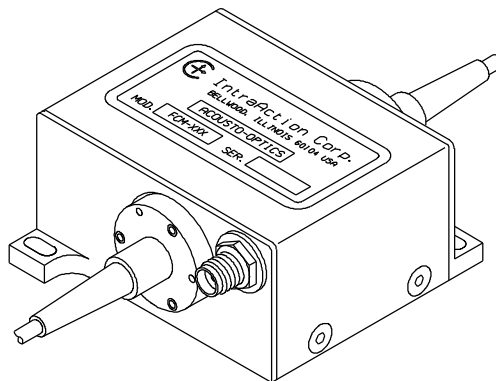


**MODEL FCM SERIES  
FIBER PIGTAILED  
ACOUSTO-OPTIC MODULATOR/ATTENUATOR**

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



**SPECIFICATIONS**

Acousto-optic Material

AMTIR-1 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

**MODEL (Modulator)<sup>3</sup>**

	<b><u>FCM-40.8E5C</u></b>	<b><u>FCM-40.8E6C</u></b>	<b><u>FCM-401E5C</u></b>	<b><u>FCM-401E6C</u></b>
Optical Wavelength	1.55 $\mu$ m	1.3 $\mu$ m	1.55 : m	1.3 : 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 mwatts	500 mwatts	500 mwatts	400 mwatts
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 nsec	60 nsec	120 nsec	120 nsec

**MODEL (Attenuator)<sup>3</sup>**

	<b><u>FCM-40.8E5CA</u></b>	<b><u>FCM-40.8E6CA</u></b>	<b><u>FCM-401E5CA</u></b>	<b><u>FCM-401E6CA</u></b>
Optical Wavelength	1.55 $\mu$ m	1.3 $\mu$ m	1.55 : m	1.3 : m
RF Frequency <sup>4</sup>	40 MHz	40 MHz	40 MHz	40 MHz
RF Drive Power <sup>5</sup>	600 mwatts	500 mwatts	500 mwatts	400 mwatts
Insertion Loss (RF off)	< 1 dB	< 1 dB	< 1 dB	< 1 dB
Extinction Ratio (RF off/RF on)	7 dB	7dB	7dB	7 dB
Modulation Bandwidth (-3 dB)	7.5 MHz	7.5 MHz	4 MHz	4 MHz
Optical Rise Time	60 nsec	60 nsec	120 nsec	120 nsec

<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.