

## MT110-BxxA1.5-xx-Hk

### Product Overview

This modulator has been specially designed for an operation with Ti:Sa laser in the range of 690-1064 nm/680-1300nm. In combination with the AA MPDS driver, it offers a constant diffraction efficiency and output angle for the whole wavelength range with no Bragg Angle adjustment.

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

### FEATURES

- Broad wavelength range: 690-1064 nm/680-1300 nm
- Constant output diffracted angle
- Constant diffraction efficiency



### SPECIFICATIONS (T=25°C)

PARAMETER	RATING	UNIT
Material-Acoustic mode-Velocity	TeO <sub>2</sub> -L - 4200	m/s
Input / Output Polarization	Linear Vertical	
Active Aperture	1.5 x 2	mm <sup>2</sup>
Rise/fall time (T <sub>r</sub> )	160	ns/mm
Min Rise/fall time	128	ns
Static Extinction Ratio	>33	dB
Max Optical power density	10	W/mm <sup>2</sup>
RF power	<2.2	W
Input impedance	50	Ω
V.S.W.R.	< 1.2:1	
Connector	SMA female	
Size	60.1 x 28.7 x 26.5	mm <sup>3</sup>
Weight	Nom 100	g
Packaging	IN PRO 046	
Temperature stabilization	Passive top heatsink	
Operating Temperature (non condensing)	+10 to +40	°C
Storage Temperature (non condensing)	-20 to +50	°C
RoHS Compliance	Yes	

## MT110-BxxA1.5-xx-Hk

### Versions

	MT110-B50A1.5-IR-Hk	MT110-B69A1.5-680.1300-Hk
Wavelength	690-1064 nm	680-1300nm
Carrier Frequency, F( $\lambda$ )	+/- (85 to 135) MHz	+/- (75.5 to 144.5) MHz
Diffraction efficiency (%)	>80, nom 85	>75, nom 80
Transmission (%)	>95	>80 @685 nm >95@1064 nm >95@1300 nm
Maximum RF power (W)	2.2	2.5

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

### OUTLINE DRAWING IN PRO 046, mm

