

## Signal Powered Fiber Optic Modem

### LDM80



- ✓ Data Rates to 19.2K Baud at 3.5KM (2.2 Miles)
- ✓ 17dB Optical Link Power Budget
- ✓ Powered by RS232 Host Port Signals
- ✓ Full Duplex Asynchronous Operation
- ✓ Indicating LEDs
- ✓ DCE/DTE Switch
- ✓ Designed for FCC Class A Requirements
- ✓ Complies with FCC Class A Requirements
- ✓ Pinned or Socketed RS232 Connectors

The LDM80 is a small, inexpensive fiber optic transmitter/receiver completely powered by the host RS232 port. The enclosure for the LDM80 is a conductive shell which greatly reduces RF radiation and susceptibility. The rugged metal enclosure is small enough to mount on the back panel of typical computer equipment saving valuable desk and floor space. A pair of these units allows most RS232C cable links to be replaced and extended with a duplex fiber optic cable. The normal 50-foot RS232 limit may be extended to 2.2 miles (3.5 km). Fiber optic data communications provide complete EMI/RFI rejection, isolation, elimination of ground loops, and reduced error rates. Data security is enhanced by almost nonexistent electromagnetic emissions.



LDM80-P-025 shown smaller than actual size.

The RS232 connection is through male or female EIA 25-pin connectors. The fiber optic connection is through ST connectors. The LDM80 is equivalent to a 3-wire, full duplex, RS232 circuit. Handshake signals are locally connected as in Figure 1.

Indicating LEDs come on during a "SPACE" on transmit or receive data. A TD/RD reversing DIP switch is provided for connection to DTE (Data Terminal Equipment) or DCE (Data Communication Equipment) ports.

