Lightvision

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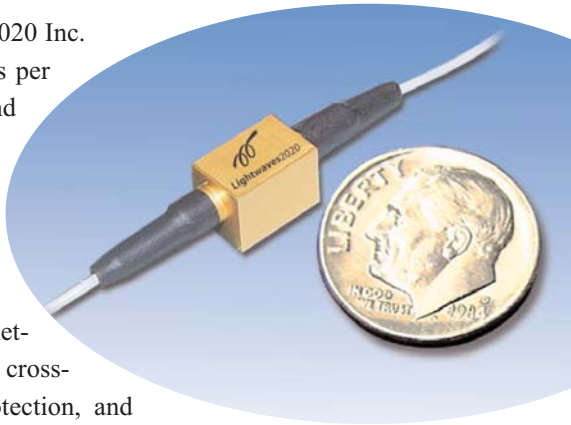
Finally, we have it....

Affordable, No Moving Parts

High Speed Variable Optical Attenuators (VOA)

NEW

The high speed VOA is designed and manufactured by Lightwaves2020 Inc. to meet the growing demand for all-optical networks to 40 gigabits per second (Gbps). Based on our company's solid-state technology and advanced package technology, the high speed VOA has no moving parts and contains high reliability features. The device is driven by 0-5 VDC voltages to produce optical power attenuation and switching.



The high speed VOA can be applied to channel balancing in optical networks, power equalization in optical add/drop modules and optical cross-connects, gain-tilt and power adjustment in EDFAs, receiver protection, and instrumentation. The features of this innovative device include: high speed (µs) attenuation control, no moving parts, continuous tuning, low PDL, low WDL, wide operating wavelength range, and voltage driving with low power consumption.

High Speed Polarization Controller

Lightwaves2020's high-speed polarization controller (PC) is based on novel optical material offering fast response in µs, in contract with conventional polarization controllers with speed in µs. The dramatic increase in response speed enables the new polarization controller suitable for demanding 40Gbs PMDC application as well as polarization Mux/DeMux application. In addition, with the functional diagram shown in diagram 1, the new high speed polarization controller is ideal for fiber sensing in optical security, spectroscopy and polarization dependent imaging in biomedical applications.

An optional driver-PCB, on which the polarization controller is fixed, is provided. The device is driven by 0 - 5VDC voltages to produce 0 - 2p phase retardation of the polarization state. The high-speed polarization controller (PC) has options of three or four cell design. The fourth cell is added for faster searching and controlling.

The features of this leading-edge product contain high speed (µs), broadband wavelength ranges, no moving parts, low insertion loss, low PDL over wavelength range, and solid state technology.

The applications of the polarization controller (PC) are: PMD compensation, polarization generator, polarization scrambler, polarization multiplexing / demultiplexing, polarization instrumentations, fiber sensing, polarization dependent imaging, and polarization coded optical security.

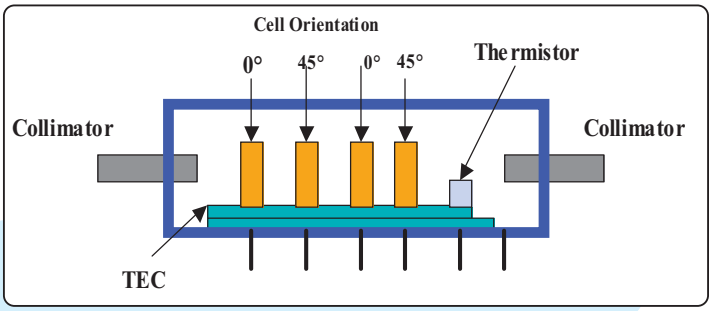
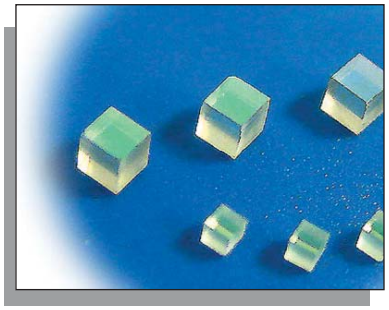


Diagram 1: Functional diagram of high speed PC

Telecom Filters



Lightwaves2020's Telecom filters are optimally designed and manufactured for fiber optical devices and modules. With the state-of-the-art optical coating process and advanced optical novel monitoring technology, Lightwaves2020's Telecom Filters have excellent performance and very high quality to build high-end optical devices and modules.

