

# Passive Optical Components for Communications



**LIGHTEL**

# Fiber Optic Passive Components

Today's networks are evolving at a rapid pace to support the growing demands of high speed internet applications such as e-commerce, video streaming and gaming. Consequently, service providers are upgrading their networks to NG-PON, NG-PON2 and 5G. These new systems require high reliability, high performance and cost-effective fiber optic passive components. Lightel is a US-based fiber optic company focusing on the design and manufacture of high-quality fiber optic components.

## Optical Splitters, Couplers, WDMs

Since 2000, Lightel has been producing fiber optic single mode and multimode fused devices for the communications market. Applications include Passive Optical Network (PON) distribution, optical test equipment, optical amplifiers, and wavelength division multiplexing. Lightel produces a wide variety of fiber optic splitters supporting wavelengths (visible to 2 $\mu$ m) in multiple wavelength windows. Available in PM and non-PM configurations and customer specified split ratios and connectorization options, these devices have proven reliability and high performance and are tested to GR-1209/1222-CORE standards. In addition, Lightel's fused wavelength division multiplexers (WDM) are offered in a large selection of wavelength options for optical amplifiers and simple two-wavelength division multiplexing.

### Couplers/Splitters

- Single, Dual or 3-Window Wideband Coupler
- 1x3 Single Fused Single or Dual Window Wideband Splitter
- 1x4 Single Fused Single or Dual Window Wideband Splitter
- Ultralow PDL Single Window Wideband Coupler
- Compact Size Single or Dual Window Wideband Coupler
- Polarization Maintaining (PM) Coupler
- PLC Wideband Splitter
- Multimode Coupler

### Fused WDMs

- 1480/1550nm WDM
- 1310/1550nm WDM
- 1060/1550nm WDM
- 980/1550nm WDM
- 980/1060nm WDM
- 980/1030nm WDM
- PM 980/1550nm WDM
- PM 980/1060nm WDM



# Coarse and Dense WDMs

Service providers are continuously seeking to leverage their existing fiber infrastructure to meet the ever-expanding bandwidth needs of their customers. Wavelength division multiplexing combines multiple signals at various wavelength for transmission onto an optical fiber. Lightel offers an extensive portfolio of filter-based WDMs, Coarse Wavelength Division Multiplexers (CWDM) and Dense Wavelength Division Multiplexers (DWDM) to support these requirements.

## Filter WDM

- 1310/1550nm WDM
- High Isolation 1310/1550nm WDM
- 1310+1490/1550nm WDM
- High Isolation 1310+1490/1550nm WDM
- C Band and L Band WDM
- L Band Supervisory Channel WDM
- 1064nm Band Pass Filter
- PON & NGPON WDM
- OTDR WDM

## DWDM

- 100 & 200GHz Single Channel DWDM Add/Drop
- PM 100 & 200GHz Single Channel DWDM Add/Drop
- 4, 8, 16, 32, & 40 Channel DWDM Mux/Demux

## CWDM

- Extended Band Single Channel CWDM Add/Drop
- 4, 8, & 16 Channel Extended Band CWDM Mux/Demux
- Compact Size 4-18 Channel CWDM (CCWDM) Mux/Demux



## Packaging Options

Lightel's devices are available in a large variety of packaging options. The customer can specify discrete components, cassettes, LGX modules, trays and rack mount units. All standard communication connectorization options are available including LC, SC and MPO.



# Fiber Optic Isolators and Circulators

Lightel also produces isolators and circulators for communications applications. Designed to prevent unwanted back reflected light from returning into the laser source, our optical isolators provide superior performance at a cost effective price. Similarly, Lightel's circulators are three-port devices which allow light to travel in only one direction. Both of these types are available in a wide range of options including polarization insensitive, small form factor, single/dual stage, polarization maintaining, temperature hardened and extended wavelength ranges.

## Isolators

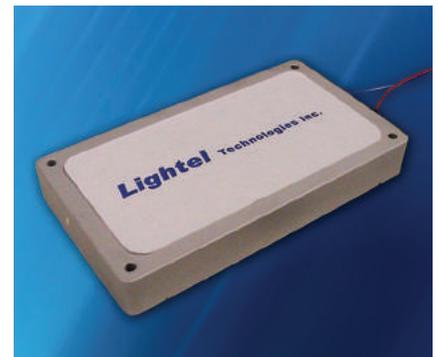
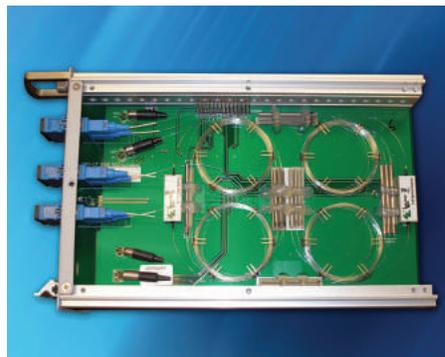
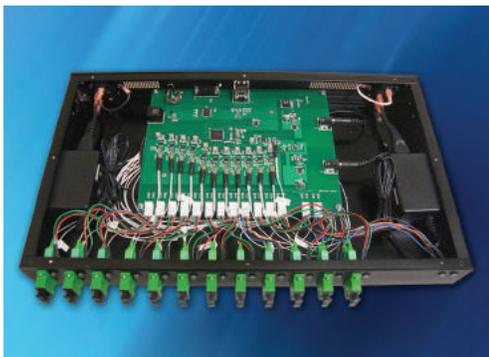
- Polarization Insensitive (PI) Single or Dual Stage Isolator
- 2-in-1 or 3-in-1 PI 1550nm Isolator
- Mini Size PI Isolator
- 1064nm PI Isolator
- Polarization Maintaining Isolator
- 1064nm Polarization Maintaining Isolator

## Circulators

- 1310 or 1550nm PI 3 Port Circulator
- 1064nm PI 3 Port Circulator
- PM 1310nm or 1550nm 3 Port Circulator
- PM 1064nm 3 Port Circulator

# Functional Modules

In addition to providing passive components, Lightel designs, develops and manufactures complete functional modules incorporating active devices such as switches, transmitters and receivers. Manufactured to a customer drawing or designed by Lightel from a customer concept, our functional modules include network protection switches, optical power monitoring systems and optical signal processing modules.



## About Lightel

LIGHTEL designs, develops, and manufactures a broad range of fiber optic products and services for telecommunications, CATV, and datacomm industries. Our product line includes fused, micro-optic and planar light-wave circuit-based passive optical components. In addition, we offer our technology leading connector end face video microscope products including the Connector Inspector, Digital Inspector and ViewConn. We also manufacture fiber optic component workstations for those customers who wish to fabricate their own devices for vertical integration, product development or R&D purposes.

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