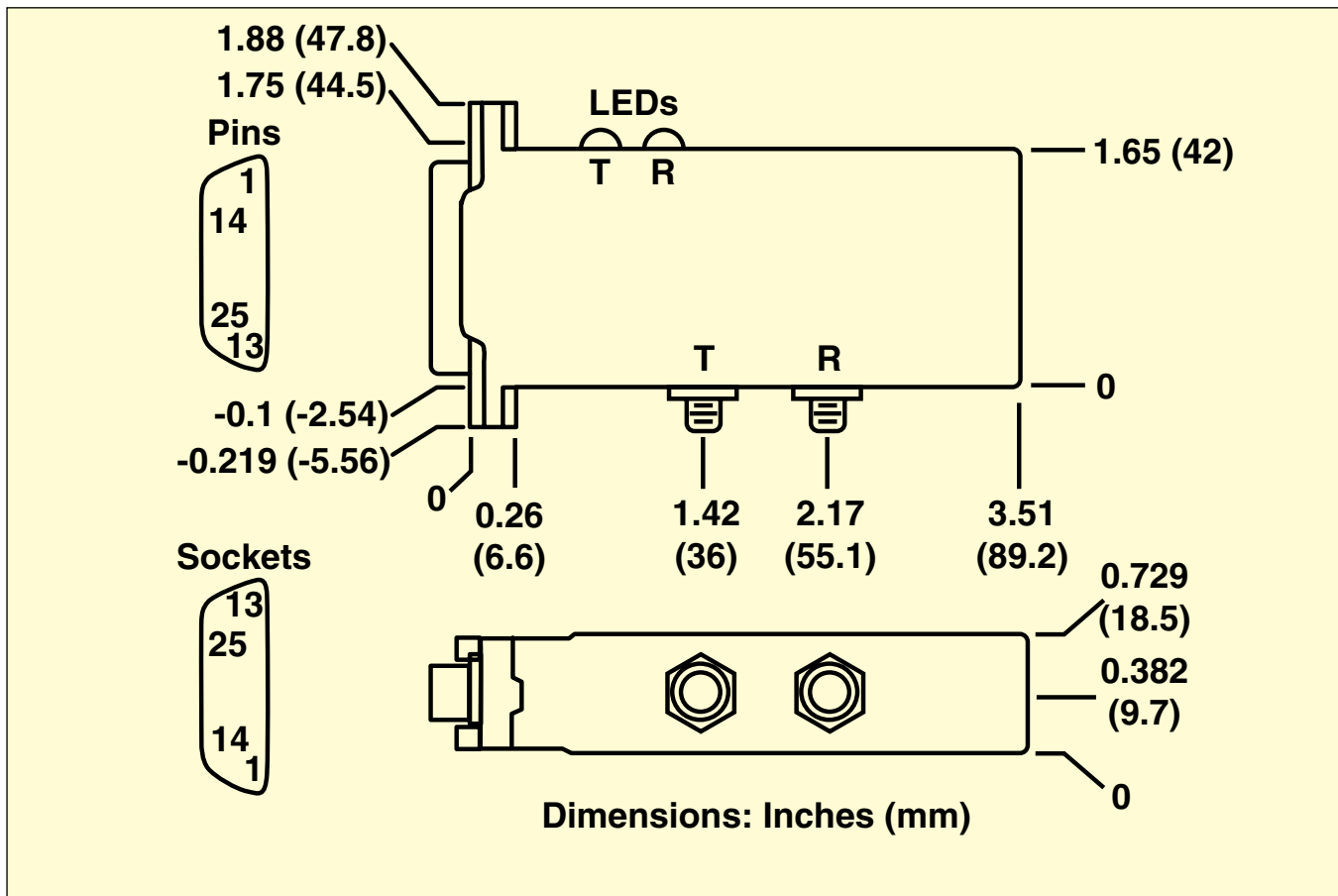
### Recommended Cables

The LDM80 optical transmitter may be used with a wide range of fiber sizes. Specifications are for 100/140µm. Other fiber sizes may be used with a resulting different cable loss budget.

### Specifications

<b>Baud Rate Range</b>	0 – 19.2K	
<b>Distance: Over Baud Rate Range</b>		
<b>Fiber Core Diameter (µm)</b>	<b>Max. Cable Length (km)</b>	<b>Loss Budget (dB)</b>
100 (glass)	3.5	17
50 (glass)	2.5	9
62.5 (glass)	2.0	11
85 (glass)	3.5	16
200 (glass)	3.5	23
1000 (plastic)	30 meters	32
<b>Channel Lines<sup>(1)</sup></b>	TD, RD	
<b>Control Lines<sup>(1)</sup></b>	RTS, CTS, DSR, DTR, RLSD	
<b>Modes</b>	Asynchronous 2-fiber full duplex, 1-fiber simplex	
<b>Optical Transmitter</b>	850 nm wavelength	
<b>Output from 1 m cable</b>	-26dB typ, -27dB min, -18dB max	
<b>Optical Receiver Power Input for 4 µs Pulse Distortion</b>	-44dB min	
<b>Optical Connectors</b>	ST	

Notes: (1) TD = Transmit Data, RD = Receive Data, RTS = Request To Send, CTS = Clear To Send, DTR = Data Terminal Ready, DSR = Data Set Ready, RLSD = Received Line Signal Detect.



OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners.

## Specifications

<b>RS-232 Output Voltage</b>	+5V logic 0, -5V logic 1 with 3kW Load
<b>DCE/DTE Switch</b>	One
<b>Diagnostic LEDs</b>	Two
<b>Power: Port Power and/or DC operation</b>	+5.0 to +8.5 Vdc, no current limit, 5mA >+8.5 Vdc, 10mA current limit
<b>Operating Environment</b>	-20 to +70°C, 0 to 95% relative humidity, non-condensing
<b>Dimensions</b>	3.51 x 1.88 x 0.729" (89.2 x 47.8 x 18.5 mm)
<b>Weight</b>	8.1 oz (230 g) maximum
<b>MTBF<sup>(1)</sup></b>	>100,000 hrs

Notes: (1) Ground-benign environmental conditions (no salt atmosphere, <50°C ambient temperature).

<b>To Order</b>		
<b>Model No.</b>	<b>RS232 Connector</b>	<b>Field Connector</b>
<b>LDM80-P-025</b>	25 Pin male	ST fiber optic connector
<b>LDM80-S-025</b>	25 Pin female	ST fiber optic connector

Includes operator's manual.

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**Ordering Example:** LDM80-P-025 converter and OCW-1, OMEGACARE<sup>SM</sup> extends standard 1-year warranty to a total of 2 years.