

## 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 voltages 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 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: 15 mW

#### Specifications

##### Electrical

Frequency Range	0.05 MHz to 40 GHz
Electrical Power Requirements	+15 V @ 50 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	Diamond AVIM or FC/APC
Optical Input Power	+ 11.8 dBm (15 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:**

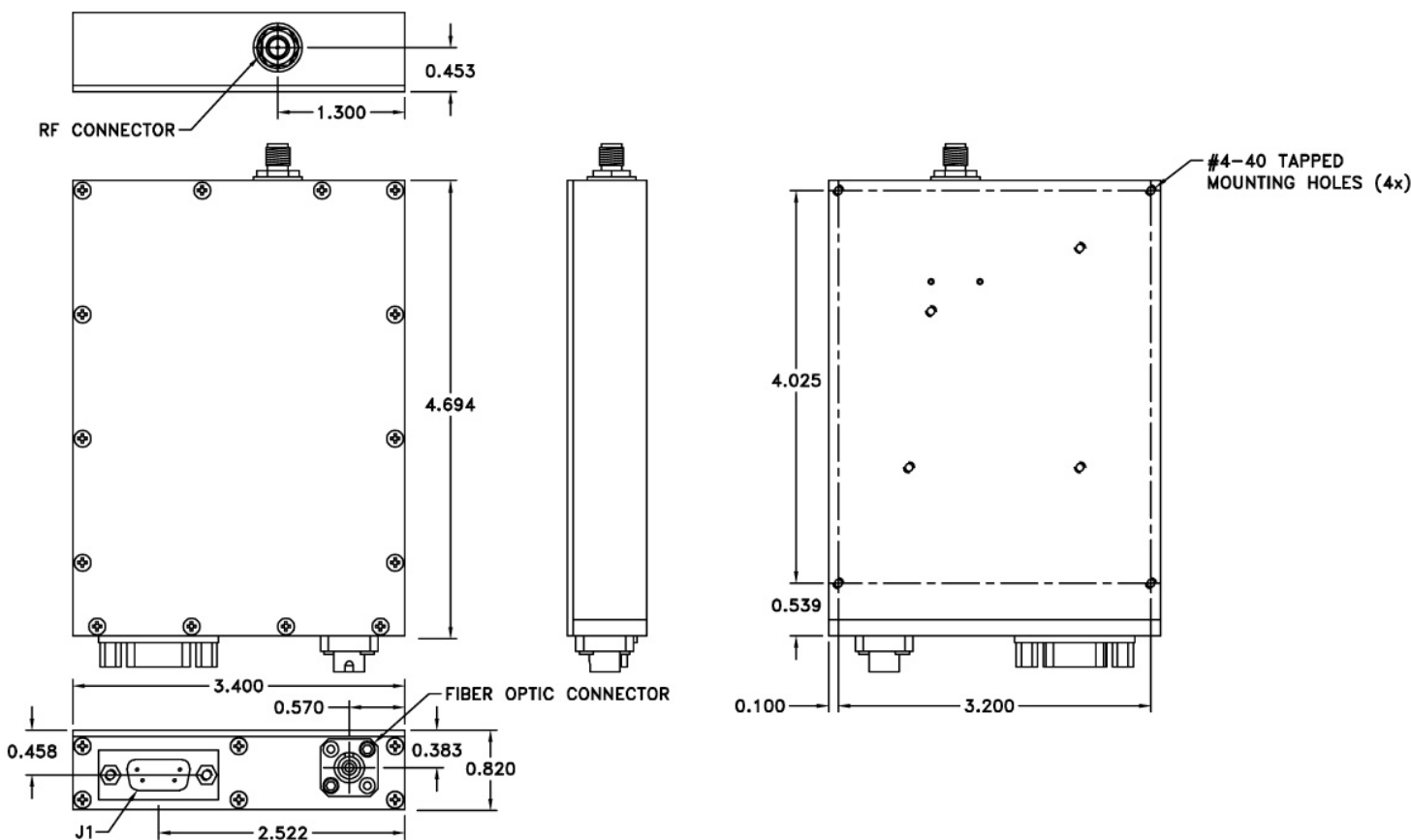
Contact Sales at Emcore 626-293-3400, or visit [www.emcore.com](http://www.emcore.com).

**Ordering Information**

SIRU-3040-AV Diamond ACIM Optical Connector

SIRU-3040-FA FC/APC Optical 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

Information contained herein is deemed to be reliable and accurate as of issue date. EMCORE reserves the right to change the design or specifications of the product at any time without notice. Ortel, the Ortel logo, EMCORE, and the EMCORE logo are trademarks of EMCORE Corporation.

**EMCORE**

2015 West Chestnut Street  
 Alhambra, California 91803-1542  
 Tel: 626-293-3400  
 Fax: 626-293-3428  
[www.emcore.com](http://www.emcore.com)

*For more information on this and other products:*

Contact Sales at Emcore 626-293-3400 or visit [www.emcore.com](http://www.emcore.com)

