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SCHOOL OF COMPUTING SCIENCE & ENGINEERING

CAT-3 Case Study Report File Submission

On

"**NIR SENSOR**" Year : first Semester : 1

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REPORT

The report incorporates an in-depth assessment of the competitive landscape, product market sizing, product benchmarking, market trends, product developments, financial analysis, strategic analysis and so on to gauge the impact forces and potential opportunities of the market.

Apart from this, the report also includes a study of the major developments in the market, such as product launches, agreements, acquisitions, collaborations, mergers and so on to comprehend the prevailing market dynamics at

present and its impact during the forecast period 2018-2023.

What are NIR Detectors/Sensors?

A Near Infrared (NIR) Detector is used to analyze the surface of the material by using infrared technology. This detector is used in the form of an NIR spectroscopy which uses the near infrared region of an electromagnetic spectrum. So, the infrared region cannot be recognized with the human eye and due to this it is referred as shorter wavelengths in the infrared spectrum. The major segments of NIR detectors/sensors is further discussed in this report and includes the various types of technologies used in NIR detectors such as MEMS FT-NIR, digital light processing NIR, nyxel, diode, array technology, silicon-on-

insulator image sensing and others. The NIR detectors/sensors report is also segmented on the type of products, such as photodetectors, type of image sensors, like CCD and CMOS and modules. NIR detectors/sensors use several types of substrate materials such as Pbs, HgCdTe, InGaAs, Si, Ge and others which are discussed in this report.

What are the major applications of NIR Detectors/Sensors?

NIR detectors/sensors are used in various applications such as eye tracking, gesture recognition, machine vision, 3D mapping, spectroscopy and others. The application like machine vision is the most preferred type of application which is used for providing imaging based automatic inspection and

is also used for process control for industrial purposes. Eye-tracking and spectroscopy are also widely used for purposes, like tracking image using HCI (Human Computer Interface) field as a tool for analyzing users' webpage usage patterns, allowing interaction with disabled people, medical diagnostics, psychological research and several others.

Who are the Major Players in the NIR Detector/Sensors market?
The companies referred to in the market research report include Sony, OmniVision (U.S), Kyosemi (Japan), ThorLabs (New Jersey), First Sensor (Germany), Teledyne Dalsa (Canada) and so on.

Key Takeaways from this Report

- Evaluate market potential through analyzing growth rates (CAGR %), Volume (Units) and Value ($M) data given at country level – for product types, end use applications and by different industry verticals.
- Understand the different dynamics influencing the market – key driving factors, challenges and hidden opportunities.
- Get in-depth insights on your competitor performance – market shares, strategies, financial benchmarking, product benchmarking, SWOT and more.
- Analyze the sales and distribution channels across key geographies to improve top-line revenues.

- Understand the industry supply chain with a deep-dive on the value augmentation at each step, in order to optimize value and bring efficiencies in your processes.
- Get a quick outlook on the market entropy – M&As, deals, partnerships, product launches of all key players for the past 4 years.
- Evaluate the supply-demand gaps, import-export statistics and regulatory landscape for more than top 20 countries globally for the market.

THANK YOU