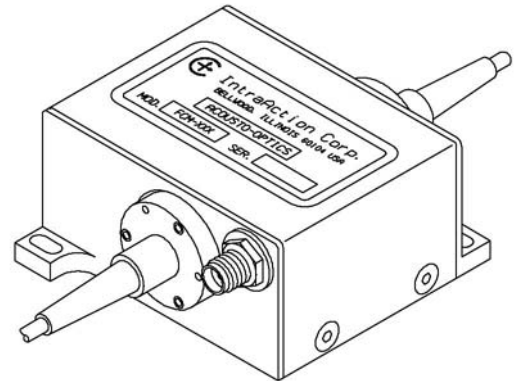


# MODEL FCM SERIES FIBER PIGTAILED ACOUSTO-OPTIC MODULATOR/ATTENUATOR

- NEAR IR WAVELENGTH RANGE
- INTENSITY MODULATION
- OPTICAL FREQUENCY SHIFTING
- CHOICE OF FREQUENCY SHIFT
- LOW RF DRIVE POWER
- HIGH RELIABILITY



SPECIFICATIONS				
Acousto-optic Material	AMTIR-I Chalcogenide Glass			
Optical Fiber <sup>1</sup>	Singlemode			
Fiber Connector <sup>1</sup>	FC-PC			
Optical Back Reflection <sup>2</sup>	-40 dB			
Optical Polarization	Any			
Input Impedance / VSWR	50 ohms / 1.2:1			
Size	See outline drawing			
<b>MODEL (MODULATOR)<sup>3</sup></b>	<b>FCM-40.8E5C</b>	<b>FCM-40.8E6C</b>	<b>FCM-40IE5C</b>	<b>FCM-40IE6C</b>
Optical Wavelength	1.55 $\mu\text{m}$	1.3 $\mu\text{m}$	1.55 $\mu\text{m}$	1.3 $\mu\text{m}$
RF Frequency <sup>4</sup>	40 MHz	40 MHz	40 MHz	40 MHz
Optical Frequency Shift	+ 40 MHz	+ 40 MHz	+ 40 MHz	+ 40 MHz
RF Drive Power <sup>5</sup>	600 mW	500 mW	500 mW	400 mW
Insertion Loss (RF on)	< 3 dB	< 3 dB	< 2.4 dB	< 2.4 dB
Extinction Ratio (RF on/RF off) <sup>5</sup>	>55 dB	> 55 dB	> 55 dB	> 55 dB
Modulation Bandwidth (-3 dB)	7.5 MHz	7.5 MHz	4 MHz	4 MHz
Optical Rise Time	60 ns	60 ns	120 ns	120 ns
<b>MODEL (ATTENUATOR)<sup>3</sup></b>	<b>FCM-40.8E5CA</b>	<b>FCM-40.8E6CA</b>	<b>FCM-40IE5CA</b>	<b>FCM-40IE6CA</b>
Optical Wavelength	1.55 $\mu\text{m}$	1.3 $\mu\text{m}$	1.55 $\mu\text{m}$	1.3 $\mu\text{m}$
RF Frequency <sup>4</sup>	40 MHz	40 MHz	40 MHz 4	0 MHz
RF Drive Power <sup>5</sup>	600 mW	500 mW	500 mW	400 mW
Insertion Loss (RF off)	< 1 dB	<1 dB	< 1 dB	< 1 dB
Extinction Ratio (RF off/RF on)	7 dB	7 dB	7 dB	7 dB
Modulation Bandwidth (-3 dB)	7.5 MHz	7.5 MHz	4 MHz	4 MHz
Optical Rise Time	60 ns	60 ns	120 ns	120 ns

<sup>1</sup> Other optical fiber such as polarization maintaining, and other connectors such as FC-APC are also available.

<sup>2</sup> Optical back reflection varies with fiber type and connectors.

<sup>3</sup> Modulator... first order diffracted beam is transmitted to output fiber, Attenuator... zero order beam is transmitted to output fiber.

<sup>4</sup> Operation at other RF frequencies is available. See Frequency Shifter/FCM Series product sheet.

<sup>5</sup> High extinction digital drivers are available. Laboratory and OEM drivers are available.