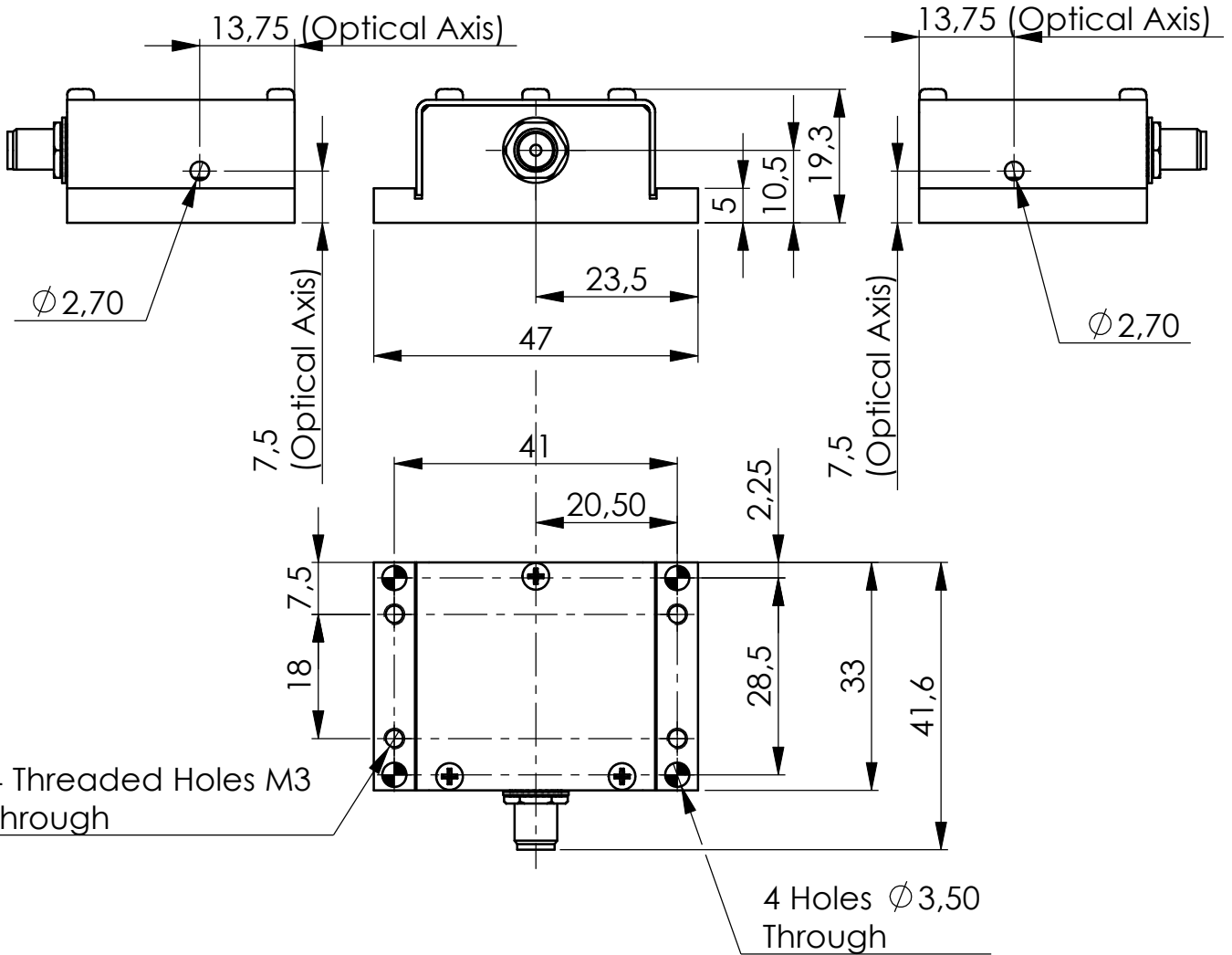
### Features

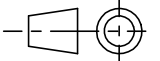
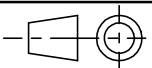
- Small rise time
- High diffraction efficiency