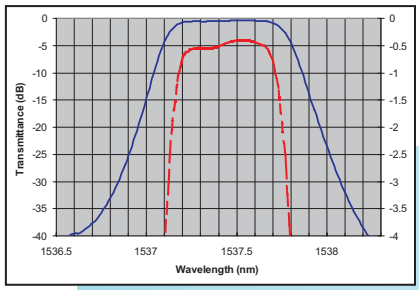
Features / Benefits

- Low insertion loss
- High transmission isolation
- High reflectance isolation
- Ultra high uniformity (+/- 0.1nm) for large size (15mm x 15mm)
- Low polarization dependent loss (PDL)
- Low temperature dependent wavelength shift
- Telcordia compliant
- Dielectric hard layers with excellent environmental stability and reliability

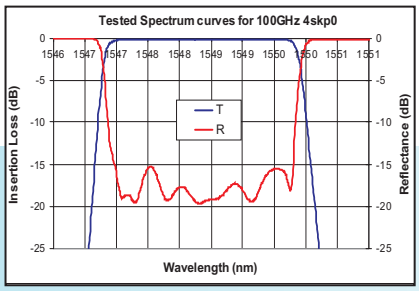
Product family

- DWDM: 50GHz, 100GHz, low CD 100GHz, 200GHz, 3skp0, 4skp0, customized filters.
- CWDM: standard (AOI= 0 or 13.5deg), extended (blocking 1250 - 1650nm, AOI= 0 or 13.5deg), 3 skp0, 4 skp0, 8 skp0, customized filter.
- GFF: any customized gain flattening filters.
- Edge filter: long pass filters, short pass filters.
- Large size filters: ultra high uniformity (+/- 0.1nm) for large size (15mm x 15mm) filters
- Other filter: filters on fiber tip, tap filters on grin lens

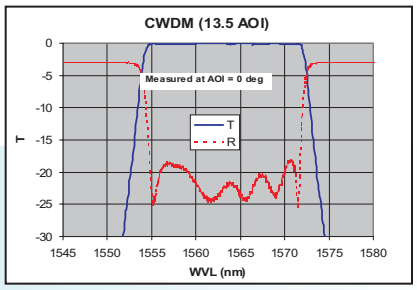
Application Examples



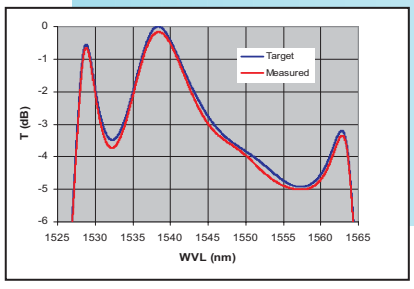
1) 100 GHz DWDM filters



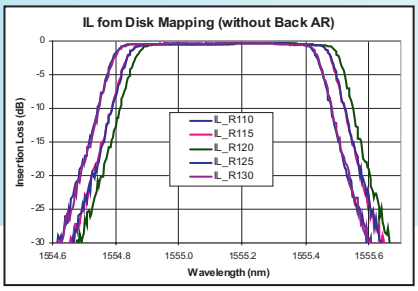
2) 100GHz 4skp0 filters



3) 13.5 degree AOI CWDM filters

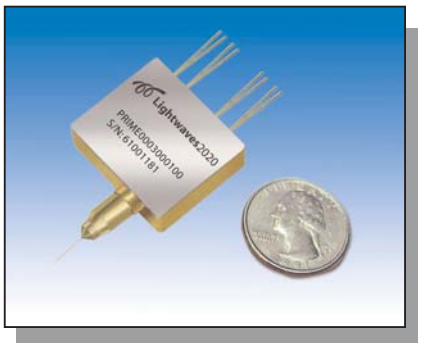


4) GFFs



5) Low CD 100GHz (large size)

Market and Product Information



Lightwaves2020 has released a fiber optic polarimeter, which can be used to calculate both the state of polarization (SOP) and the degree of polarization (DOP). With the operating wavelength ranging from 1520 to 1610nm, this device is ideal for integration into polarization measuring and stabilizing modules. It has found its wide applications in polarization division multiplexing, polarization measurement, PMD compensation, and fiber sensing systems. It has no moving parts and features fast response and easy mounting onto PCB board. The polarimeter has been qualified by a few Tier 1 customers already and will move onto volume production soon.

Lightwaves2020 has released Liquid Crystal based 16-channel VOA array, which has no moving parts and can be widely used in power adjustment in EDFAs and power equalization applications.

In addition, Lightwaves2020 has also released 2-channel VOA and power monitor integrated module and EDFA with GFF which offers flatness of 1.0dB.

Frank Lai has been promoted to Acting COO for his distinguished performance in leading the QA team.

Jewel Chang has been promoted to Director of Business Assessment for her expertise in coordinating and organizing revenue-driven activities.

Vivian Wang (Executive Assistant), Alice Tsui (Electric Engineer), Mandy Wong (Administrative Assistant), and Yiching Lin (Optical Engineer) are the new forces that just joined our team.

Lightwaves2020 has submitted the OCM patent application.

Z. G. Huang and Minjie Zhang will present their paper, "Cost Effective OSNR Monitor using LC Phase Shifter", at the OFC/NFOE conference.

Z. G. Huang and James Pang's article, "FIBER SOURCES: high-power ASE tunable lasers show their colors", has been published in Laser Focus World's November 2007 issue.

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Lightvision is a publication of Lightwaves2020 as a service to customers and sales associates.

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