Wafer Inspection Equipment Market is projected to surpass US$4,154.244 million by 2029 at a CAGR of 6.76%

The wafer inspection equipment market is anticipated to grow at a CAGR of 6.76% from US$2,628.062 million in 2022 to US$4,154.244 million by 2029.

NOIDA, UTTAR PARDESH, INDIA, April 4, 2024 /EINPresswire.com/ -- According to a new study published by Knowledge Sourcing Intelligence, the wafer inspection equipment market is projected to grow at a CAGR of 6.76% between 2022 and 2029 to reach US$4,154.244 million by 2029.

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>
> *Knowledge Sourcing Intelligence*

Wafer inspection devices are specifically engineered to identify physical and pattern flaws on wafers by accurately determining the precise coordinates of the flaws. The process of wafer inspection involves capturing an image of one die on a silicon wafer and comparing it to another, in order to identify defects. Any inconsistencies found during the comparison typically indicate the presence of a defect. These devices utilize automated vision inspection technology to effectively detect flaws in various components.

The use of patterned wafer inspection system and non-patterned wafer inspection system to guarantee the quality of chips in semiconductor manufacturing. Surging Integration of Advanced Packaging Technologies are primary driving force behind wafer inspection equipment market growth. As the complexity of chips continues to rise, there is a growing adoption of advanced packaging technologies such as 3D ICs. To ensure accurate alignment and connectivity between layers in these intricate structures, more advanced inspection methods are necessary.

Wafer inspection equipment plays a vital role in the semiconductor manufacturing process. These machines serve as checkpoints for quality control, guaranteeing that the silicon wafers utilized for chip production are defect-free before progressing along the production line.

Numerous product launches and collaborations are taking place in the market, thereby increasing the wafer inspection equipment market growth. For instance, in March 2024 Hitachi High-Tech launched the LS9300AD, a cutting-edge system designed to inspect defects on both sides of non-patterned wafers. By integrating traditional laser scattering technology with a new DIC function, it can identify shallow microscopic flaws, ultimately enhancing yield and cutting costs for chip producers.

Access sample report or view details: https://www.knowledge-sourcing.com/report/global-wafer-inspection-equipment-market

The wafer inspection equipment market, based on type is segmented into two categories namely patterned wafer inspection system and non-patterned wafer inspection system. Non-patterned wafer Inspection System is expected to account for a major share of the wafer inspection equipment market. Due to the initial step involves conducting a non-patterned inspection to detect any flaws present in the raw wafer.

The wafer inspection equipment market, based on technology is segmented into two categories namely E-beam inspection and optical inspection. Optical inspection is expected to account for a major share of the wafer inspection equipment market. Owning to popularity for routine inspections due to its efficiency, resulting in faster and more widespread usage.

Based on geography, the market for wafer inspection equipment market is expanding significantly in the Asia Pacific region due to favourable factors. In countries like India, China, and Taiwan there is a growing need for wafer inspection equipment in favourable industries, including semiconductor and chip manufacturing industry. This demand is being driven by these nations. Due to the growing chip production in the region, coupled with government initiatives to promote local chip manufacturing, is creating new possibilities for the use of inspection tools.

As a part of the report, the major players operating in the wafer inspection equipment market, that have been covered are KLA Corporation, Rudolph Technologies, Inc., ASML Holdings N.V., Hitachi, Ltd., Applied Materials, Inc., Toray Industries, Microtronic, Inc., Sonix Inc.

The market analytics report segments the wafer inspection equipment market as follows:

- By Type

  - Patterned Wafer Inspection System
  - Non-Patterned Wafer Inspection System

- By Technology

  - E-Beam Inspection
  - Optical Inspection

- By Geography

o North America

- United States
- Canada
- Mexico

o South America

- Brazil
- Argentina
- Others

o Europe

- United Kingdom
- Germany
- France
- Spain
- Others

o Middle East and Africa

- Saudi Arabia
- UAE
- Israel
- Others

o Asia Pacific

- Japan
- China
- India
- South Korea
- Indonesia
- Thailand
- Others

Companies Profiled:

- KLA Corporation

- Rudolph Technologies, Inc.
- ASML Holdings N.V.
- Hitachi, Ltd.
- Applied Materials, Inc.
- Toray Industries.
- Microtronic, Inc.
- Sonix Inc.

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