Microscopy Market Assessment, By Product Type [Optical Microscopes, Electron Microscopes, Scanning Probe Microscopes, Accessories and Software], By Application [Healthcare and Life Sciences, Material Science, Semiconductors and Electronics, Environmental Applications, Automotive and Aerospace, Others], By End-user [Academic and Research Institutes, Healthcare Facilities, Industrial Users, Pharmaceutical Companies], By Region, Opportunities and Forecast, 2018-2032F

Market Report | 2025-01-09 | 246 pages | Market Xcel - Markets and Data

AVAILABLE LICENSES:

- Single User License $4500.00
- Muti-User/Corporate Licence $5700.00
- Custom Research License $8200.00

Report description:

Global microscopy market is projected to witness a CAGR of 7.55% during the forecast period 2025-2032, growing from USD 12.81 billion in 2024 to USD 22.94 billion in 2032. Technological advancements, increasing research and development (R&D) investments, and augmented demand from biotechnology research are supporting the microscopy market's growth. Nanotechnology applications, precision medicine, and artificial intelligence (AI) integration are expected to further support the market's growth.

Microscopy uses complicated equipment to view objects that are so small and cannot be viewed with the naked eye. A few microscopy types include optical, electron, and scanning probe microscopy. Electron microscopy provides clear images with high resolution of cellular structures needed in biological research. Material science researchers employ it to observe nanostructures and defects in metals, polymers, and semiconductors. Moreover, environmental scientists utilize microscopes to study living things among water samples, and forensic experts observe tiny pieces of evidence at certain crime sites. These different uses showcase the pivotal role of microscopes in many scientific and industrial fields.

Additionally, a significant amount of government investment in the R&D sector shows that the government supports science and technological progress, propelling the requirement for advanced tools. Such efforts are exponentially beneficial for the growth of

the microscopy market. For instance, in November 2024, the UK government invested USD 25.87 billion in R&D, ensuring their participation in Horizon Europe. The investment also prioritizes the life science industry, with approximately USD 660 million committed to the Life Sciences Innovative Manufacturing Fund (LSIMF). This will help enhance the microscopy market through increased research opportunities and a higher product demand.

Major investments in the development of electron microscope facilities are also expected to provide lucrative growth opportunities to the global microscopy market. In April 2024, USD 153.76 million was promised for a new national electron microscope facility in Cheshire, United Kingdom. The advanced facility aims to develop new materials and products to combat major challenges such as climate change and drug discovery.

Government Fundings in R&D Boost Market Growth

Increasing funding accelerates the growth of the microscopy market as it enhances and propels advanced technologies such as super-resolution microscopy. Such advanced technologies enable scientists to observe cellular structures with much greater precision, which creates an increased demand for next-generation microscopy devices. Most government-funded investments lead to collaborative efforts among academic institutions, industries, and research laboratories. These partnerships establish cutting-edge facilities with modern, state-of-the-art microscopy, which become easily accessible to researchers and drive innovation in microscopy across the globe.

In October 2024, the Franceschi Microscopy & Imaging Center at the Washington State University (WSU) secured USD 2.5 million in funding for equipment upgrades. This money will help them acquire new transmission electron microscopes (TEM). Installation will take place in less than one year and represent a significant expansion of WSU's research capabilities. In addition, companies and start-ups are receiving more investment to expand their capabilities in enhancing the life sciences industry. For example, in November 2024, Clair Scientific, a Danish start-up, raised USD 17 million for an innovative microscope that deploys cutting-edge imaging technology and cloud computing. The investment will allow the company to accelerate the commercialization of the microscope and place it uniquely in the market.

Technological Advancements in Microscopy Drive Market Expansion

Technological advances in microscopy are one of the major contributors to the growth of the market. The microscopy field has significantly improved with resolution advancements, artificial intelligence integration, and digital imaging. Such technologies enable detailed and precise observations in various areas, improving research findings in healthcare and nanotechnology areas. Automation and miniaturization developments are also increasing the ease of use and accessibility of microscopy. New applications of technology emerge as their scope widens due to these technological developments, thus boosting the market's growth. In May 2024, Hitachi High-Tech Corporation released the SU3900SE and SU3800SE high-resolution Schottky scanning electron microscopes (SEMs) that feature nano-level precision with an efficient observation of specimens. This launch is improving usability and cutting down the operator's workload. It is expected to augment the development of high-tech devices in microscopy, positively influencing the market's expansion.

