

Global (North America, Europe, Asia-Pacific, South America, Middle East and Africa) Laser Processing Acousto-Optics Device Market 2018, Forecast to 2023

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Abstracts

Three categories of acousto-optic devices will be mainly discussed in this report. They include the acousto-optic modulator, filter and deflector.

Acousto-optic modulator

By varying the parameters of the acoustic wave, including the amplitude, phase, frequency and polarization, properties of the optical wave may be modulated. The acousto-optic interaction also makes it possible to modulate the optical beam by both temporal and spatial modulation.

A simple method of modulating the optical beam travelling through the acousto-optic device is done by switching the acoustic field on and off. When off the light beam is undiverted, the intensity of light directed at the Bragg diffraction angle is zero. When switched on and Bragg diffraction occurs, the intensity at the Bragg angle increases. So the acousto-optic device is modulating the output along the Bragg diffraction angle, switching it on and off. The device is operated as a modulator by keeping the acoustic wavelength (frequency) fixed and varying the drive power to vary the amount of light in the deflected beam.

Acousto-optic filter

The principle behind the operation of acousto-optic filters is based on the wavelength of the diffracted light being dependent on the acoustic frequency. By tuning the frequency of the acoustic wave, the desired wavelength of the optical wave can be diffracted acousto-optically.

There are two types of the acousto-optic filters, the collinear and non-collinear filters. The type of filter depends on geometry of acousto-optic interaction.

Acousto-optic deflectors



An acousto-optic deflector (AOD) spatially controls the optical beam. In the operation of an acousto-optic deflector the power driving the acoustic transducer is kept on, at a constant level, while the acoustic frequency is varied to deflect the beam to different angular positions.

Scope of the Report:

This report focuses on the Laser Processing Acousto-Optics Device in global market, especially in North America, Europe and Asia-Pacific, South America, Middle East and Africa. This report categorizes the market based on manufacturers, regions, type and application.

The concentration of Laser Processing Acousto-Optic Devices industry is high. The top manufacturers are Gooch&Housego, Brimrose and Harris. Each of production, respectively with global sales market share as 45.36%, 18.39% and 8.63% in 2016. Other key manufacturers include Isomet,AA Opto-Electronic Company, A·P·E GmbH, IntraAction Corp and Panasonic.

The Laser Processing Acousto-Optic Device market is expected to be worth USD 70.65 Million by 2023, at a CAGR of 8% between 2017 and 2023. Laser Processing Acousto-Optic Device are used with laser systems for marking semiconductor components; hence, the players in the laser technology market are offering various high-speed semiconductor marking solutions, which in turn would boost the demand for acousto-optic devices technology in semiconductor and electronics vertical. Although Laser Processing Acousto-Optic Devices brings a lot of opportunities, the study group recommends the new entrants just having money but without technical advantage and upstream and downstream support do not to enter into this field.

The worldwide market for Laser Processing Acousto-Optics Device is expected to grow at a CAGR of roughly 6.8% over the next five years, will reach 66 million US\$ in 2023, from 45 million US\$ in 2017, according to a new GIR (Global Info Research) study.

Market Segment by Manufacturers, this report covers

Gooch & Housego	
Brimrose	
Harris	

Coherent



Isomet

AA Opto Electronic

A.P.E Angewandte Physik

IntraAction Electronics

Panasonic

Market Segment by Regions, regional analysis covers

North America (United States, Canada and Mexico)

Europe (Germany, France, UK, Russia and Italy)

Asia-Pacific (China, Japan, Korea, India and Southeast Asia)

South America (Brazil, Argentina, Colombia etc.)

Middle East and Africa (Saudi Arabia, UAE, Egypt, Nigeria and South Africa)

Market Segment by Type, covers

Acousto-optic Modulator

Acousto-optic Deflector

Acousto-optic Tunable Filter

Others

Market Segment by Applications, can be divided into

CO2 Laser Processing Machine



Fiber Laser Processing Machine

YAG Processing Machine

Others

There are 15 Chapters to deeply display the global Laser Processing Acousto-Optics Device market.

Chapter 1, to describe Laser Processing Acousto-Optics Device Introduction, product scope, market overview, market opportunities, market risk, market driving force; Chapter 2, to analyze the top manufacturers of Laser Processing Acousto-Optics Device, with sales, revenue, and price of Laser Processing Acousto-Optics Device, in 2016 and 2017;

Chapter 3, to display the competitive situation among the top manufacturers, with sales, revenue and market share in 2016 and 2017;

Chapter 4, to show the global market by regions, with sales, revenue and market share of Laser Processing Acousto-Optics Device, for each region, from 2013 to 2018;

Chapter 5, 6, 7, 8 and 9, to analyze the market by countries, by type, by application and by manufacturers, with sales, revenue and market share by key countries in these regions;

Chapter 10 and 11, to show the market by type and application, with sales market share and growth rate by type, application, from 2013 to 2018;

Chapter 12, Laser Processing Acousto-Optics Device market forecast, by regions, type and application, with sales and revenue, from 2018 to 2023;

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