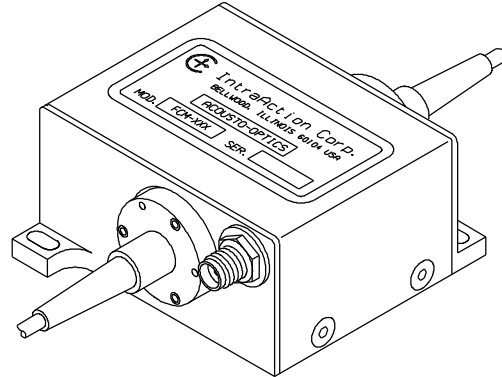


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**MODEL FCM SERIES
FIBER PIGTAILED
ACOUSTO-OPTIC MODULATOR/ATTENUATOR**

- 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 ¹	Singlemode
Fiber Connector ¹	FC-PC
Optical Back Reflection ²	-40 dB
Optical Polarization	any
Input Impedance / VSWR	50 Ohms / 1.2:1
Size	See outline drawing

MODEL (Modulator)³	<u>FCM-40.8E5C</u>	<u>FCM-40.8E6C</u>	<u>FCM-401E5C</u>	<u>FCM-401E6C</u>
Optical Wavelength	1.55 μm	1.3 μm	1.55 : m	1.3 : m
RF Frequency ⁴	40 MHz	40 MHz	40 MHz	40 MHz
Optical Frequency Shift	+ 40 MHz	+ 40 MHz	+ 40 MHz	+ 40 MHz
RF Drive Power ⁵	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) ⁵	> 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

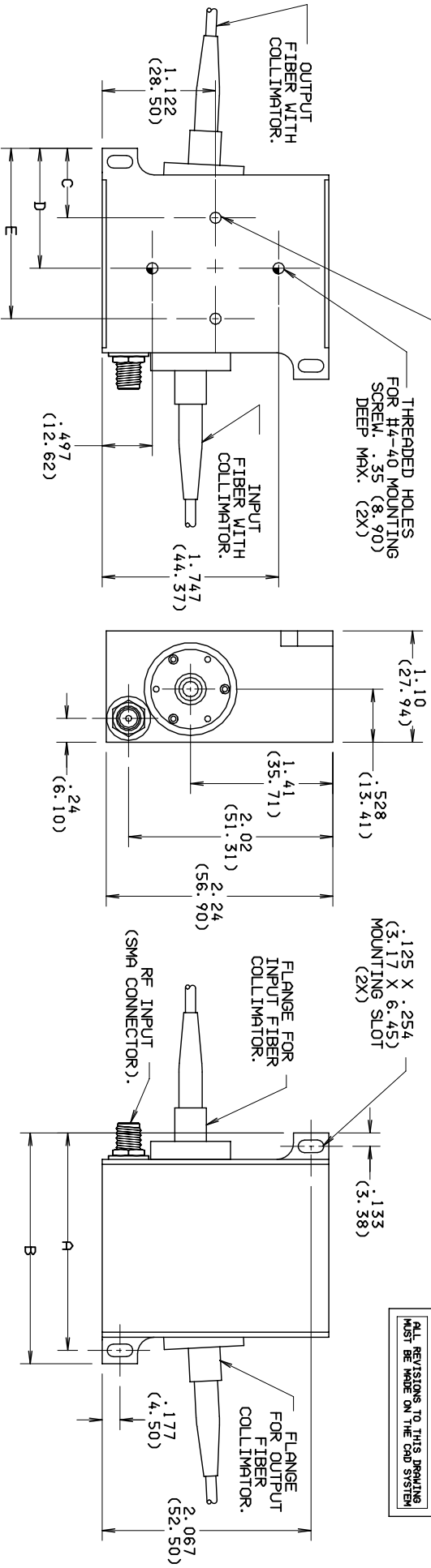
MODEL (Attenuator)³	<u>FCM-40.8E5CA</u>	<u>FCM-40.8E6CA</u>	<u>FCM-401E5CA</u>	<u>FCM-401E6CA</u>
Optical Wavelength	1.55 μm	1.3 μm	1.55 : m	1.3 : m
RF Frequency ⁴	40 MHz	40 MHz	40 MHz	40 MHz
RF Drive Power ⁵	600 mwatts	500 mwatts	500 mwatts	400 mwatts
Insertion Loss (RF off)	< 1 dB	<1 dB	< 1 dB	< 1 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

¹ Other optical fiber such as polarization maintaining, and other connectors such as FC-APC are also available.
² Optical back reflection varies with fiber type and connectors.
³ Modulator...first order diffracted beam is transmitted to output fiber, Attenuator...zero order beam is transmitted to output fiber.
⁴ Operation at other RF frequencies is available. See Frequency Shifter/FCM Series product sheet.
⁵ High extinction digital drivers are available. Laboratory and OEM drivers are available.

ENG2108

THREADED HOLES FOR
M3 X .5 MOUNTING SCREWS.
.35 (8.90) MAX. (2X)

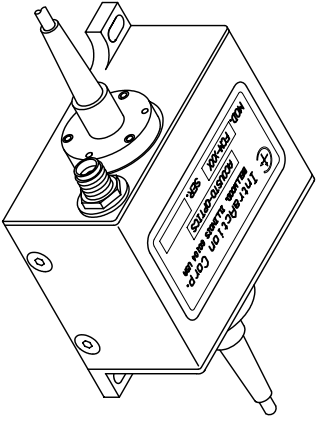
THREADED HOLES
FOR H4-40 MOUNTING
SCREW. .35 (8.90)
DEEP MAX. (2X)




ALL REVISIONS TO THIS DRAWING
MUST BE MADE ON THE CAD SYSTEM

REVISIONS		
ISSUE	DESCRIPTION	APPD./DATE
	ORIGINAL RM 10-20-98	JL
A-E	SEE PREVIOUS DRAWING.	JL
F	ADDED SPEC. FOR SHORT VERSION. RM 02-04-00	JL
G	DIM 1.41 WAS 1.30 AND DIM 2.02 WAS 1.98. M-F 01-19-04	--

	FCM-40.8XXX	FCM-401XXX
A	1.567 (39.80)	2.155 (54.74)
B	1.700 (43.18)	2.288 (58.12)
C	0.475 (12.07)	0.688 (17.47)
D	0.850 (21.59)	1.188 (30.17)
E	1.225 (31.12)	1.688 (42.87)



UNLESS OTHERWISE SPECIFIED TOLERANCES AND DIMENSIONS ARE IN INCHES		APPROVED DATE
LINER : .XX ±.010 (XX.XX) = mm		JL 10-21-98
ANGULAR ± DIAMETERS ± LIMITS APPLY BEFORE FINISHING DO NOT SCALE THIS PRINT		CHECKED DATE
MATERIAL		JL 10-21-98
DRAWN DATE		DATE
RM 10-20-98		DATE
FINISH		DATE
MFG. INSTR.		
D. C. INSTR.		


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 PHONE (708) 547-6644

FCM SERIES
MODULATOR / ATTENUATOR

FSCM NO. **B** DMG. NO. **FCM OUTLINE G** ISSUE
 SCALE FULL UNIT WEIGHT SHEET 1 OF 1