Growing Focus on Biotechnology Research Fuels Market Growth

The increasing focus on biotechnology research rapidly drives the growth of the microscopy market as large companies launch new products in response to the changing demands of the industry. Large players employ state-of-the-art technologies to develop high-performance microscopes to conduct in-depth studies of sophisticated biological inquiries. Several key players have developed advanced light and fluorescence microscopes to support the growth of the biotechnology sector. This focus on innovation enhances research effectiveness and further reinforces the dominance of the optical microscope industry. With biotechnology applications increasing worldwide, the steady introduction of new products by major companies is likely to uphold market leadership and spur future growth.

For instance, in June 2024, Nikon Corporation unveiled its AX/AX R with NSPARC Super-Resolution Confocal Microscope. The advanced system has a fourfold larger field of view than the former and captures images sixfold faster. The product aims to improve efficiency in biology, disease research, and drug development, supporting scientific research and bolstering market growth.

Optical Microscope Dominates the Market

Optical microscopes are the dominant segment of the microscopy market because of their vast applications and friendly design. These devices are mainly found in research laboratories, educational institutions, and healthcare facilities. They can deliver high

resolution at a low price as compared to other alternatives. Additionally, the rising focus on biological research and increasing demand for diagnostic and clinical applications are further augmenting the growth of the segment. Continuous improvement in the technological aspect, particularly in digital and fluorescence microscopy, enhances the functions of optical microscopes, ensuring that they will remain in continued use. In May 2024, Oxford Instruments plc announced the launch of new benchtop fluorescence and super-resolution models based on its highly successful BC43 CF benchtop confocal microscope launched in 2021. Such launches are making advanced microscopy accessible to many users and could potentially lead to market growth while significantly improving the quality of research in many fields.

North America Accounts for Major Microscopy Market Share

North America dominates the global microscopy market, accounting for the largest share due to several factors. It has many important industry leaders and many local manufacturers. Advanced medical facilities and a rising demand for diagnostic services are aiding market growth. Moreover, government efforts to improve healthcare systems are also supporting the market growth in the region. North America also contains strong economies that support innovation and technology. As such, the region is a significant part of the microscopy industry, promising stable growth shortly. In October 2024, Carl Zeiss AG partnered with CIC Innovation Services LLC to provide advanced microscopes and AI image analysis to the East Coast and Philadelphia. With USD 1 million in new equipment, this partnership is expected to help UCity Square scientists in areas like cancer treatment and personalized medicine. Such projects highlight North America's leadership in the microscopy market.

Meanwhile, Asia-Pacific is expected to witness rapid growth in the microscopy market in the coming years due to tremendous requirements from the research and academic institutes because of rising research studies in the region.

Future Market Scenario (2025-2032F)

The microscopy market is set to grow because of new developments in nanotechnology, life sciences, and materials research. There is a rising need for precision imaging in medical diagnostics, biotechnology, and semiconductor industries that will boost innovation. New technologies like AI-powered microscopes, super-resolution imaging, and government funding for R&D will help the market grow even more in the next few years.

Furthermore, technological advancements like AI integration in microscopy are changing the field by improving image analysis and making research processes faster, supporting market growth. For instance, in July 2024, Medprime Technologies Pvt. Ltd. launched Micalys, an AI-based digital microscope platform that will revolutionize digital pathology in India. This new solution makes diagnoses much more accurate, workflows better, and increases productivity. Micalys solves vital access and cost problems, mainly targeting remote zones and small healthcare facilities in the country.

Additionally, the increasing efforts to enhance microscope capabilities are also expected to boost the market's growth. For example, the Joint Electron Microscopy Center at ALBA, inaugurated in February 2023, promotes research in structural biology and materials science. The center accommodates two of the world's most powerful electron microscopes that work in tandem with synchrotron light, improving Spanish research capabilities in these fields.

