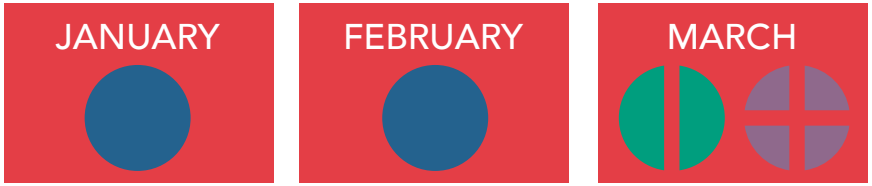
LIGHTCOUNTING

Subscription Packages & Publication Profiles 2019

REPORT OVERVIEWS & DESCRIPTIONS

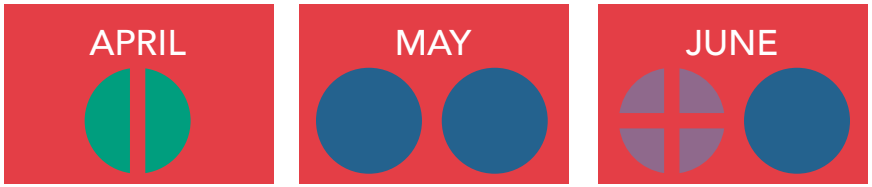
LightCounting reports and service products are designed to help executives plan and run their businesses. We support decision making based on facts and data with realistic projections. Our research covers the entire supply chain of the global optical communications industry with in-depth analysis on the optical components and modules.



Market for Optics in China

Communications ICs and Timing Devices

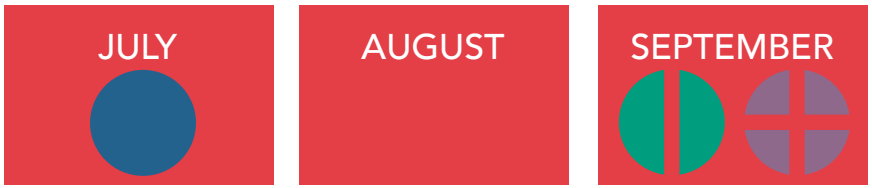
High Speed Ethernet Optics Quarterly Market Update



Market Forecasts

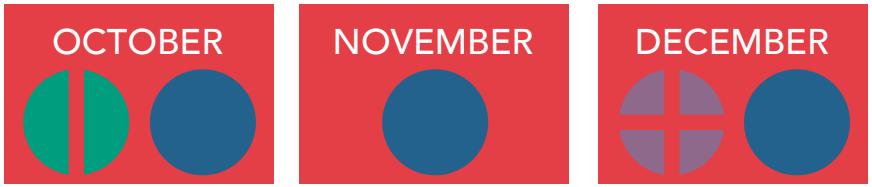
State of the Industry Integrated Optical Devices

Quantum Computing and Communications Quarterly Market Update



Mega Data Center Optics

High Speed Ethernet Optics Quarterly Market Update



Market Forecasts
Optics for Lidar and 3D Depth Sensing in Smartphones

Next Generation Access Optics

Active Optical Cables & Embedded Optical Modules Quarterly Market Update

MARKET FOR OPTICS IN CHINA

FREQUENCY ANNUALLY **DATE** JANUARY

Demand for optics from Chinese Service Providers surprised the industry in 2010-2018. It started with massive deployments of FTTx systems and continued with optical fronthaul in the access markets. First deployments of 100G DWDM technology in core networks set up high expectations for scale of future projects. Chinese Cloud companies are starting to build datacenters requiring more optical connectivity inside and outside of these facilities. This report takes a closer look at all these developments and offers detailed profiles of leading service providers and Cloud companies in China. It segments data on sales of optical components and modules in 2010-2018 between China and the rest of the world and offers forecast for sale of optics to China Market in 2019-2023.

Information on the report is available at LightCounting.com/China

NEW

COMMUNICATIONS ICs AND TIMING DEVICES

FREQUENCY ANNUALLY **DATE** FEBRUARY

This new report will offer a forecast of the global semiconductor IC market with the focus on optical communications. Transitions to higher data rates in optical communications open new opportunities for semiconductor IC manufacturers, such as new digital signal processing chips. It also increases requirements to driver and trans-impedance amplifiers used in optical transmission modules. The report will also offer analysis of the global market for timing devices, including market shares of the leading suppliers.

