CCTV Automated Lens Cleaning Technology

This technology detects contaminants on the surface of CCTV lenses and removes them through electrical vibrations.

This technology sends electrical signals to the lens, causing water droplets to move, thus effectively clearing contaminants from the lens surface. This eliminates the need for mechanical devices like wipers to be attached to the CCTV, offering a faster and stain-free solution compared to traditional heating methods.

▲ Electronic self-cleaning glass ("Drop-Free Glass") applied to CCTV automatically detects and cleans contaminants.

Issues to Tackle

- Rainwater, dust, and other debris on CCTV camera lenses can compromise video monitoring.
- Traditional cleaning solutions, such as wipers and heating elements, have drawbacks, highlighting the need for a more effective alternative.

Expected Benefits

- Ensures rapid cleaning within one second, maintaining consistent video monitoring even in flood-prone areas, harsh weather conditions, or during heavy rainfall, without creating blind spots or interruptions.
- Operates without mechanical or electrical cleaning components, such as wipers or heaters, resulting in enhanced durability and reduced maintenance costs.

Key Services

· Applicable to various industries, employing electrical vibrations to effectively clear contaminants from lens surfaces.
  - Automatically detects contamination on the camera lens.
  - Removes pollutants from the lens surface through electrical vibration.

· With a simple structure and low power consumption, this solution is highly versatileand suitable for applications such as security cameras, sensors in autonomous vehicles, drones, vehicle windshields, and large-scale architectural glass.

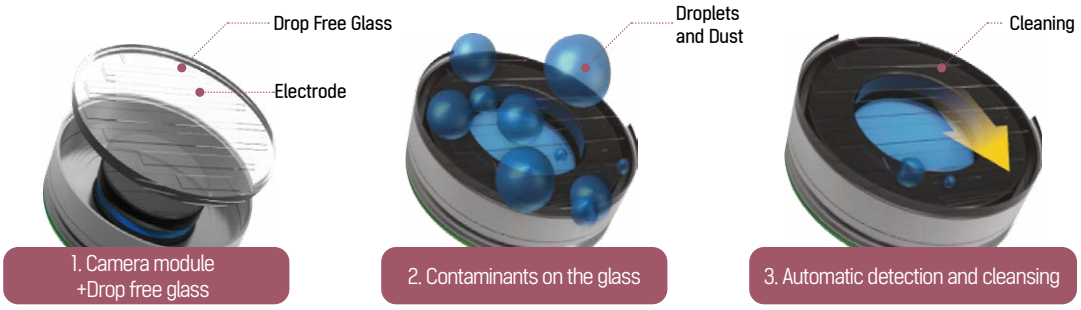
Use Cases

· Busan Metropolitan City: Deployed and tested for disaster safety measures in coastal regions vulnerable to recurrent flooding and typhoon-induced hazards.

· Incheon Metropolitan City 'Songdo Central Park' and Seoul Metropolitan City 'COEX': Installed to strengthen urban security and disaster preparedness in major metropolitan locations.

Key Components

Configuration



Technology

1. Drop-Free Glass

· Employs multiple electrical signals to induce vibrations that effectively remove contaminants such as rainwater from the glass surface.

POINT Delivers superior cleaning efficiency and fast operation, effectively removing even high-viscosity substances as rainwater, oil, and honey. Automatically identifies contaminants on the lens surface, without the need for external sensors.

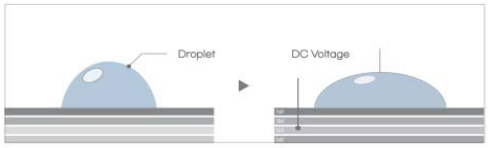
2. AI CCTV

·Features Drop-Free Glass to automatically detect and clear contaminants from the camera lens surface.

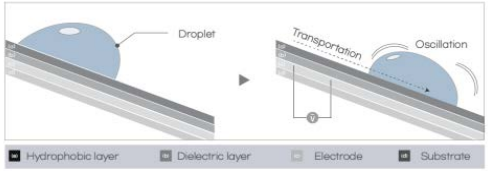
POINT Drop-Free Glass ensures consistent removal of dirt from the lens.

Self-Cleaning Mechanism

1. When contaminants are present, Drop-Free Glass modifies fluid shapes by transmitting electrical signals to a surface coated with electrodes and insulating layers.



2. Multiple electrical signals generate vibrations on the glass surface, enabling the removal of contaminants through electrostatic oscillation.



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