Key Players Landscape and Outlook

Key players in the microscopy industry are utilizing strategies such as mergers, acquisitions, partnerships, and new product launches to improve their services and competitiveness. Such efforts will propel significant market growth, allowing big-cap industry players to increase their presence and, therefore, find new opportunities.

In April 2024, Carl Zeiss AG strategically partnered with Argolight S.A. to improve microscopy imaging quality control. This partnership combines Argolight's advanced solutions with ZEISS microscopes, enabling precise performance checks. This will boost user trust in results and help them understand how their imaging systems perform, aiming for more accurate and reliable microscopy imaging.

In May 2023, Nikon Corporation launched the first digital imaging microscope for medical use in Japan, ECLIPSE Ui, distributed by its subsidiary Nikon Solutions Co., Ltd. The instrument has a distinctive, eyepiece-less design that improves pathologists' posture, reduces physical strain, and speeds up workflow by allowing easy observation of images on a monitor.

Table of Contents:

5.3.1.1.1.By Value
5.3.1.1.2.By Volume
5.3.1.2.Market Share Analysis & Forecast
5.3.1.2.1.By Product Type
5.3.1.2.1.1.Optical Microscopes
5.3.1.2.1.1.1.Confocal Microscopes
5.3.1.2.1.1.2.Stereo Microscopes
5.3.1.2.1.1.3.Digital Microscopes
5.3.1.2.1.1.4.Compound Microscopes
5.3.1.2.1.1.5.Inverted Microscopes
5.3.1.2.1.2.Electron Microscopes
5.3.1.2.1.2.1.Scanning Electron Microscopes (SEM)
5.3.1.2.1.2.2.Transmission Electron Microscopes (TEM)
5.3.1.2.1.2.3.Cryo-Electron Microscopes
5.3.1.2.1.3.Scanning Probe Microscopes
5.3.1.2.1.3.1.Atomic Force Microscopes (AFM)
5.3.1.2.1.3.2.Scanning Tunneling Microscopes (STM)
5.3.1.2.1.3.3.Near-Field Scanning Optical Microscopes (NSOM)
5.3.1.2.1.4.Accessories and Software
5.3.1.2.2.By Application
5.3.1.2.2.1.Healthcare and Life Sciences
5.3.1.2.2.1.1.Clinical Diagnostics
5.3.1.2.2.1.2.Drug Discovery and Development
5.3.1.2.2.1.3.Forensic Analysis
5.3.1.2.2.1.4.Cell Imaging
5.3.1.2.2.2.Material Science
5.3.1.2.2.3.Semiconductors and Electronics
5.3.1.2.2.4.Environmental Applications
5.3.1.2.2.5.Automotive and Aerospace
5.3.1.2.2.6.Others
5.3.1.2.3.By End-user
5.3.1.2.3.1.Academic and Research Institutes
5.3.1.2.3.2.Healthcare Facilities
5.3.1.2.3.3.Industrial Users
5.3.1.2.3.4.Pharmaceutical Companies
5.3.2.Canada
5.3.3.Mexico
*All segments will be provided for all regions and countries covered
6.Europe Microscopy Market Outlook, 2018-2032F
6.1.Germany
6.2.France
6.3.Italy
6.4.United Kingdom
6.5.Russia
6.6.Netherlands
6.7.Spain
6.8.Turkey

Microscopy Market Assessment, By Product Type [Optical Microscopes, Electron Microscopes, Scanning Probe Microscopes, Accessories and Software], By Application [Healthcare and Life Sciences, Material Science, Semiconductors and Electronics, Environmental Applications, Automotive and Aerospace, Others], By End-user [Academic and Research Institutes, Healthcare Facilities, Industrial Users, Pharmaceutical Companies], By Region, Opportunities and Forecast, 2018-2032F

Market Report | 2025-01-09 | 246 pages | Market Xcel - Markets and Data

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4500.00
	Muti-User/Corporate Licence	$5700.00
	Custom Research License	$8200.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			

Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2025-05-06
		Signature	