

MT350-Ax-xx – MT350-BxxAx-xx

Product Overview

These free space modulators operate at 350 MHz with a possible RF bandwidth of +/- 50 MHz or +/-60 MHz (on request). They are provided at various wavelength range as from 450 nm up to 950 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	TeO ₂ -L - 4200	m/s
Carrier Frequency / Frequency shift	+/-350	MHz
Transmission	≥95, nom 98	%
Input / Output Polarization	Linear/Linear	
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	

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Versions with 0.2 mm Aperture

	MT350-A0.2-VIS	MT350-A0.2-800
Wavelength	450-700 nm	700-950 nm
Transmission	>95%	>95%
Active aperture	0.2x1 mm ²	0.2x1 mm ²
Minimum rise time	20 ns (∅ 0.13 mm)	20 ns (∅ 0.13mm)
Separation angle (0-1)	>37.5 mrd	>58.3 mrd
Diffraction efficiency*	>85 %	>80 %
Maximum RF power	1.3 W	1.3 W
Maximum Laser power density	1W/mm ² @ 488 nm 5 W/mm ² @633nm	10 W/mm ²
On request : Variable frequency	MT350-B100A0.2-VIS 350+/-50 MHz *Efficiency typ >70 % MT350-B120A0.2-VIS 350+/- 60 MHz *Efficiency typ>60%	MT350-B100A0.2-800 350+/-50 MHz *Efficiency typ >60 % MT350-B120A0.2-800 350+/- 60 MHz *Efficiency typ>50%

*Diffraction efficiency is wavelength and beam diameter dependent

Versions with 0.12 mm Aperture

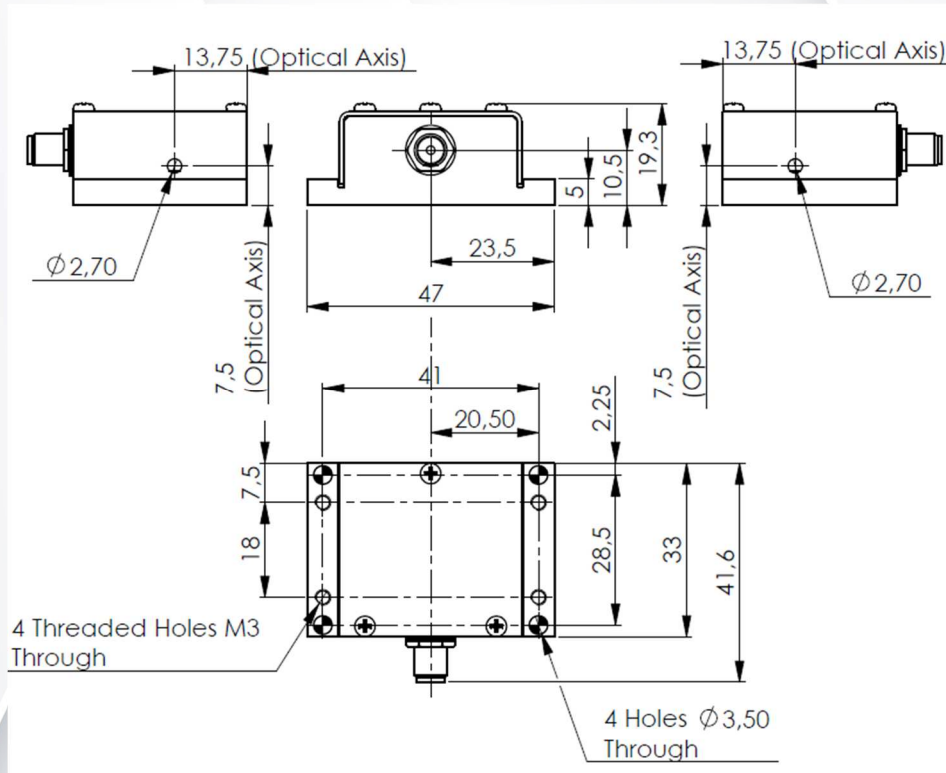
	MT350-A0.12-VIS	MT350-A0.12-800
Wavelength	450-700 nm	700-950 nm
Transmission	>95%	>95%
Active aperture	0.12x1 mm ²	0.12x1 mm ²
Minimum rise time	6 ns (∅ 0.04 mm)	6 ns (∅ 0.04mm)
Separation angle (0-1)	>37.5 mrd	>58.3 mrd
Diffraction efficiency*	>85 %	>80 %
Maximum RF power	1.3 W	1.3 W
Maximum Laser power density	1W/mm ² @ 488 nm 5 W/mm ² @633nm	10 W/mm ²
On request : Variable frequency	MT350-B100A0.12-VIS 350+/-50 MHz *Efficiency typ >70 % MT350-B120A0.12-VIS 350+/- 60 MHz *Efficiency typ>60%	MT350-B100A0.12-800 350+/-50 MHz *Efficiency typ >60 % MT350-B120A0.12-800 350+/- 60 MHz *Efficiency typ>50%

Diffraction efficiency is wavelength and beam diameter dependent

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

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OUTLINE DRAWING IN PRO 002, mm



OUTLINE DRAWING IN PRO 003, mm

