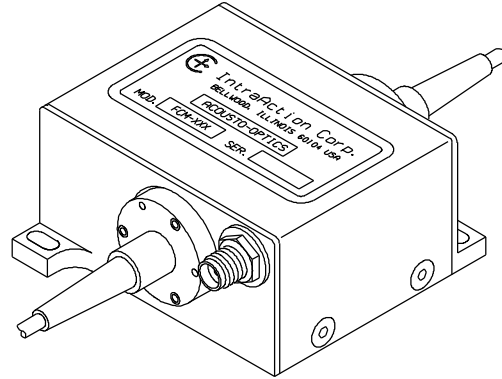


FREQUENCY SHIFTER

POLYTEC GmbH Büro Berlin Schwarzschildstraße 1 D - 12489 Berlin GERMANY
Tel: +49 (30) 63 92 51 40 Fax: +49 (30) 63 92 51 41 wl@polytec.de www.polytec.de

MODEL FCM SERIES FIBER PIGTAILED ACOUSTO-OPTIC MODULATOR / FREQUENCY SHIFTER

- NEAR IR WAVELENGTH RANGE
- OPTICAL FREQUENCY SHIFTING
- CHOICE OF FREQUENCY SHIFT³
- INTENSITY MODULATION
- LOW RF DRIVE POWER
- HIGH RELIABILITY



SPECIFICATIONS

Acousto-optic Material	AMTIR-1 Chalcogenide Glass
Optical Fiber ¹	Singlemode
Fiber Connector ¹	FC-PC
Modulation Bandwidth (-3dB)	4.0 MHz
Optical Rise Time	120 nsec
Insertion Loss ²	< 2.0 dB
Extinction Ratio (On/Off)	> 55 dB
Optical Polarization	any
Input Impedance / VSWR	50 Ohms / 1.2:1
Size (less connectors)	2.24(5.7)D x 1.10(2.8)H x 2.29(5.82)W inches(cm)

MODEL	<u>FCM-401E6C</u>	<u>FCM-501E6C</u>	<u>FCM-801E6C</u>	<u>FCM-1001E6C</u>
RF Frequency ³	40 MHz	50 MHz	80 MHz	100 MHz
Optical Frequency Shift ^{3,4}	+ 40 MHz	+ 50 MHz	+ 80 MHz	+100 MHz
Optical Wavelength	1.3 μm	1.3 μm	1.3 μm	1.3 μm
RF Drive Power ⁵	500 mwatts	500 mwatts	700 mwatts	1.0 watt

MODEL	<u>FCM-401E5C</u>	<u>FCM-501E5C</u>	<u>FCM-801E5C</u>	<u>FCM-1001E5C</u>
RF Frequency ³	40 MHz	50 MHz	80 MHz	100 MHz
Optical Frequency Shift ^{3,4}	+ 40 MHz	+ 50 MHz	+ 80 MHz	+100 MHz
Optical Wavelength	1.55 μm	1.55 μm	1.55 μm	1.55 μm
RF Drive Power ⁵	700 mwatts	700 mwatts	1.0 watt	1.5 watts

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

² Does not include connector losses.

³ User defined frequencies available from 40 MHz to 250 MHz. Note: Specifications change with frequency.

⁴ Negative frequency shift available. Specify when ordering.