Information on the report is available at: LightCounting.com/Cloud

HIGH SPEED ETHERNET OPTICS

FREQUENCY SEMI-ANNUALLY **DATE** MARCH, SEPTEMBER

This report is focused on markets and technologies for Ethernet Optical transceivers. It will include the latest shipment data and a forecast for more than 50 types of Ethernet transceivers segmented by speed, reach and form factors. Confidential sales data from more than 20 leading suppliers provide a basis for this report. As an active participant in the IEEE 802.3 standards process, LightCounting is also uniquely placed to provide an insider perspective on vendors' latest products and technologies under consideration by the IEEE.

Information on the report is available at: LightCounting.com/Ethernet

QUARTERLY MARKET UPDATES

FREQUENCY QUARTERLY

DATE MARCH, JUNE, SEPTEMBER, DECEMBER

These reports summarize the latest quarterly financial results and news of service providers, cloud companies, optical networking equipment vendors, module and component vendors. Each report also comes with a database featuring quarterly shipments, pricing and sales for more than 100 categories of optical components and modules based on confidential sales data collected by us from more than 25 leading vendors. The database also includes historical component sales data for the last 8 quarters and provides estimates for the current and the next quarter.

Information on the latest report is available at LightCounting.com/marketupdate.cfm

MARKET FORECASTS

FREQUENCY SEMI-ANNUALLY **DATE** APRIL, OCTOBER

Based upon confidential sales data provided by more than 25 leading optical component and module vendors together with data points obtained from semiconductor vendors, network equipment vendors, service providers and the cloud companies, these reports provide detailed forecasts for more than 125 optoelectronic modules including transceivers,transponders, line cards and WSS used in CWDM/DWDM, Ethernet, Fiber Channel, FTTx, Wireless Fronthaul and Optical Interconnect applications.

Information on the latest report is available at LightCounting.com/Forecast.cfm

STATE OF THE INDUSTRY

FREQUENCY ANNUALLY **DATE** MAY

This report provides a holistic look at the optical communications industry supply chain, spanning service providers, cloud companies, equipment manufacturers and the optical and semiconductor component and module suppliers. For each group, the report examines business strategies, M&A activity, and profitability. It also provides market shares of the top 3, top 6 and top 10 optical component and module vendors in CWDM/DWDM, Ethernet, Fibre Channel, FTTx, Wireless fronthaul and Optical Interconnect (AOC/EOM) market segments.

Information on the latest report is available at Lightcounting.com/SOTIR.cfm

INTEGRATED OPTICAL DEVICES

FREQUENCY ANNUALLY **DATE** MAY

Increasing data rates required in mega-datacenters and DWDM networks have lead to development of more complex optical devices that combine multiple functions on the same chip. New technologies such as Silicon Photonics (SiP) also hold promise for integration of optics and electronics. This report will include analysis of the market data from 2010-2018 and provide a forecast for shipments of integrated optical devices based on InP, GaAs and SiP technologies.

Information on the report is available at LightCounting.com/IntegratedDevices

NEW

QUANTUM COMPUTING AND COMMUNICATIONS

FREQUENCY ANNUALLY **DATE** JUNE

This report will discuss the latest advances in technologies for quantum computers and communication systems. It will analyze potential impact of these new technologies on the global optical communications market. The report will also profile leading vendors and potential structure of the supply chain in this emerging industry segment.

Information on the latest report is available at Lightcounting.com/MegaDC.cfm

MEGA DATA CENTER OPTICS

FREQUENCY ANNUALLY **DATE** JULY

This report provides a detailed analysis of demand for optical connectivity in datacenters and networks operated by Cloud companies. Analysis on technology transitions in servers, switches and DWDM transport equipment will be correlated to projections for sales of next generation optical products. The report will include a forecast for DWDM optics, Ethernet transceivers and Active Optical Cables, deployed by the Cloud companies.

