

# FINISAR®

## Key Features

- ▶ Full-duplex transceivers for optical data links over two glass optical fibers
- ▶ Short-Reach 850nm VCSEL Multi-mode or Long-Reach 1310nm DFB Single-mode available
- ▶ Multi-rate and Rate Select versions available
- ▶ Compact form-factor: Half the size of SFF transceivers
- ▶ Board-mounted
- ▶ Built-in digital diagnostic functions
- ▶ Duplex LC optical connection
- ▶ Single 3.3V power supply
- ▶ Interoperable with standard SFP and SFP+ optical transceivers
- ▶ Extended operating temperature range of -40°C to 85°C
- ▶ Extreme storage temperature range from -57°C to 100°C
- ▶ Option for conformal coating for high reliability in corrosive environments
- ▶ Qualified to applicable tests in MIL-STD-810G, MIL-STD-883 and GR-486-CORE
- ▶ Meets applicable requirements for Gigabit Ethernet, 10 Gigabit Ethernet, and Fibre Channel

## Applications

- ▶ Fast Ethernet
- ▶ 10 Gigabit Ethernet
- ▶ 1 Gigabit Ethernet
- ▶ 8G Fibre Channel
- ▶ 4G Fibre Channel
- ▶ 2G Fibre Channel
- ▶ Proprietary high-speed data links

# Endurance®

## For Industrial and Military Applications

### Rugged and Compact 125 Mb/s to 10 Gb/s Optical Transceivers

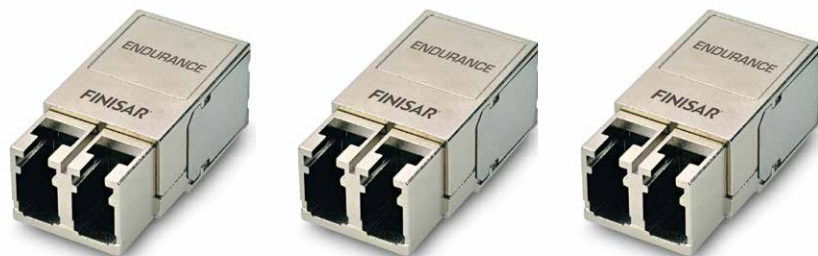
#### Overview

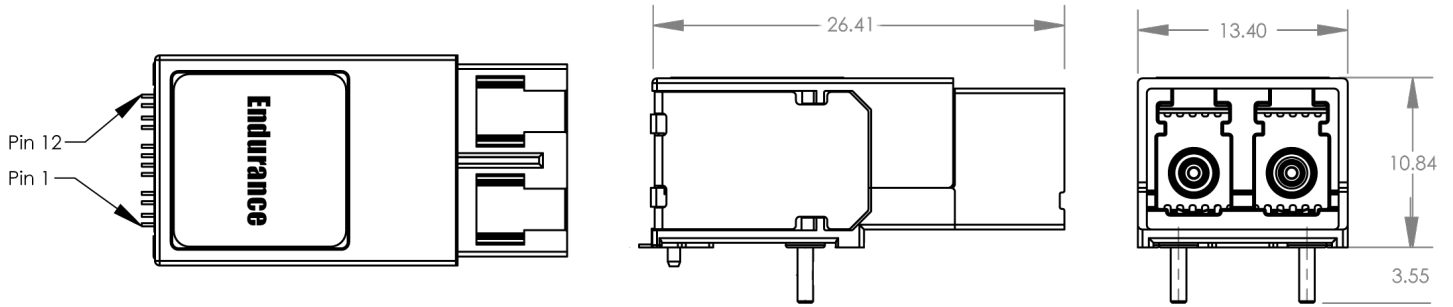
Endurance® is a family of compact transceiver modules designed to be rugged and robust so they are optimal for industrial and military applications. They have a wide operating temperature range, a metal housing to minimize effects of Electro-Magnetic Interference, two through-hole mounting posts to stabilize under shock and vibration conditions, and the pins are soldered directly to the Printed Circuit Board (PCB) to ensure constant connectivity. Endurance modules are available with conformal coating for additional reliability in harsh environments. They have been qualified to Telcordia and Military standards.

The simple serial interface is independent of protocol and can thus be used in a wide range of applications. Digital diagnostic functions for monitoring and control of the module are provided via a 2-wire serial interface.

#### Key Advantages

- ▶ Robust for environments with extreme temperatures, shock and vibration, electromagnetic interference, and corrosion
- ▶ Saves valuable board space with its compact size
- ▶ Light weight fiber optic solution for data links compared to coaxial cable
- ▶ Low power consumption
- ▶ Utilizes Finisar's vertically integrated and highly reliable laser technology and integrated circuit capabilities





Measurements are in mm

## Specifications

| Parameter                   | Short-Reach/Short-Wave   | Long-Reach/Long-Wave   |
|-----------------------------|--|------------------------|
| Supply Voltage              | 3.3 Volts  | 3.3 Volts              |
| Supply Current, Max         | 300 mA   | 250 mA                 |
| Laser Source                | 850 nm VCSEL Multi-mode  | 1310nm DFB Single-mode |
| Operating Temperature Range | -40°C to +85°C   | -40°C to + 85°C        |
| Link Distance               | 26 to 300 meters* (10 Gb/s)<br>70 to 150 meters* (4 Gb/s)<br>300 to 550 meters* (1 Gb/s) | 10 km                  |

\*Dependent on multi-mode fiber type

## Product Selection

| Part Number  | Description   |
|--------------|---|
| FTE8510K1LTN | Endurance, Short-Reach, 10 GbE, -40°C to 85°C, No Conformal Coating                         |
| FTE8510K1LTY | Endurance, Short-Reach, 10 GbE, -40°C to 85°C, Conformal Coating                            |
| FTE8511K1LTN | Endurance, Short-Reach, 10 GbE/1 GbE Rate-select, -40°C to 85°C, No Conformal Coating       |
| FTE8511K1LTY | Endurance, Short-Reach, 10 GbE/1 GbE Rate-select, -40°C to 85°C, Conformal Coating          |
| FTE8504K1LTN | Endurance, Short-Reach, 125 Mb/s to 4 Gb/s Rate-select, -40°C to 85°C, No Conformal Coating |
| FTE8504K1LTY | Endurance, Short-Reach, 125 Mb/s to 4 Gb/s Rate-select, -40°C to 85°C, Conformal Coating    |
| FTE1411K1LTN | Endurance, Long-Reach, 10 GbE/1 GbE Rate Select, -40°C to 85°C, No Conformal Coating        |

Contact Finisar for other product options.

## Size Comparison



SFF

Endurance

