

Small Integrated Receiver Unit

SIRU3040

0.05 - 40GHz

The Emcore Small Integrated Receiver Unit (SIRU3040) is a high-performance optical receiver with guaranteed performance over the 50 MHz to 40 GHz frequency band. The SIRU3040 is a fully integrated unit that contains both the high frequency photodiode and the control electronics. Only DC input voltage and the optical input signal are required for operation.

The unit can be used to construct transparent optical links for antenna remoting, microwave delay lines and other applications where it is necessary to transport RF and microwave signals over long distances without signal degradation.

The SIRU3040 is an ideal receiver to use with Emcore's SITU3040 40 GHz high-performance externally modulated fiber optic transmitters.

Applications

- Microwave Antenna Signal Distribution
- Broadband Delay-line and Signal Processing Systems
- Frequency Distribution Systems
- Radar System Calibration
- Phased Array Antenna Systems, Interferometric Antenna Arrays

Features

- Integrated high frequency photodiode and bias circuitry in a connectorized package
- 0.05 MHz to 40 GHz bandwidth
- 1310 nm and 1550 nm operation
- High optical input power capability: 10 mW

Specifications

Electrical

Frequency Range	0.05 MHz to 40 GHz
Electrical Power Requirements	+15 V @ 70 mA max
RF Response/Gain Variation (S21 w/ Emcore SITU3040 TX)	< 5 dB max 0.05 – 1 GHz
	< 10 dB max 1- 40 GHz
RF Connector	K (female)
RF Output Impedance	50 Ω

Optical

Wavelength	1300 – 1600 nm
Connectors	FC/APC
Optical Input Power	+ 10 dBm (10 mW) Maximum
Responsivity at 1310 nm	> 0.55 A/W
Responsivity at 1550 nm	> 0.50 A/W

Physical

Configuration	Self Contained Housing
Dimensions	0.8" H x 4.6" W x 3.4" D
Operating/Storage Temperature	-40 °C to +70 °C

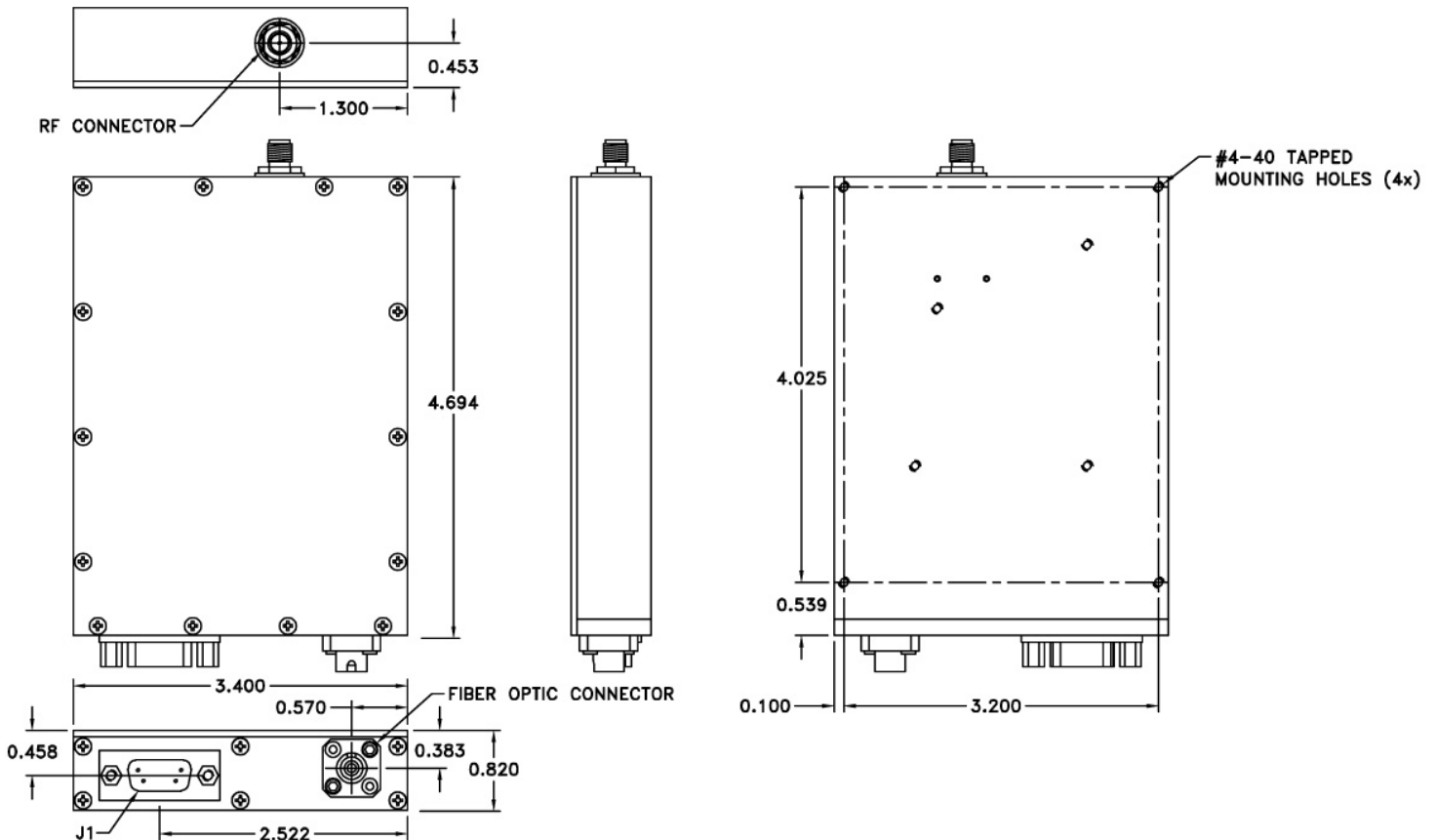
For more information on this and other products:

Contact Sales at Emcore 626-293-3400, or visit www.emcore.com.

Ordering Information

SIRU3040 0.05 – 40 GHz Fiber Optic Receiver, FC/APC Optical Connector, 2.9 mm K Female RF Connector

Package Outline Drawing



D-Connector Pin Out

1	+15 V
2	n/c
3	n/c
4	GND
5	n/c
6	Photodiode Monitor
7	n/c
8	n/c
9	n/c

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