MT200-Ax-xx – MT200-B100Ax-xx

Product Overview

These free space modulators operate at 200 MHz with a possible RF bandwidth of +/- 50 MHz (on request). They are provided at various wavelength range as from 400 up to 1100 nm. The intended application can be fast intensity modulation, pulse picking as well as frequency shifting, fixed and variable.

FEATURES

- Fast rise time/Access time
- Linear polarization
- High diffraction efficiency

SPECIFICATIONS (T=25°C)

PARAMETER	RATING	UNIT
Material-Acoustic mode-Velocity	TeO2-L - 4200	m/s
Carrier Frequency / Frequency shift	+/-200	MHz
Input / Output Polarization	Linear/Linaer	
Rise/fall time (T_r)	160	ns/mm
Static Extinction Ratio	>33	dB
Input impedance	50	Ω
V.S.W.R.	< 1.2:1	
Connector	SMA female	
Size	47 x 41.6 x 19.3	mm^3
Weight	Nom 50	g
Packaging	IN PRO 002 or IN PRO 003	
Operating Temperature (non condensing)	+10 to +40	°C
Storage Temperature (non condensing)	-40 to +65	°C
RoHS Compliance	Yes	

Versions with 0.5 mm Aperture

	MT200-A0,5-400.442	MT200-A0,5-VIS	MT200-A0,5-800	MT200-A0,5-1064
Wavelength	400-442 nm	450-700 nm	700-950 nm	980-1100 nm
Tramsmission	>90%, nom 95%	>95%	>95%	>95%
Active aperture	0.5x2 mm^2	0.5x2 mm^2	0.5x2 mm^2	0.5x2 mm^2
Minimum rise time	30 ns (∅ 0.2 mm)	30 ns (∅ 0.2 mm)	30 ns (∅ 0.2 mm)	30 ns (∅ 0.2 mm)
Separation angle (0-1)	>19 mrd	>21.4 mrd	>33.3 mrd	>46.6 mrd
Diffraction efficiency*	>85 %	>85 %	>85 %	>75 %
Maximum RF power	1 W	1.6 W	2.2 W	2.2 W
Maximum Laser power density	100mW/mm^2	1W/mm^2 @ 488 nm 5 W/mm^2 @633nm	10 W/mm^2	10 W/mm^2
On request : Variable frequency	200+/-50 MHz MT200-B100A0.5-400.442 *Efficiency typ >65 %	200+/-50 MHz MT200-B100A0.5-VIS *Efficiency typ >65 %	200+/-50 MHz MT200-B100A0.5-800 *Efficiency typ >65 %	200+/-50 MHz MT200-B100A0.5-1064 *Efficiency typ >40 %

**Diffraction efficiency is wavelength and beam diameter dependent*

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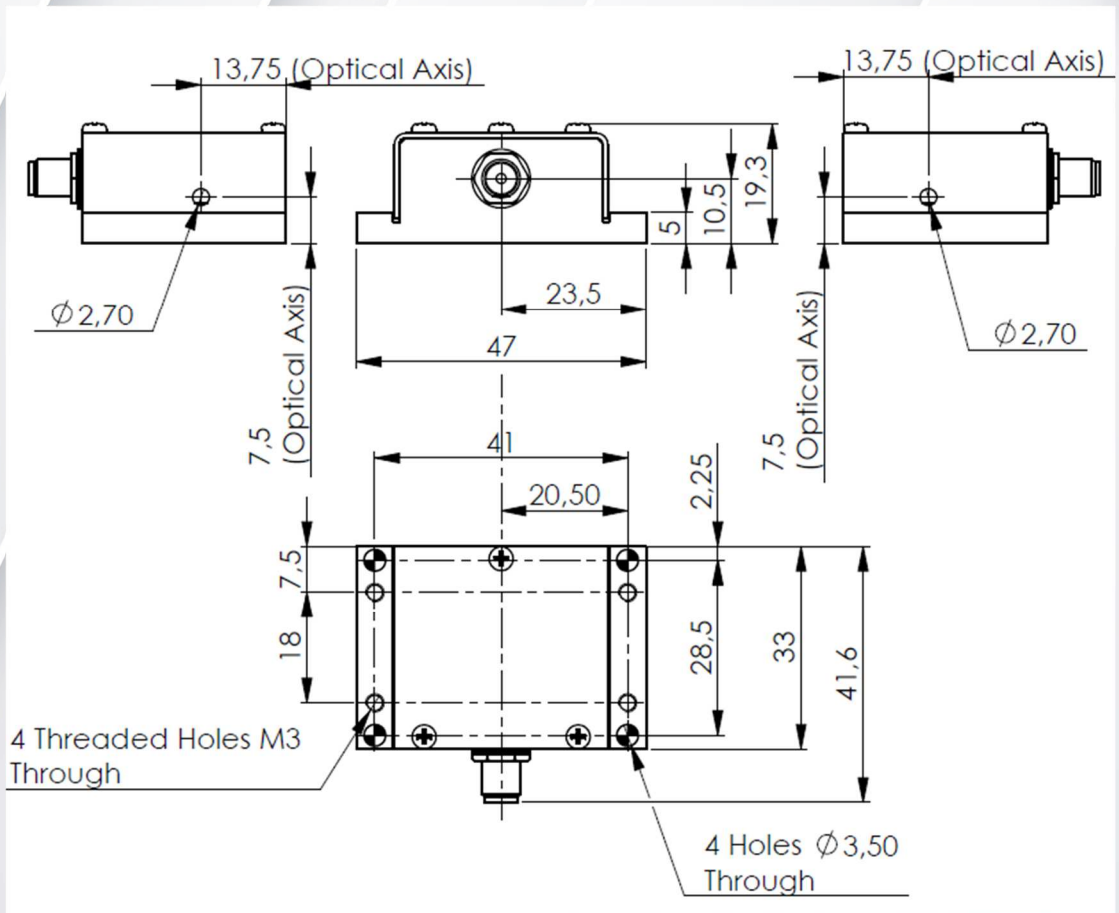
MT200-Ax-xx – MT200-B100Ax-xx

