



### Features

- » Extremely Wideband >20 GHz
- » High Dynamic Range
- » Customization Available
- » Fully Integrated Module
- » Complete Link Option

### Applications

- » Replaces Coax Cable
- » Radio Over Fiber
- » Radio Astronomy
- » Remote Antenna Sites
- » Phased Array Radar
- » EW/ECM
- » Optical Delay Lines
- » SATCOM

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### Description

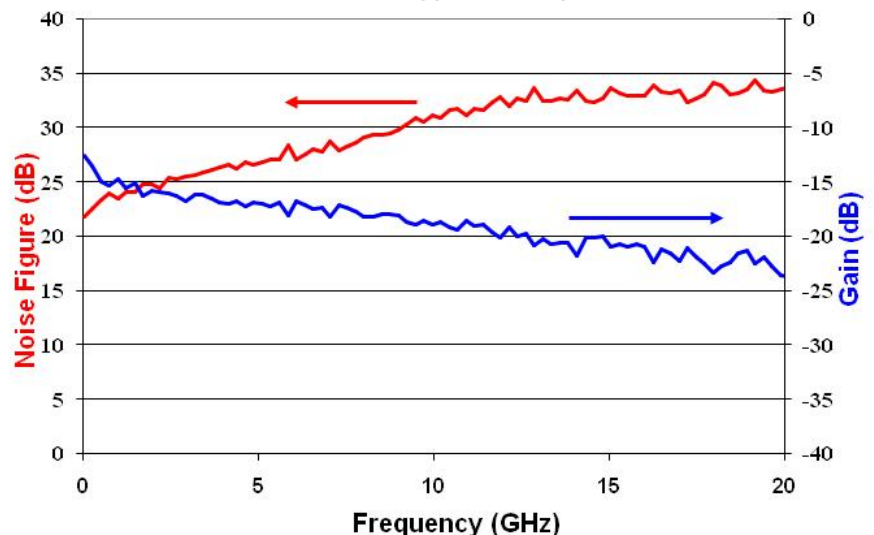
The PSI-2600-20UT is a high performance microwave photonic transmitter providing wideband electrical to optical (E/O) conversion for RF input signals beyond 20 GHz. Along with a PSI-2600-xR receiver module, the PSI-2600-20UT provides a complete fiber optic link solution designed to replace low loss coaxial cable or microwave repeaters for applications in military systems, satellite communications, radio astronomy, optical delay lines, cellular/wireless base stations or other RF/Microwave related systems. Part of the PSI-2600 series of microwave links, the PSI-2600-20UT transmitter does not incorporate any RF pre-amplification. Custom packaging, connectors and link gain configurations are also available. **Please contact PSI with your application needs.**

### RF Link Performance

Parameter	Condition	Min	Typ	Max	Units
Operating Bandwidth		0.10		20	GHz
Link Gain	@ 10 GHz	-22	-20		dB
Noise Figure	@ 10 GHz		32	35	dB
Input IP3	@ 10 GHz	20	22		dBm
Spur Free Dynamic Range	1 Hz band @ 10GHz	106	110		dB/Hz <sup>2/3</sup>
Gain Flatness	1-20 GHz			±5	dB
	Any 100 MHz band			±0.5	dB

Note: RF link specifications with PSI-2600-20UR and a 3m optical jumper (PSI-2601-20L Link)

PSI-2601-20L Typical Response



### RF Characteristics

Parameter	Condition	Min	Typ	Max	Units
Maximum RF Input				20	dBm
1 dB Compression Point		11			dBm
RF Input Impedance			50		$\Omega$
RF Return Loss		9.5	15		dB
RF Input Connector	SMA Female				

### Optical Characteristics

Parameter	Condition	Min	Typ	Max	Units
Wavelength		1520	1550	1556	nm
Optical Output Power		0.5		10	mW
Connector Return Loss		55			dB
Optical Output Connector	FC/APC				

Notes:

1. User supplied fiber optic cable should be singlemode Corning SMF-28 or equivalent
2. To minimize distortion caused by optical reflections the optical cable return loss should be >55 dB using angled-polished connectors
3. ITU channel wavelength selection is possible, please contact PSI with requirements