Information on the latest report is available at Lightcounting.com/MegaDC.cfm

NEW

OPTICS FOR LIDAR AND 3D DEPTH SENSING IN SMARTPHONES

FREQUENCY ANNUALLY **DATE** OCTOBER

This report analyzes the new business opportunity for suppliers of optical components in the market for 3D depth sensors used in smartphones and lidars. It reviews different 3D sensing technologies, the VCSEL arrays, edge emitting lasers and detectors required to support them. The report will include historical data on shipments of these products in 2017-2019 and forecast for 2020-2024. It offers an analysis of the leading vendors and discusses future developments in the supply chain.

Information on the latest report is available at Lightcounting.com/3D

NEXT GENERATION ACCESS OPTICS

FREQUENCY ANNUALLY **DATE** NOVEMBER

This report examines how the new 5G wireless, 10GPON and NG-PON2 networks will reshape demand for optical components, reducing the opportunity for some types and speeds of modules, and increasing it for others. The report includes a detailed five-year forecast of transceiver shipments, prices and revenues, broken down by speeds, reaches and "colors" for both FTTx and wireless fronthaul applications. It includes tutorials and visual guides to mobile fronthaul, FTTx and cable TV networks.

Information on the latest report is available at Lightcounting.com/Access.cfm

ACTIVE OPTICAL CABLES AND EMBEDDED OPTICAL MODULES

FREQUENCY ANNUALLY **DATE** DECEMBER

This report examines two segments of optical interconnects that go beyond pluggable modules. Active Optical Cables (AOCs) and Embedded Optical Modules (EOMs), often referred to as on-board optics. AOCs aggregate optical transceivers into enclosed cables with electrical connections on the outside. Having gained traction in the High-Performance Computing (HPC) area, they are spreading into the data center and into proprietary intra-system interconnects. As data rates continue to ramp, signal losses increase to the point that the effective reach of copper cabling and traces on circuit boards shrinks considerably. EOMs are a potential solution in various applications.

Information on the latest report is available at Lightcounting.com/AOC.cfm

SUBSCRIPTION PACKAGES

LightCounting offers six subscription packages—Platinum Plus, Platinum, Gold, Gold Plus, Silver and Bronze.

The 2019 publication calendar includes 9 annual reports, 4 semiannual reports, and 4 quarterly market updates. In addition to these reports, subscribers also receive bonus material, including previews of the quarterly and semi-annual forecasts (at least two weeks ahead of the publication date), unlimited analyst enquiry (access to analysts for further information, discussion and insights), and at least 8 research notes for publication in the calendar year.

The following Research Notes were published in 2018:

- Is This the Right Time for Optical Companies to Invest? (February 2018)
- Open Networks Move Closer to Wide Deployment at OFC 2018 (April 2018)
- Scaling Up Production of Photonic Integrated Circuits (May 2018)
- Ciena Presents a Coherent Vision of the Company's Future (June 2018)
- Do All Roads Lead to Copackaging of Optics and ASICs (July 2018)
- An Eventful Week for the End of July: Infinera Aquires Coriant as ZTE Goes Back to Work (July 2018)
- Steady Progress But No Surprises at ECOC 2018 (October 2018)
- Staying on the Right Side of Change (October 2018)
- II-VI and Finisar: A Merger of Equals (November 2018)

LEARN MORE.
Find out more about our package rates.
Call 408.962.4851 or email info@lightcounting.com.

LIGHTCOUNTING

THE NAME ALONE IS WHAT SETS US APART AND
WHAT DEFINES US AS A COMPANY.

Fifteen years ago, LightCounting began with an analyst team focused on research for high speed interconnects for the datacom, telecom, and consumer communications markets. From that time our research team has grown to cover the whole supply chain from optical and semiconductor components, to modules, sub-systems and sensors. We have been defining and refining the market intelligence mix ever since, to offer our clients a unique perspective on the industry landscape ahead and a clear roadmap to navigate it with.

THAT'S OUR MARKET INTELLIGENCE.
THAT'S HOW IT HELPS OUR CLIENTS GROW.