Ultraviolet Disinfection Equipment Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The Ultraviolet Disinfection Equipment market size is expected to grow by registering a CAGR of 12% during the forecast period. Due to the coronavirus crisis, businesses in the UV disinfection equipment market are considering the critical criteria and protocols to ensure the effectiveness of UV sterilization processes in a human-safe way, driving the market significantly.

Key Highlights
UV-C light is used by UV disinfection equipment to produce and develop a germicidal effect. Increasing UV disinfection equipment use in various applications for food and beverage production, wastewater treatment, medical care, and other industries will be a crucial driver of growth throughout the projection period.
In light of the recent global spread of infectious diseases and other potential pathogens that can be transmitted through water and air, as well as the degree of containment in drinking water wreaking havoc on the health of general consumers in developing countries, factors such as increasing awareness of the importance of health literacy in individuals, partly imparted by government bodies, and the degree of containments in drinking water driving the growth of the UV disinfection systems market share.
Ultraviolet disinfection equipment finds its applications in diverse industries, ranging from the purification of water in individual homes to disinfecting the water supply of an entire city to industrial wastewater treatment, as UV water treatment is recognized as a safer and cost-effective solution for industrial applications.
Moreover, ultraviolet disinfection equipment is becoming increasingly popular as an effective alternative to existing chemical water disinfection techniques like chlorination and ozonation. It also has additional advantages like lower capital and operating costs, ease of installation and maintenance, and shorter contact times.
Despite this, The market has also witnessed an influx of new businesses supported by venture capital, such as robotics firms with robots for specialized or niche tasks. These new start-ups have been encouraged by introducing their products into the market for industries ranging from food processing to healthcare by regulatory bodies like the FDA and USDA. ?

In addition to the performance benefits of Ultraviolet disinfection equipment, the occasional maintenance of its components, including the UV lamp and Quartz Sleeve, to be reviewed every six months, can be performed without professional assistance. This makes it ideal for residential and municipal end-users.
Low operational expenses provide a quick return on investment, despite specific UV disinfection systems having a higher starting cost than chlorination. But there are obstacles, such as the fact that only microorganisms are removed from wastewater, not other toxins like heavy metals, manufactured chemicals, or salts. However, benefits, including non-chemical water treatment, simple installation and maintenance, and low power requirements, attract end users.
With the recent outbreak of COVID-19, the UV disinfection systems market is witnessing a significant surge in demand due to its disinfecting surfaces and germs-killing properties. Many countries, such as China and the United States, use UV lamps to clean surfaces and prevent infection. According to the photonics media, COVID-19 has increased the demand for UV components in disinfect spaces.
The recent outbreak of COVID-19 is expected to boost the Ultraviolet disinfection equipment market share in the medium to long run. For instance, the International Ultraviolet Association (IUVA) believes that UV disinfection technologies can reduce the transmission of COVID-19, the SARS-CoV-2, by acting as a multiple-barrier.

Ultraviolet Disinfection Equipment Market Trends

Municipal End Users are Expected to Project the Largest Market Share

Municipal wastewater treatment facilities have begun switching from traditional technology to UV disinfection because it is more affordable, secure, and environmentally beneficial. Additionally, due to issues with water scarcity, the market for UV disinfection systems is driven by the rising price of fresh water. UV systems convert wastewater in its tertiary stage into water that can be reused for secondary purposes, like gardening.
Moreover, It is estimated that contaminants in drinking water cause 502,000 diarrheal deaths annually, particularly in developing nations like India. Contaminations can spread diseases like diarrhea, cholera, dysentery, typhoid, and polio - the WHO also estimates that 1.8 billion people rely on drinking water supplies tainted with faces. Considering the economic element linked with developing countries and the efficient solutions provided by UV disinfection systems, such harsh situations fuel the necessity for UV disinfection systems.
The need for a higher level of disinfection and a reduction in byproducts has grown due to rising awareness of the significance of municipal water quality and the growing number of regulations. As a result, many businesses are integrating purpose-built UV plants into the municipal treatment processes to offer complete network protection.
Rapid industrialization has increased water pollution in emerging nations, and the growing population has increased the demand for clean, safe drinking water, which is predicted to drive up product demand. Due to the rising use of technology in water and wastewater treatment facilities in developed nations, the municipal segment dominated the global UV disinfection equipment market.
The market for UV disinfection systems is driven by the demands for municipal water and the water quality requirements set by reputable local agencies like the Food and Drug Administration (FDA). For example, the FDA established a standard for the quality and purity of the water that must be used to produce drug products and pharmacological substances. Therefore, businesses can use UV disinfection equipment to accomplish the same.
Additionally, UV Disinfection can assist by treating municipal wastewater in the tertiary stage, which will help combat the issues of water scarcity and the rising cost of fresh water. So that wastewater can be reused for secondary purposes like flushing and gardening, UV systems made explicitly for municipal wastewater can disinfect wastewater.

Asia Pacific to Witness Significant Growth

The Asia Pacific region, which faces challenges from a lack of clean drinking water and its expensive assistance, benefits from the growing population by becoming one of the most significant marketplaces. The mentioned factors drive the UV disinfection systems market.
Local government body projects, such as the National Mission for Clean Ganga, the Five Year Plan of the China Government, and the Chicago River project, involve installing UV disinfection systems, thereby driving the UV disinfection systems market.
During the projection period, the expanding investments in the pharmaceutical, chemical, food and beverage, and automotive sectors in China, India, and other APAC regions will significantly impact driving demand for wastewater treatment and, consequently, UV disinfection equipment.
India currently possesses the majority of the polluted areas in the world due to increased industrialization and urbanization. Additionally, the growing regional economy, favorable industrial laws, and the development of the automobile industry are some key factors influencing the need for air and water filtration products.
Demand for ultrapure water is increasing considerably in the APAC region compared to the other areas globally. Ultrapure water is extensively used in the pharmaceutical and semiconductor sectors. The demand for electronic equipment is driven by rising disposable income and the purchasing power parity of a significant portion of the worldwide population. These elements encourage the development of the UV disinfection equipment market because semiconductors are employed in electrical goods.
The Asia Pacific region is expected to be one of the higher growth regions during the forecast period.
Because water and wastewater treatment is a crucial part of China's overall municipal and industrial water management, the demand for these products is anticipated to grow significantly throughout the forecast period. As a result of the rising demand for UV-equipped devices in the wake of the COVID-19 epidemic, major manufacturers in China are putting more emphasis on product innovations and technological advancements.

Ultraviolet Disinfection Equipment Market Competitor Analysis

The market is significantly fragmented and showcases a high degree of competitiveness. Some major players dominating the market are Xylem Inc., Trojan Technologies, Calgon Carbon Corporation, Severn Trent Services, and Atlantic Ultraviolet Corporation.

April 2022 - Rossari Biotech Limited announced the launch of Dr. Nanoxa, a new-age antimicrobial surface coating infused with nanotechnology which provides bio-security from residual infections caused by bacteria and viruses, including SARS CoV, for 30 days. The product is made in India and has successfully been tested by National Accreditation Board for Testing and Calibration Laboratories (NABL) certified laboratories using international standards and has proven to inactivate UTI-causing bacteria and SARS-CoV-2 (Coronavirus) for 30 days of application
March 2022 - WellAir Launches a New Advanced Air Cleaning Device in Europe with Independently Tested Industry Leading 99.9% Effectiveness Against Airborne Pathogens. With the launch, WellAir continues to chart a new path forward for healthy indoor environments at a time when air quality has never been a bigger priority.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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