

Optical Amplifiers: Market Shares, Strategies, and Forecasts, Worldwide, 2013 to 2019

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Abstracts

WinterGreen Research announces that it has published a new study Optical Amplifiers: Market Shares, Strategy, and Forecasts, Worldwide, 2013 to 2019. The 2013 study has 375 pages, 100 tables and figures. Worldwide optical amplifier markets are poised to achieve significant growth as the data in networks expands exponentially. As cloud systems proliferate and wireless data takes hold the efficiencies brought by high speed end-to-end optical networks are needed by carriers and in the data center.

Optical Amplifiers are evolving. There are various types including the EDFA, Raman, and Semiconductor configurations. The EDFA optical amplifier units can be used in telecom and datacom (SONET/SDH/DWDM/Gigabit Ethernet) applications to change an electrical signal into an optical signal and vice versa.

According to Susan Eustis, lead author of the study, 'Optical Amplifiers are used to update the communications networks to manage broadband, to update the data center networks to make them manage traffic with higher speeds, to implement the backbone network for mobile communications.'

'Everything is going mobile. This evolution is driven by mobile smart phones and tablets that provide universal connectivity. With 6 billion cell phones in use and one billion smart phones, soon to be 6 billion smart phones, a lot of people have access to mobile communication. Video, cloud-based services, the internet, and machine-to-machine (M2M) provide mobile connectivity. All these devices are networked and drive significant traffic to the broadband network, stimulating the need for optical transceivers.'

The optical amplifier component market is intensely competitive. There is increasing demand for optical components as communications markets grow in response to more

use of smart phones and more Internet transmission of data. The market for network infrastructure equipment and for communications semiconductors offers attractive long-term growth:

Data center growth is in response in part to the growth of big data, and in part to the incredible bandwidth being consumed by video content. New programming is moving to broadcast quality short videos that can be downloaded by users. Users can download broadcast quality news or training videos as broadband networks become universally available.

Low bandwidth video does not directly drive adoption of optical components. It indirectly does by creating demand for broadband data transport. Video capability at the high end of the market is creating need for network high speed of transmission just because of the quantity of data being transmitted.

The Optical Transport Network (OTN) is a set of optical network elements connected by optical fiber links. Optical network elements provide transport, multiplexing, switching, management, supervision and survivability of communication channels. Carrier Ethernet is emerging. Optical transceiver, transmitter, receiver, and transponders support the implementation of the new network capacity.

Optical amplifier components are an innovation engine for the network supporting end to end data transport over optical systems. Optical components support and enable low-cost transport throughout the network. Optical components are needed for high speed network infrastructure build-outs. These are both for carriers and data centers. Network infrastructure build-out depends on the availability of consultants who are knowledgeable.

Optical amplifiers are evolving to be compliant with the 10Gbps Small Form Factor Pluggable (XFP) Multi-Source Agreement (MSA) specification for next generation optical transceiver devices. There is expected to be tremendous investment in wireless cell tower base stations as the quantity of network traffic grows exponentially. Carriers worldwide are responding to the challenges brought by the massive increase in wireless data traffic. The advent of big data and exponential growth of data managed by the enterprise data centers is a significant market factor.

The global optical amplifier market at \$900 million in 2012 is anticipated to reach \$2.8 billion by 2019. Growth is driven by the availability of high speed processors and component devices that support increased speed and traffic on the optical networks.

The migration to all optical networks is ongoing.

Markets are driven by the availability of 100 Gbps devices and the vast increases in Internet traffic. Internet traffic growth comes from a variety of sources, not the least of which 1.6 billion new smart phones sold per year. Smartphone market growth is causing the need for investment in backhaul and cell tower technology.

Worldwide optical transport market revenues are forecast to grow rapidly through 2019. This is in the context of a world communications infrastructure that is changing. Technology is enabling interaction, innovation, and sharing of knowledge in new ways.

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