



## Small Integrated Receiver Unit

### SIRU3000

0.05 - 18GHz

The Emcore Small Integrated Receiver Unit (SIRU3000) is a high-performance optical receiver with guaranteed performance over the 50 MHz to 18 GHz frequency band and up to +11.8 dBm (15 mW) optical input power. The SIRU3000 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 SIRU3000 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 18 GHz bandwidth
- 1310 nm and 1550 nm operation
- High optical input power capability: +11.8 dBm (15 mW)

#### Specifications

##### Electrical

Frequency Range	0.05 MHz to 18 GHz
RF Response/Gain Variation (S21 w/ Emcore SITU3000 TX)	< 5 dB max 0.05 – 1 GHz
	< 10 dB max 1-18 GHz
Electrical Power Requirements	+15 V @ 50 mA max
Photodiode Monitor Output	0.1 V/mA typical
RF Connector	K (female)
RF Output Impedance	50 Ω

##### Optical

Wavelength	1280 – 1580 nm
Connectors	Diamond AVIM or FC/APC
Optical Input Power	+ 11.8 dBm (15 mW) Maximum
Responsivity	> 0.7 A/W minimum

##### 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:**

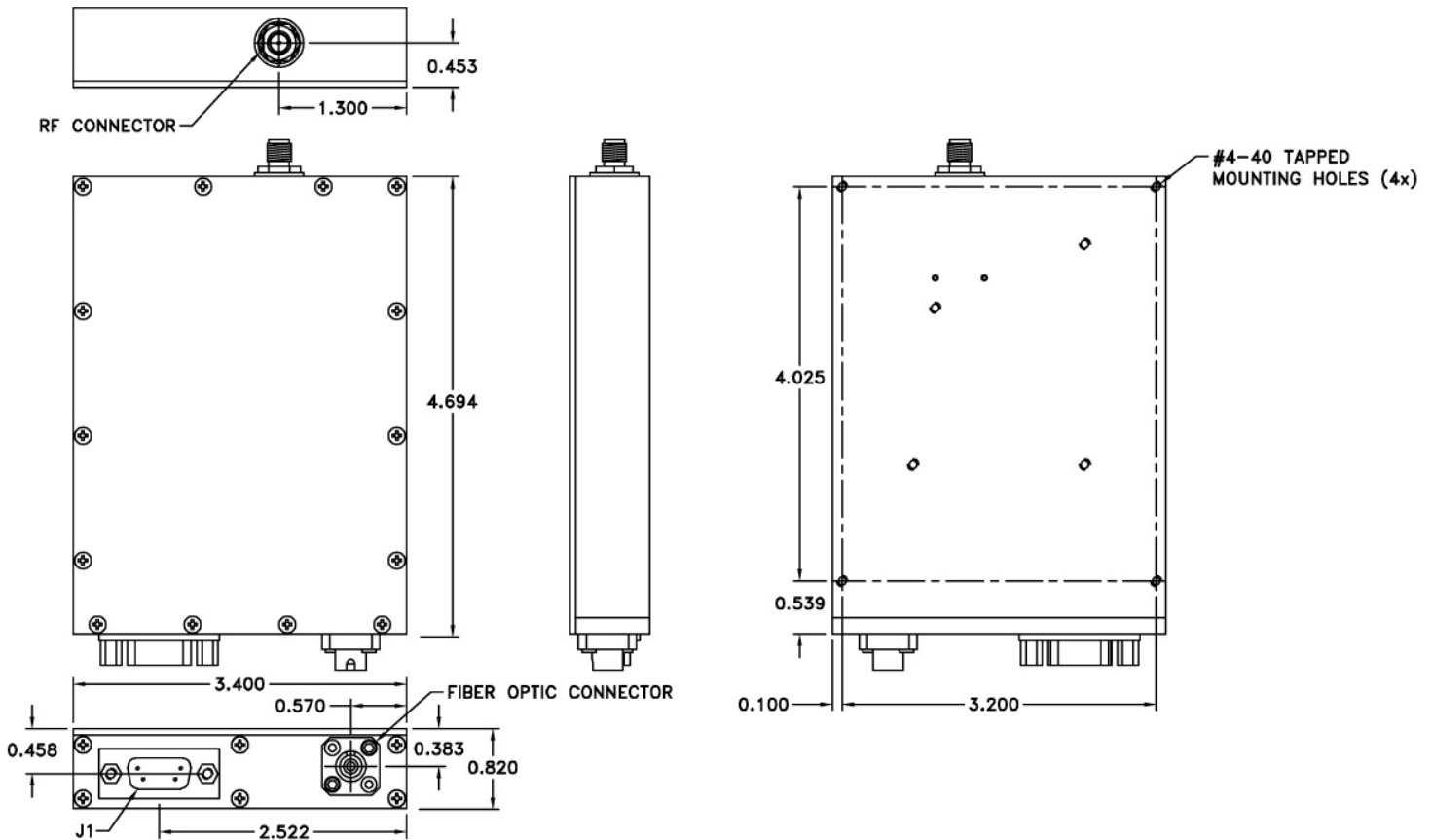
Contact Sales at Emcore 626-293-3400, or visit [www.emcore.com](http://www.emcore.com).

## Ordering Information

SIRU-3000-AV Diamond ACIM Optical Connector

SIRU-3000-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

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