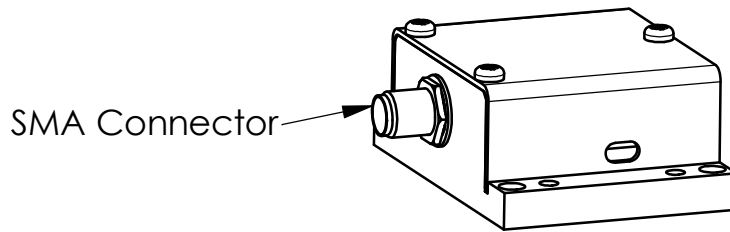
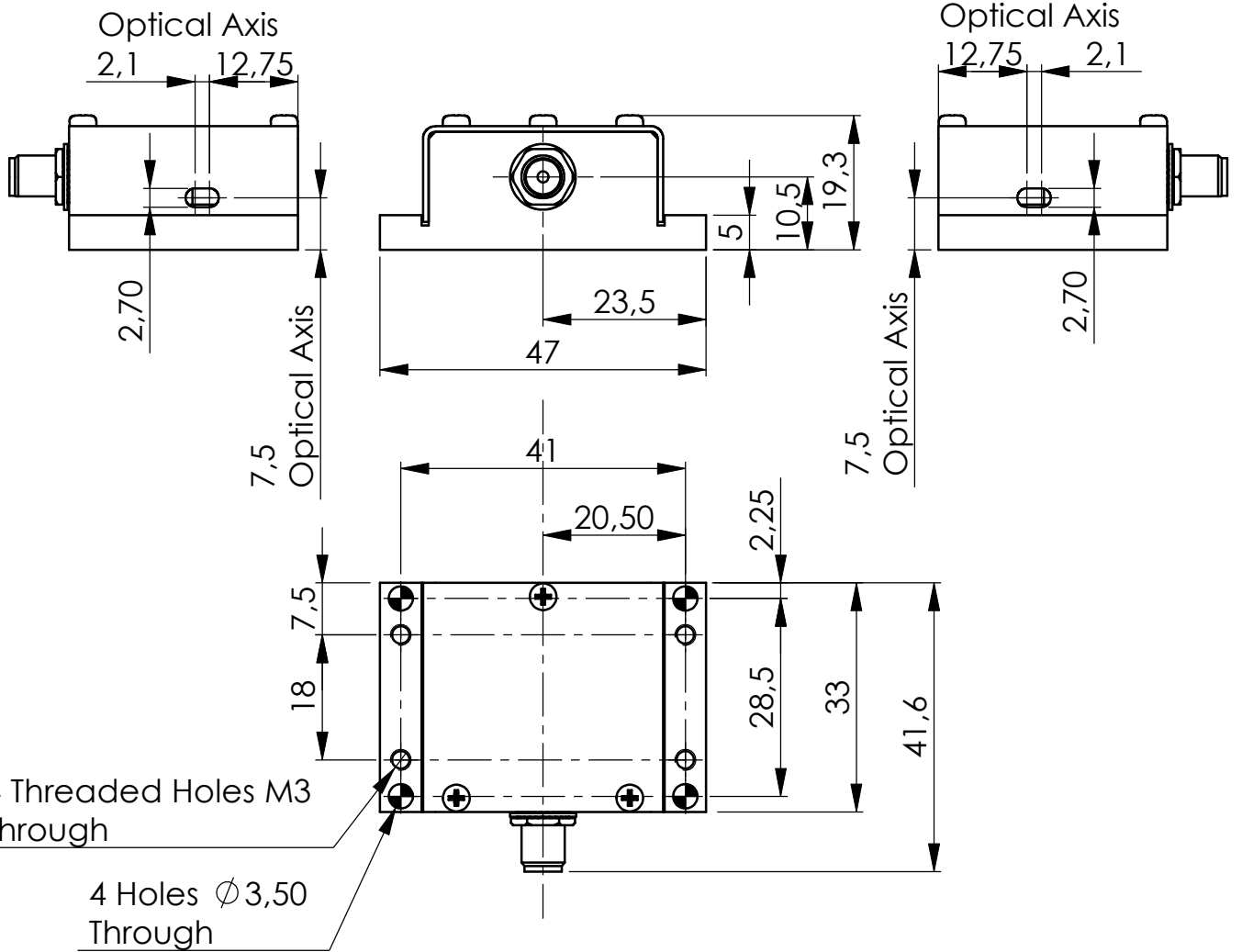
		Units	Min	Nom	Max
Material-Acoustic mode-Velocity			TeO <sub>2</sub> [L] – 4200 m/s		
Optical Wavelength range (AR coated) (λ)	800	nm	700		950
	1064		980		1100
Carrier Frequency / Frequency shift		MHz	+/-200		
Transmission		%	95	98	
Input / Output Polarization			Linear / Linear		
Active Aperture		mm <sup>2</sup>	0.2 x 1		
Beam diameter (1/e <sup>2</sup> )(φ)		mm	0.06		0.15
Rise/fall time (T <sub>r</sub> )		ns	9.6		25
Analog Amplitude Modulation Bandwidth (-3dB) (F <sub>-3dB</sub> )		MHz			50
Separation angle(0-1)	800	mrd	33.3		45.2
	1064		46.6		52.4
Static Extinction Ratio		dB	33		
*Diffraction Efficiency (η)	800	%	85		
	1064		80		
Optical power density (CW)		W/mm <sup>2</sup>			10
Input impedance		Ω		50	
V.S.W.R.				< 1.2:1	
RF Power (P)		W			2,2
Size		mm <sup>3</sup>	47. x 41.6 x 19.3		
Weight		g		50	
Packaging			IN PRO 002 or IN PRO 003		
Operating Temperature (non condensing)		°C	+10	+25	+40
Storage Temperature (non condensing)		°C	-20		+50
RoHS Compliance			Yes		
OPTION MT200-B100A0.2-xx			Diffraction efficiency >60% over 200 +/- 50 MHz		

\*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	15/12/06	E.D	Mise en page
A	25/04/02	F.C	Plan initial / Initial Drawing
Index	Date	Auteur Author	Modifications
Conception Design	E.D	<b>PLAN D'INTERFACE / OUTLINE DRAWING</b>	
Vérification Checking	L.F		
Tolérance Tolerance	ISO 2768mK	Référence / Reference <b>IN-PRO-002</b>	
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	
	Format A4		
		Folio / Sheet 1/1	Indice / Index B



B	15/12/06	E.D	Mise en page
A	09/03/06	A.A	Plan initial / Initial drawing
Indice Index	Date	Auteur Author	Modifications
Conception Design	E.D	<b>PLAN D'INTERFACE / OUTLINE DRAWING</b>	
Vérification Checking	L.F		
Tolérance Tolerance	ISO 2768mK	Référence / Reference  <b>IN-PRO-003</b>	
Echelle Scale	1:1	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.	
	Format A4		



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