



CORNING

OEM Micro-Optics Solutions

From the cloud to the home, OEM works with equipment manufacturers to develop unique and proprietary wavelength division multiplexing (WDM), passive transceiver components, and connectivity products.

Combining Corning's innovation in material science with a deep understanding of wavelength management and silicon photonic components and subsystems, our micro-optics products are improving optical performance in metro and access networks, FTTx, and data centers.

See how we connect to:

- [Transceiver Core Components](#)
- [Wavelength Management](#)
- [Data Center Monitoring](#)

Connect to Transceiver Core Components

Empowering data center and metro networks, 100/400G and beyond

In transmitting between light and electrical signals, whether you choose a parallel multifiber approach or WDM-based single-fiber solution, OEM has you covered both inside and outside of the transceiver.

Connect to Free-Space WDM with POSA and NanoMUX™

OEM passive optical subassembly (POSA) uses our free-space-optics WDM platform to fit directly inside small form-factor pluggable transceiver (SFP) and quad small-form-factor pluggable transceiver (QSFP). Our unique substrate-based POSA and glass-block POSA offer mux and demux capability in the transceiver with ultra-compact footprint. It is designed to seamlessly integrate with your specific input and output interface.

Features:

- Supports major transceiver form factors CFP2/4/8, QSFP28, QSFP-DD, and beyond
- Implemented as receiver optical subassembly (ROSA) or transmitter optical subassembly (TOSA) with highly customizable design
- Ultra-low insertion loss (< 1.0 dB) with thin-film-filter technology
- Robust design protects against thermal perturbation and shock



OEM NanoMUX multiplexer is also developed on our proprietary free-space-optics WDM platform. It can be placed inside transceivers and is also suitable for pure mux/demux module or board-mount designs.

Features:

- Free-space-optics platform with thin-film-filter technology delivers low insertion loss (< 1.5 dB)
- Robust multiplexer in a small-form-factor
- GR-1209 and GR-1221 qualified
- Fiber-leads design provides splicing or connectorized solution



Connect to Silicon Photonics with our Fiber Array Assembly (FAU)

Our FAU connects to the heart of a silicon photonics chip—the photonics integrated circuit (PIC). Leveraging Corning's innovation in material science, our FAU is vertically integrated, from fiber, to customized glass, and to cable assembly.

Features:

- FAU-PIC interface enables 100G/400G and beyond
- Highly customizable for glass angle and cable assembly type
- Precise positioning and measurement with fiber integrity control
- High-density FAU with various core pitch as small as 50 μm



Connect to Metro and FTTx Wavelength Management

A spectrum of cost-effective wavelength division multiplexing products

Connect to Metro and Access Networks

In bringing fibers from long haul to the last mile, coarse WDM was created as a cost-effective method to cope with a different set of needs within metro and access markets. Over the last 10 years, OEM coarse WDM products evolved from a three-port design to our proprietary free-space-optics platform, the SpectruMux® compact coarse WDM (CCWDM), and NanoMUX™ which fits into different form-factor multiplexing applications.

Features:

- A variety of form factors with flexible and compact packaging
- Ultra-stable and highly reliable, Telcordia 1209/1221 compliant
- Extended operating temperature available

Evolution of OEM Free-Space Optics WDM Platform



Connect to FTTx

OEM FTTx products are designed to provide wavelength management and enable the desired density and functionality of the modern optical distribution networks: GPON, XGS-PON, NG-PON2, PtP, OTDR, and video.

Features:

- Customized WDM designs available, including FSO option
- Plug-and-play solution available with blocking FWDM and OTDR
- Coexistence devices allow NG-PON to work with existing GPON systems



Pluggable Blocking FWDM



Pluggable OTDR



WDM Filters



WDM Filter Cassette



FWDM Reflector

Connect to High-Speed Data Center Monitoring

Tapping into data streams, without disrupting the flow

Modern data centers and networks are handling ever-increasing amounts of information, and it's critical to understand exactly what is going on in these data streams. OEM developed innovative thin-film multimode taps, and they act like a beam splitter, stripping off the required power to be monitored and passing the rest on through the fiber.



Features:

- No mode dispersion in high-speed applications
- Bidirectional multimode tap and custom split ratio units are available
- High-density 2-in-1 design

Other Micro-Optics Products from OEM

In addition to the key solutions mentioned above, we also offer a variety of micro-optics products consisting of DWDM, circulators, isolators, power monitors, switches, collimators, and variable attenuators.

With OEM, novel applications of our micro-optic technologies solve our customers' problems. Why not tap into our expertise and let us help you?

Contact us at oemsales@corning.com and visit the OEM website www.corning.com/opcomm/oem-solutions for more information.



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