

TECH OFFER

Clean and Safe Indoor Air Quality Solution Using Far-UVC Technology



KEY INFORMATION

TECHNOLOGY CATEGORY:

Sustainability - Sustainable Living

Green Building - Indoor Environment Quality

Green Building - Heating, Ventilation & Air-conditioning

TECHNOLOGY READINESS LEVEL (TRL): **TRL6**

COUNTRY: **HONG KONG**

ID NUMBER: **TO175280**

OVERVIEW

In the wake of the COVID-19 pandemic, people have developed new expectations for indoor air quality. It is no longer just about ventilation and purification, but also about providing clean and safe air for a healthier environment. Traditional UVC technology (254 nm) has been widely used in HVAC systems and air purifiers to disinfect airborne pathogens. To ensure its effectiveness, sufficient contact time is required, hence it is often used in unoccupied spaces due to safety concerns.

This solution utilises human-safe 222 nm far-UVC technology which has been shown to be able to effectively inactivate airborne pathogens while maintaining safety since it does not penetrate the outer layer of human skin or eyes. This allows for continuous disinfection of air in occupied spaces. By integrating 222 nm far-UVC technology into HVAC system, including air purification, air monitoring and IoT management platforms, the company offers a complete solution for clean and safe air.

With integrated capabilities in both R&D and manufacturing, the company can provide tailor-made solutions for different

industry applications. They are seeking collaborations with real estate developers, chain restaurant operators and pathogenic air sampling technology experts to further develop and commercialise this solution.

TECHNOLOGY FEATURES & SPECIFICATIONS

- Human-safe 222 nm Far-UVC: An effective and direct disinfection technology, 24x7, no downtime
- Green Technology: No chemicals, no mercury, and ozone free
- Air Quality Monitoring: Multiple sensors IAQ control system
- New Fresh Air System: Does not rely on fresh air ventilation
- Smart IoT System: Enable optimisation of air purification effectiveness and energy efficiency
- Reduce Carbon Emission: Green technology, energy saving

POTENTIAL APPLICATIONS

This solution could be deployed across various industries, including, but not limited to:

- Commercial/Residential Complexes
- Hospitals
- Hotels and Hospitality
- Educational Institutions
- F&B and Catering Operators
- Indoor Recreational Facilities

In addition to indoor occupied spaces, the solution is also applicable in sectors such as the food industry, cold chain, and logistics centres, where secondary pollutants are the major sources of contamination.

UNIQUE VALUE PROPOSITION

With the ability to achieve higher number of equivalent air changes, the utilisation of far-UVC for air disinfection offers a more cost effective and energy saving solution for indoor air quality control as compared to traditional air purification methods and reliance on ventilation.