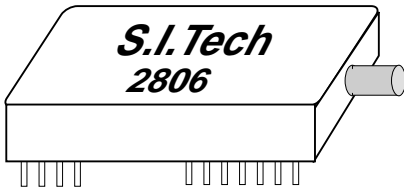
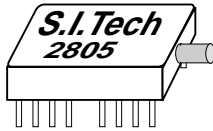


# Model 2805 TR/2806 REC



## Fiber Optic Transmitter/Receiver Pair

DUAL IN-LINE PACKAGE FOR PC BOARD MOUNT



### SYSTEM

**Transmission:** Up to 6500 ft. (2 Km) with suitable graded index fiber optic cable

**Typical Bit Error Rate:** Better than  $10^{-9}$

### ELECTRICAL SIGNAL INPUT/OUTPUT FOR TRANSMITTER AND RECEIVER

**Format:** TTL

**Connector:** Solder pads or DIP socket

**Duty Cycle:** 0 to 100%

**Minimum Pulse Width:** 50 nanoseconds

**Data Rate:** DC to 20 Mbps NRZ

**Input impedance:** TTL, optional 75 ohm TTL levels

**Output Impedance:** Standard TTL logic output (sink 16 milliamps, source 400 microamps)

### OPTICAL TRANSMITTER

**Output Power at 100 mA**

**LED Current:** 10 microwatts (-20 dBm) into 50 micron fiber. Output power is pin selectable over a 10 dB range

**Wavelength:** 820 nanometers (1300 nm option)

**Emitter Type:** LED

**Optical Connector:** SMA compatible metal receptacle

### OPTICAL RECEIVER

**Wavelength:** 670 to 950 nanometers, 820 to 900 nanometers is optimum (1300 nm option)

**Minimum Sensitivity:** (BER  $\leq 10^{-9}$ ) 1 microwatt (-30 dBm) @ 820 nanometers

**Maximum Sensitivity:** 10 microwatts

**Minimum Optical Risettime**

**required:** 0.25 microseconds

**Optical Connector:** SMA compatible metal receptacle

**Operating Temperature:** 0 °C to 50 °C

**Size:** TR2805 (24 pin DIP)

1.2" X 0.75" X 0.37" (3X1.9X0.94 cm)

REC 2806 (40 pin DIP)

2.0" X 1.12" X 0.37" (5X2.8X0.94 cm)

Hybrid circuit in an all metal DIP

**Weight:** TR/REC pair - 0.25 lb (100 grams)

**Stand Alone Version:** Model 2856 with power supply and

Bit-Driver® enclosure

**P.C.Board Version:** S.I.Tech 2865

### TRANSMISSION LINE INTERFACE

Operating distance is dependent upon optical fiber core diameter and the cable's optical attenuation. The table below indicates three cables that may be used at any data rate. These cables are available in connectorized assemblies to meet the exact configuration of your application.

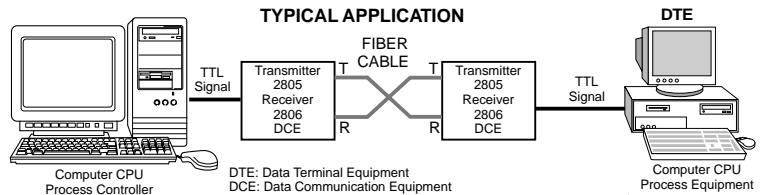
S.I.Tech offers complete links including fiber optic cable, connectors, cable assemblies, and Bit-Drivers®.

### OPERATING DISTANCE FOR FIBER OPTIC CABLE

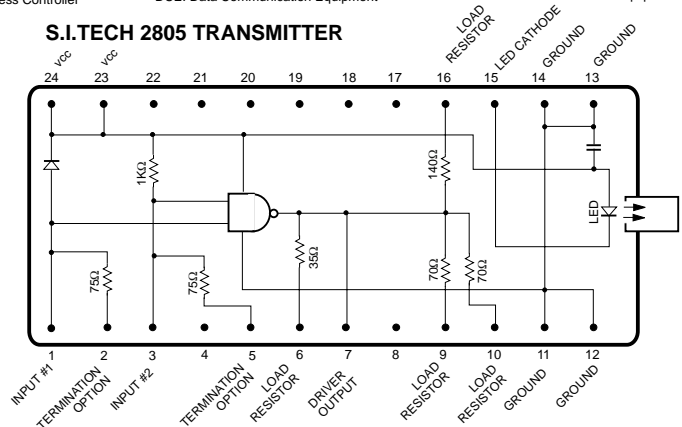
Fiber Size (Microns)	Attenuation dB/Km	Distance Meters	Distance Feet
62.5	4.0	2000	6600
50	3.0	2000	6600
10*	1.0	7000	23000

\*single mode option (1300 nm)

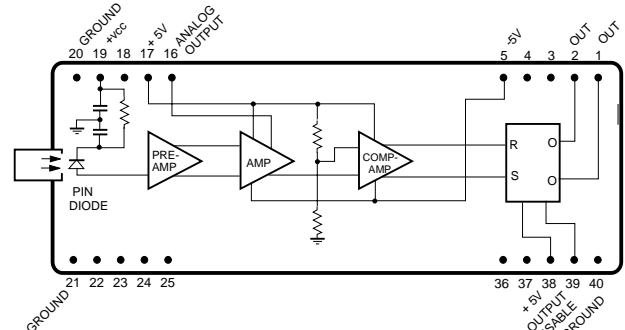
Optical unit connection: Connect the optical transmission line to the T and R receptacles. Note which cable channel goes to T or R by noting cable imprint. On the other end, reverse the connection.



### S.I. TECH 2805 TRANSMITTER



### S.I. TECH 2806 RECEIVER



Meets FCC requirements of Class A, Part 15 Computing Devices Standard.  
Specifications subject to change without notice.