

# Photonic Crystals: Materials, Technologies and Global Markets

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## Abstracts

### REPORT SCOPE

The report forecasts the size of the market in current U.S. dollars for overall components and modules internalizing photonic crystals in value terms for each individual component, as well as in module and volume terms wherever possible, from 2017 through 2023. Estimated values used are based on manufacturers' total revenues. Projected and forecasted revenue values are in constant US dollars, unadjusted for inflation.

The report forecasts the market size for:

Photonic crystal-enabled components and modules such as LEDs, solar and PV cells, displays, biosensors, image sensors, optical fibers, discrete and integrated optical components, and lasers and supercontinuum sources.

Forecasts are classified on the basis of application vertical, photonic crystal dimension, geographic region and individual country markets.

The Summary and Highlights chapter provides a snapshot of key findings of the report.

The Overview chapter discusses the theoretical overview of photonic crystals provides an overview of the market size of components and modules internalizing photonic crystals for the duration of 2017-2023. It also establishes the theoretical ground for better appreciation of the technology and commercial promise of photonic crystals across applications and domains.

Chapters 4 through 11 discuss individual components and modules that employ photonic crystals. Each chapter provides a detailed analysis of the current state of photonic crystal applications. The chapters also discuss the market potential in terms of verticals, dimensions and geographic regions. The basic theory behind these modules and the advantages photonic crystals provide them over conventional methods and material also are examined.

The U.S. Patent Analysis chapter highlights the patent activity of photonic crystals. The chapter classifies the patents awarded based on functional categories such as design innovations; energy applications of photonic crystals; fabrication and synthesis methodologies; integrated circuits and quantum dots; laser applications of photonic crystals; lighting applications of photonic crystals; photonic crystal fiber applications; sensor applications of photonic crystals and telecommunications applications of photonic crystals.

The Vendor and Stakeholder Analysis chapter details the major stakeholder classes engaged in photonic crystal commercialization. It also analyzes the activities of key players.

## **REPORT INCLUDES:**

63 data tables

An overview of the global market for photonic crystals, their materials and technologies

Analyses of market trends with data from 2017 and 2018, and projections of compound annual growth rates (CAGRs) through 2023

Description of Photonic crystal enabled components and modules such as LEDs, solar and PV cells, displays, biosensors, image sensors, optical fibers, discrete and integrated optical components as well as lasers and supercontinuum sources

Detailed analysis of photonic crystal applications and their future demand

Comprehensive profiles of the major players of the industry, including Canon Kabushiki Kaisha, MicroContinuum, NEC Corp., Obducat and Panasonic

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