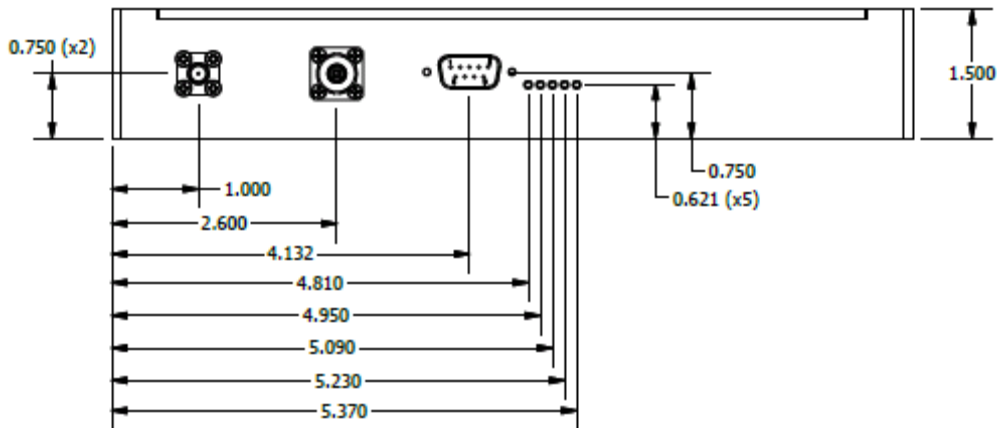
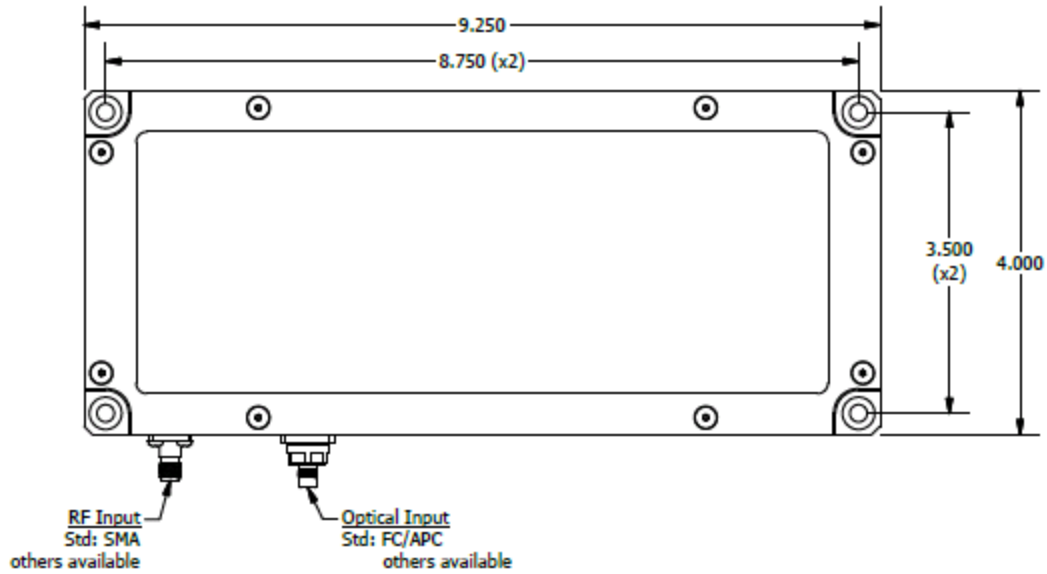
### Environmental Characteristics

Parameter	Condition	Min	Typ	Max	Units
Operating Temperature	Within Specifications	-10		60	$^{\circ}\text{C}$
Storage Temperature	No damage	-20		70	$^{\circ}\text{C}$
Humidity		0		95	%

### DC Power and Pin

Pin	Description
1	+15 V <sub>DC</sub> at 80mA max.
2	Ground
3	+5 V <sub>DC</sub> at 1500mA max.
4	-5 V <sub>DC</sub> at 1500mA max.
5	-15 V <sub>DC</sub> at 80mA max.
6	Laser Disable
7	Ground
8	Ground
9	Reset

**Mechanical Dimensions**



**Ordering Information**

PSI Part Number	Description
PSI-2600-20UT	E/O Transmitter Module
PSI-2601-20L	Microwave Photonic Link Includes: <ul style="list-style-type: none"> <li>• PSI-2600-20UT Transmitter Module</li> <li>• PSI-2600-20UR Receiver Module</li> </ul>
PSI-2603-20L	Microwave Photonic Link Includes: <ul style="list-style-type: none"> <li>• PSI-2600-20UT Transmitter Module</li> <li>• PSI-2600-20AR Amplified Receiver Module</li> </ul>