Versions with 0.2 mm Aperture

	MT200-A0,2-800	MT200-A0,2-1064
Wavelength	700-950 nm	980-1100 nm
Transmission	>95%	>95%
Active aperture	0.2x1 mm²	0.2x1 mm²
Minimum rise time	10 ns (∅ 0.06 mm)	10 ns (∅ 0.06 mm)
Separation angle (0-1)	>33.3 mrd	>46.6 mrd
Diffraction efficiency*	>85 %	>80 %
Maximum RF power	2.2 W	2.2 W
Maximum Laser power density	10 W/mm²	10 W/mm²
On request : Variable frequency	200+/-50 MHz MT200-B100A0.2-800 *Efficiency typ >65 %	200+/-50 MHz MT200-B100A0.2-1064 *Efficiency typ >40 %

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

OUTLINE DRAWING IN PRO 002, mm



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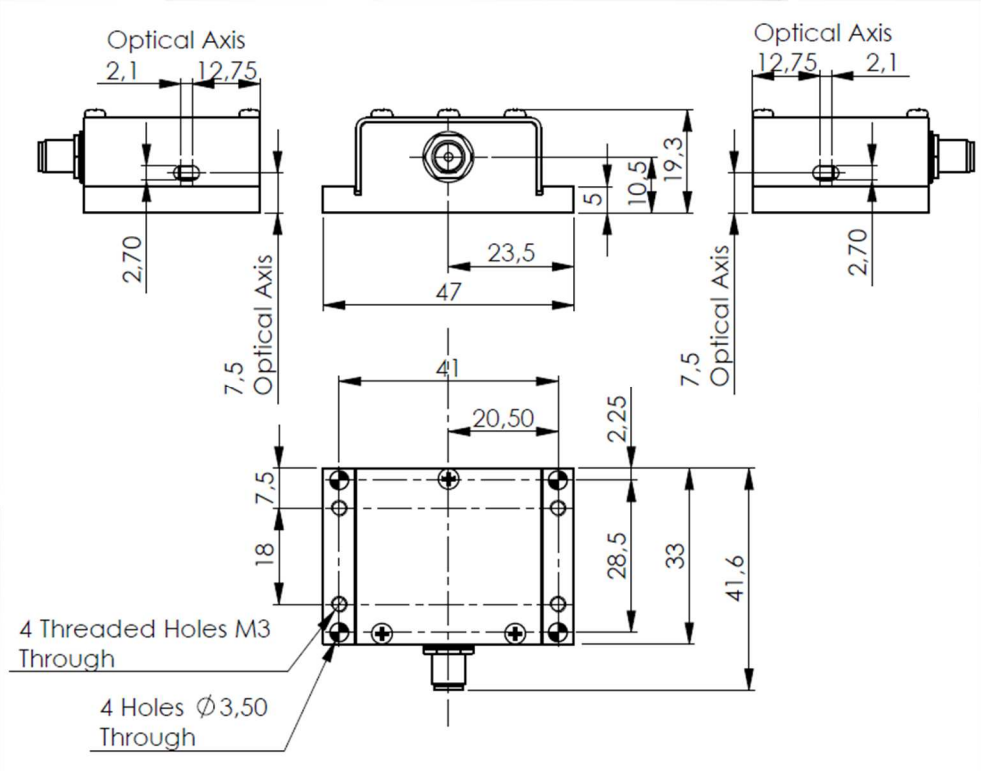
MT200-Ax-xx – MT200-B100Ax-xx

OUTLINE DRAWING IN PRO 003, mm



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