MCQ40-A1.5-L1064-Z32-Cxxx

AO MODULATOR/SHIFTER

Product Overview

These modulators are made of Quartz and due to their hard V-coating with low reflectivity, they have got a high damage threshold. In addition, due to the small aperture, fast rise time can be achieved.
They are mainly intended for intensity modulation in high power applications but can be used as frequency shifter as well: +/- 40 MHz.

Features

- 1.06 µm design.
- Linear polarisation.
- Air cooled.
- High damaged threshold.

	Units	Min	Nom	Max
Material-Acoustic mode-Velocity		*Crystal quartz [L] – 5740 m/s*		
Optical Wavelength range (AR coated) (λ)	nm	*1030*	*1064*	*1080*
Carrier Frequency / Frequency shift	MHz	*+/-40*		
Transmission	%	*99*		
Input / Output Polarization with ref to baseplate		*Linear vertical*		
Active Aperture	mm^2	*1.5 x 1.5*		
Beam diameter ($1/e^2$)(ϕ)	mm	*0.7*		*1.2*
Rise/fall time (T_r)	ns	*81*		*138*
Analog Amplitude Modulation Bandwidth (-3dB) (F_{-3dB})	MHz			*6*
Separation Angle (0-1)	mrd	*7.2*	*7.4*	*7.5*
Static Extinction Ratio	dB	*30*		
* Diffraction Efficiency (η)	%	*80*	*85*	
Optical power density	MW/cm^2	*500*		
Input impedance	Ω		*50*	
V.S.W.R.			*< 1.2:1*	
RF Power (P)	W		*15*	
Connector		*SMA female*		
Size	mm^3	*33 x 36.5 x 25.8*		
Weight	g		*30*	
Packaging		*IN PRO 181*		
Operating Temperature (non condensing)	℃	*+10*	*+25*	*+40*
Storage Temperature (non condensing)	℃	*-40*		*+65*
RoHS Compliance		*Yes*		

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

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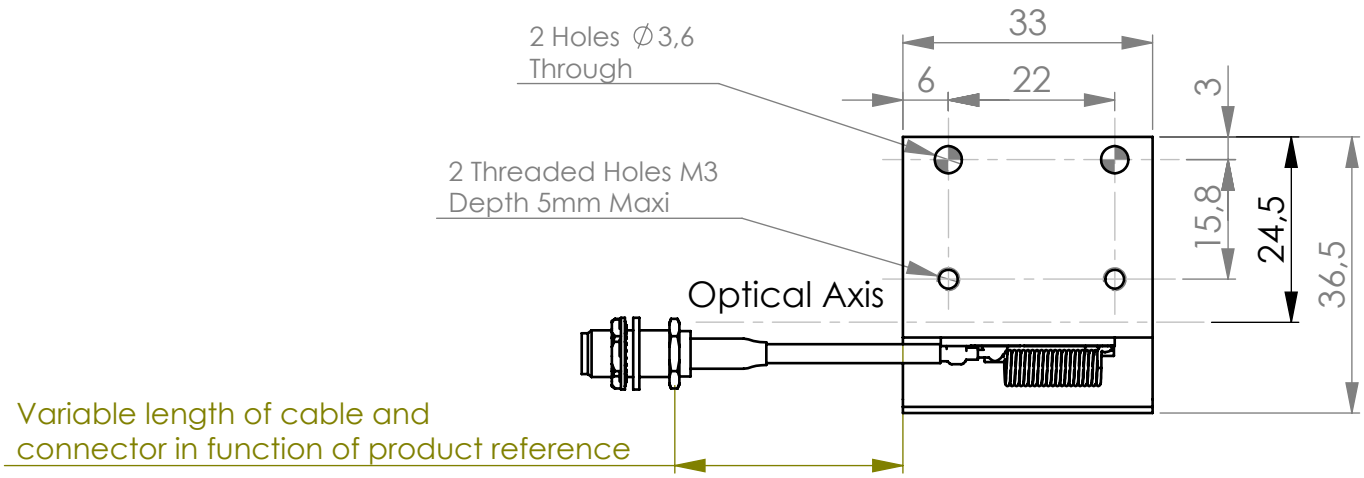

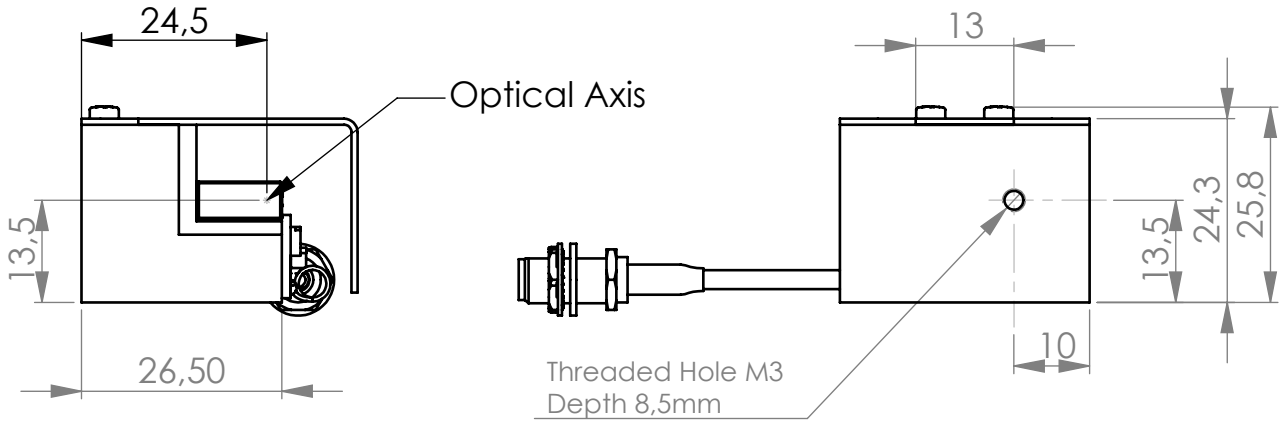

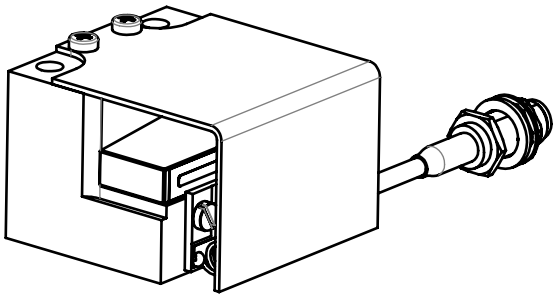

The cap can be removed

Product reference + "-Cxx" + Connector
*"-Cxx" = length of cable in cm
ex : "-C35" = Cable 35cm
*Rf connector:
"Sa" = SMA Bulkhead Crimp
"Sap" = SMA Straight Plug
"Sac" = SMA Angle Plug
"Sc" = SMC
"Scc" = SMC Angle Plug
"Bc" = BNC
ex: QCQ...-C6Sa = QCQ with 6cm cable and SMA connector.

Indice Index	Date	Auteur Author	Modifications
E	02/10/17	G.M	Rajout cote manquante.
D	24/03/15	G.M	Rajout texte désignation "Sac".
C	24/01/11	G.M	Modification forme capot.
B	13/10/09	E.V	Modification référence cable
A	19/07/07	E.D	Plan initial / Initial Drawing

Conception Design	E.D
Vérification Checking	L.F
Tolérance Tolerance	ISO 2768mK
Echelle Scale	1:1
Format	A4

PLAN D'INTERFACE / OUTLINE DRAWING

Référence / Reference

IN-PRO-181

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