

Global Quantum Cascade Laser Market Size study, By Fabrication Technology (Fabry–Perot, Distributed Feedback, Tunable External Cavities), By Operation Mode (Continuous Wave Mode, Pulsed Mode), By Packaging Type (C-Mount Package, HHL & VHL Package, TO3 Package), By End-User (Industrial, Healthcare, Telecommunication, Military & defense, Others), and Regional Forecasts 2022-2028

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Abstracts

Global Quantum Cascade Laser Market is valued at approximately USD XX million in 2021 and is anticipated to grow with a healthy growth rate of more than XX% over the forecast period 2022-2028. Quantum cascade lasers are semiconductor lasers that are used for emitting mid and long infrared portions of the electromagnetic spectrum. These lasers are also used for generating terahertz waves. Factors such as growing usage of quantum cascade lasers in gas sensing and chemical detection applications, surging demand in various healthcare applications, and flourishing development of the terahertz quantum cascade laser technology are driving the market growth across the globe. For instance, as per Statista, in India, the healthcare industry worth around USD 194 billion in 2020. Also, it is projected that the industry is rapidly growing and estimated to reach nearly USD 372 billion by 2022. Therefore, the growth of the healthcare industry is exhibiting a positive influence on the growth of the Quantum Cascade Laser Market around the world. However, the high costs of QCL-based devices and several complexities associated with the circuitry impede the growth of the market over the forecast period of 2022-2028. Also, the growing use of quantum cascade lasers in free-space optical communication and the development of QCL-based devices capable of detecting multiple gases are anticipated to act as catalyzing factors for the market

demand during the forecast period.

The key regions considered for the global Quantum Cascade Laser Market study include Asia Pacific, North America, Europe, Latin America, and the Rest of the World. North America is the leading region across the world in terms of market share owing to growing industrial manufacturing infrastructure development activities and presence of leading market players. Whereas, Asia-Pacific is anticipated to exhibit the highest CAGR over the forecast period 2022-2028. Factors such as the increasing investments in R&D to boost the adoption of QCLs, as well as increasing military & defense expenditure in emerging economies such as China and India, would create lucrative growth prospects for the Quantum Cascade Laser Market across the Asia-Pacific region.

Major market players included in this report are:

Thorlabs
Hamamatsu Photonics K.K.
mirSense
Emerson Electric Co.
Block MEMS
Wavelength Electronics Inc.
Pranalytica
DRS Daylight Solutions
Lasermix Inc.
nanoplus Nanosystems Technologies GmbH

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming eight years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within each of the regions and countries involved in the study. Furthermore, the report also caters the detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, the report shall also incorporate available opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Fabrication Technology:

Fabry–Perot
Distributed Feedback
Tunable External Cavities

By Operation Mode:

Continuous Wave Mode

Pulsed Mode

By Packaging Type:

C-Mount Package

HHL & VHL Package

TO3 Package

By End-User:

Industrial

Healthcare

Telecommunication

Military & defense

Others

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Rest of the World

Furthermore, years considered for the study are as follows:

Historical year – 2018, 2019, 2020

Base year – 2021

Forecast period – 2022 to 2028

Target Audience of the Global Quantum Cascade Laser Market in Market Study:

Key Consulting Companies & Advisors

Large, medium-sized, and small enterprises

Venture capitalists

Value-Added Resellers (VARs)

Third-party knowledge providers

Investment bankers

Investors

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