

# Fiber Optical Receiver

(850nm, ST connector)



DATASHEET

BUY NOW



## Features

- Compact
- Low Cost
- High Reliability
- High Coupling
- Efficiency

Agiltron optical receiver is based on a breakthrough fabrication platform technology featuring industrial leading attributes in low cost, high coupling efficiency, and stability. Our bonding material not only meets NASA's low outgas requirement, but is also capable of withstanding high temperatures (85°C). The package meet Telecordia 1221 reliability standard.

A fiber optic receiver is a device used to receive optical signals in a optical network. Optical receiver facilitates data transmissions between electronic devices (e.g., computer, input/output system, peripheral device, or switch) and optical data links in fiber optic systems. The fiber optic receiver is packaged in a stainless steel housing with ST style connector.

## Specifications

Parameter	Min	Typical	Max	Unit	
Min. Input Sensitivity			1.0	$\mu$ W	
High level logic output voltage	Pin < 0.1 $\mu$ W, I <sub>o</sub> = 0.8 mA		4.0	5.0	V
Low level logic output voltage	Pin > 1 $\mu$ W, I <sub>o</sub> = 0.8 mA		0.4		V
Rise time (0.4V to 2.4V)	FORC-118500021	Pin=1 $\mu$ W	12		ns
	FORC-228500021A		3		
Fall time (2.4V to 0.4V)	FORC-118500021	Pin=1 $\mu$ W	5		ns
	FORC-228500021A		3		
Pulse width distortion	Pin=1 $\mu$ W		10		%
	Pin=100 $\mu$ W		25		
Supply current	Pin < 0.1 $\mu$ W, V <sub>cc</sub> =5V		40		mA
Optical input power	1		100		$\mu$ W
Operating temperature		0 to +85			°C

### Notes:

Receiver (Rx) – 850nm

Specifications: V<sub>cc</sub>=5V, 100 $\mu$ m fiber, f=2.5 MHz, duty cycle=50%, 5 second warm-up time

**Legal notices:** All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 03/30/24

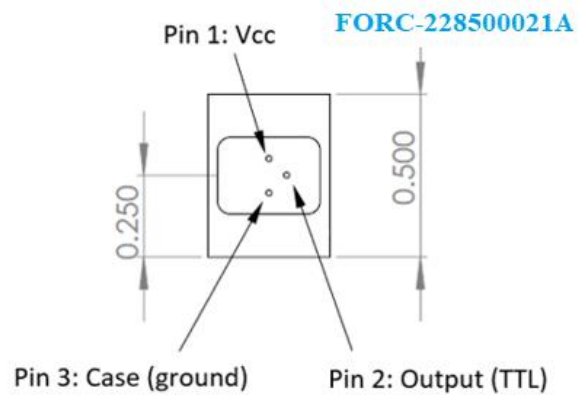
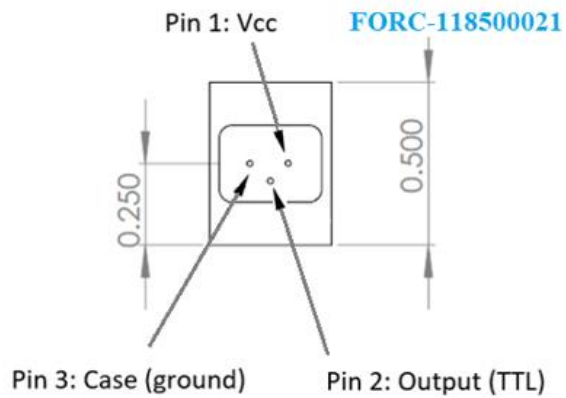
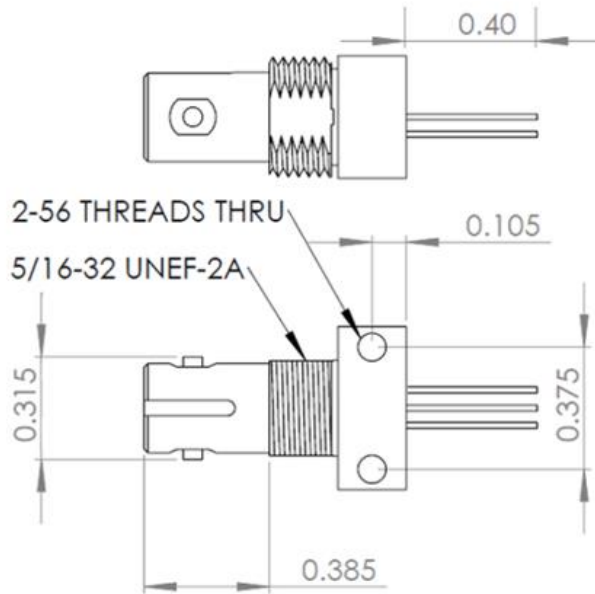
# Fiber Optical Receiver

(850nm, ST connector)



DATASHEET

## Mechanical Dimensions (Unit: mm)



### Included Hardware:

Description	Quantity
5/16-32 nut , width 3/8", thickness 3/32"	1
5/16" Internal tooth lock washer	1
2-56 x1/4 pan screw	2
#2 split lock washer	2

\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

## Ordering Information

### Part Number:

FORC-118500021

FORC-228500021A (90deg-rotated pin layout , with TTL inverting circuit)

# Fiber Optical Receiver

(850nm, ST connector)



DATASHEET

## Application Notes

---

### Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

### Fiber Cleanliness

Fibers with smaller core diameters (<5  $\mu\text{m}$ ) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

### Maximum Optical Input Power

Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the handling by expanding the core side at the fiber ends.