Is Silicon Photonics a Disruptive Technology?

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Abstract:

The potential impact of photonic integration on the optical communications market has captivated the imagination of the industry for the last two decades. Recent successes by vendors developing integrated products using Silicon photonics (SiP) has led to several mergers and high-value acquisitions in 2012-2016. Shipments of SiP-based products started to ramp 2014-2015 and exceeded $600 million in 2016.

It is clear by now that optical integration technologies, including SiP, are making a very significant impact on the market. The question is whether SiP can replace more mature Indium Phosphide (InP) and Gallium Arsenide (GaAs) technologies, which dominated the market over the last decade and already enabled a variety of integrated products?

This report offers an analysis of the impact made by integration on the market for optical transceivers and related components in 2010-2016. It offers a forecast for shipments and sales of discrete and integrated products based on InP, GaAs and SiP technologies for 2017-2022. The forecast is segmented by main applications, including Ethernet, WDM, Active Optical Cables (AOCs) and Embedded Optical Modules (EOMs) and a few others. Products are sorted by data rate, reach and form factor into more than 150 categories.