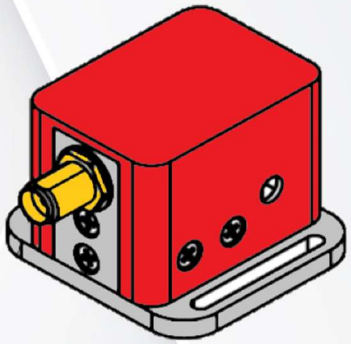
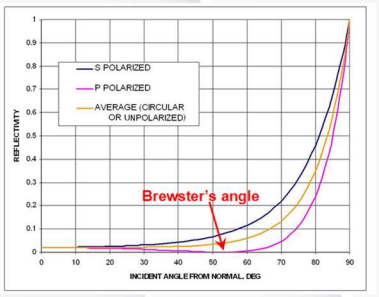
MQ180-A0,3-244.300-Br – MQ180-B50A,3-244.300-Br

Product Overview

These modulators have been specially designed for fast amplitude modulation for deep UV applications. They are made of fused Silica UV grade with Brewster incidence and can operate in the range of 244 to 300 nm.
Applications can be amplitude modulation, pulse picking or fixed/variable frequency shifting.





FEATURES

- High laser power
- Linear polarization
- High diffraction efficiency
- Brewster incidence for high transmission

SPECIFICATIONS (T=25°C)

PARAMETER	RATING	UNIT
Material-Acoustic mode-Velocity	Fused Silica-L - 5960	m/s
Centre Carrier Frequency / Frequency shift (Fc)	+/-180	MHz
Transmission	Brewster incidence angle (Horizontal plane)	
Input / Output Polarization	Linear parallel / Linear parallel to baseplate	
Bragg incidence angle	Vertical plane to baseplate	
Rise/fall time (T_r)	110	ns/mm
Static Extinction Ratio	>30	dB
Input impedance	50	Ω
V.S.W.R.	< 1.2:1	
Connector	SMA female	
RF power	Max 2,5 (typ 1.2W @244nm – 2W @300nm)	W
Size	36 x 42,6 x 26,5	mm^3
Weight	Nom 80	g
Packaging	IN PRO 418-A	
Operating Temperature (non condensing)	+10 to +40	°C
Storage Temperature (non condensing)	-20 to +50	°C
RoHS Compliance	Yes	

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MQ180-A0,3-244.300-Br – MQ180-B50A,3-244.300-Br

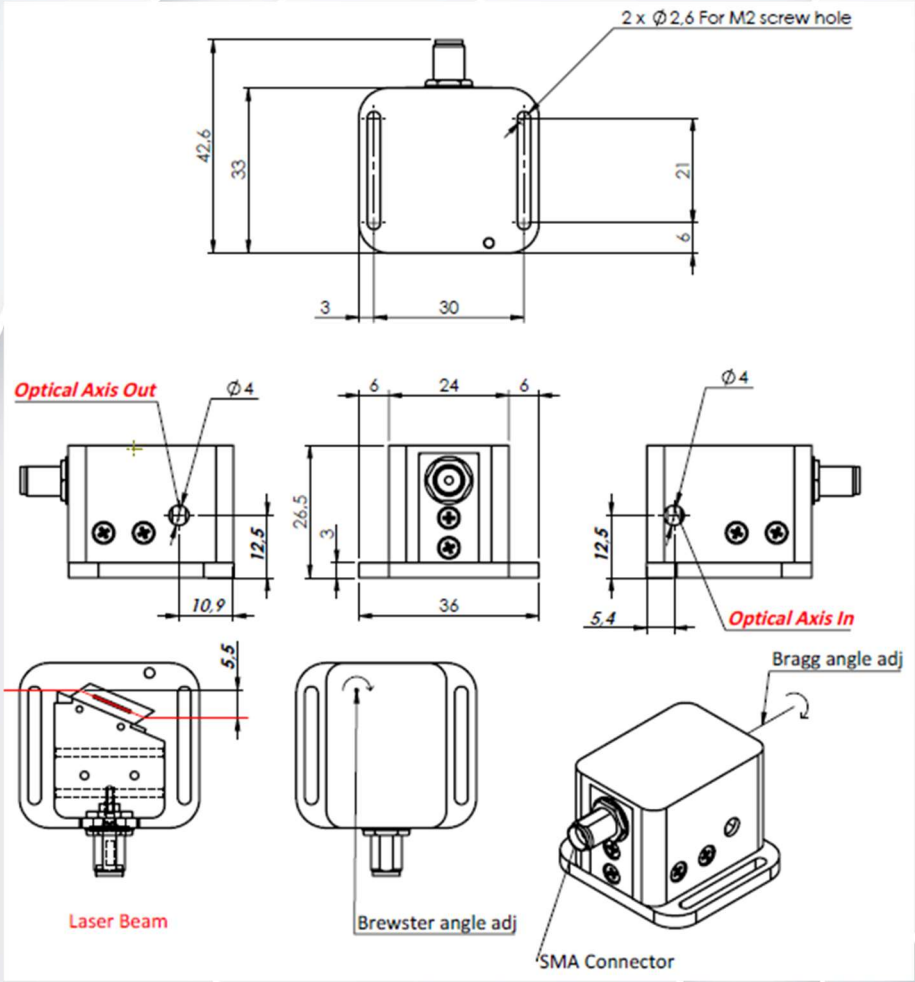
Versions

	MQ180-B50A0,3-244.300-Br	MQ180-A0,3-244.300-Br
Aperture	**0.3 x 1 mm²**	
Wavelength	244-300nm	
***Min Rise/fall time**	**15 ns**	
Analog Amplitude modulation bandwidth (-3dB)	32MHz	
Recommended beam diameter	[0,15-0,2mm] @244nm - [0,18-0,2mm] @300nm	
Separation angle (0-1)	8 mrd @Fc @266nm	
Diffraction efficiency	>= 85 % @Fc	
Maximum Laser power density	Wavelength dependent / typ 1 W/mm²	
Frequency range	180+/-25 MHz Efficiency >= 75 %	-
Scan angle	2.2mrd @266nm	-

min rise/fall time to reach optimal diffraction efficiency.

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

OUTLINE DRAWING IN PRO 418-A, mm (UV)



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