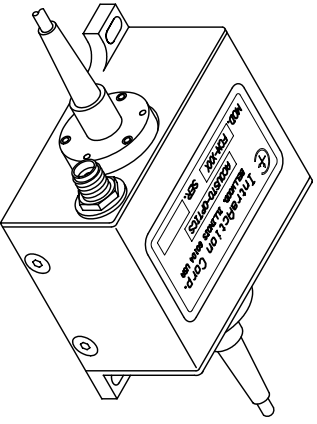
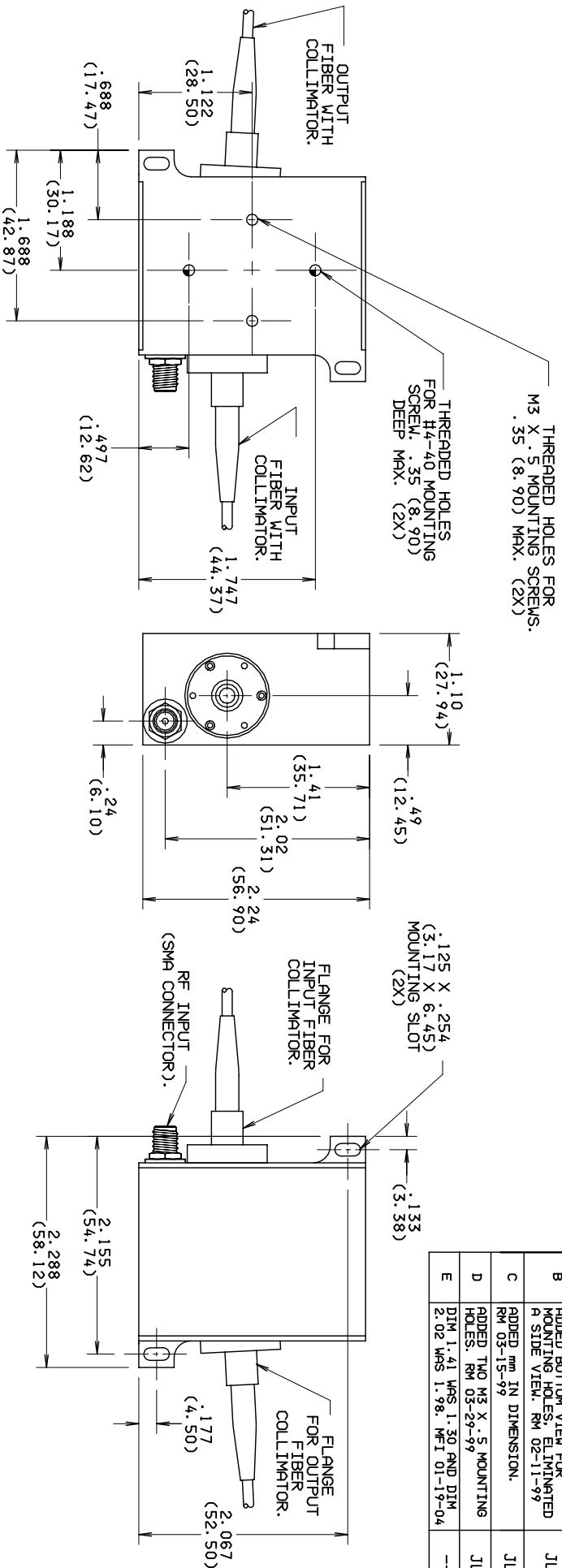
⁵ Single frequency or phase locked dual frequency, laboratory, or OEM drivers are available. High extinction drivers also available.

ENG2108

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

REVISIONS

ISSUE	DESCRIPTION	APPD./DATE
A	ORIGINAL RM 10-20-98	JL
B	ADDED FIBER AND COLLIMATOR.	JL
C	ADDED BOTTOM VIEW FOR MOUNTING HOLES, ELIMINATED A SIDE VIEW. RM 02-11-99	JL
D	ADDED TWO M3 X .5 MOUNTING HOLES. RM 03-29-99	JL
E	ADDED .125 X .254 (3.17 X 6.45) MOUNTING SLOT (2X)	--



UNLESS OTHERWISE SPECIFIED TOLERANCES AND DIMENSIONS ARE IN INCHES		APPROVED DATE	JL 10-21-98	
LINER : .XX ±.010 (XX.XX) = mm		CHECKED DATE	JL 10-21-98	
ANGULAR ± DIAMETERS ± LIMITS APPLY BEFORE FINISHING DO NOT SCALE THIS PRINT		DRAWN DATE	RM 10-20-98	
MATERIAL		FINISH		
MFG. INSTR.				
D.C. INSTR.				
FCM NO.		DMG. NO.		
B		FCM OUTLINE E		
SCALE FULL		SHEET 1 OF 1		
TITLE		ISSUE		
FREQUENCY SHIFTER				
Interaction Corp.		PHONE (708)		
3719 WARREN AVE.		547-6644		
BELLWOOD, IL 60104				