

Air quality monitoring at the Airport

Excelitas PID Lamps leading the way in tracking pollution in urban environments

Air pollution such as ozone, nitrogen dioxide, volatile organic compounds (VOCs) and fine particulates - mostly from vehicular emissions - puts a strain on the environment and affects people's health. Real-time monitoring of air quality is important to understand the factors that influence air pollution.

Photoionization Detection (PID) lamps manufactured by Excelitas in Cambridge, United Kingdom, are an intrinsic part of an innovative project that is currently being carried out in and around London Heathrow airport: the Sensor Network for Air Quality (SNAQ) with 50 stations has been installed and is measuring urban air pollution caused by road and air traffic around Heathrow airport. Measurement of Volatile Organic Compounds (VOCs) using portable PID detectors is becoming an economical way to track pollution and air quality in urban environments. PID technology enables fast detection with high sensitivity.

The small battery-powered sensors are lamppost-mounted and contain a number of detectors that measure six gases, VOCs and airborne particulates. The system works wirelessly – with data being transmitted to a central server via the mobile phone network. Measurement of VOCs using portable PID technology enables fast detection at parts per billion level sensitivity. Excelitas PID lamps are the industry-leaders for lifetime and spectral purity for cost-effective, reproducible analysis. Photoionization is the term for the absorption of high energy photons by a molecule which results in ionization of that molecule. The current created by ionization is proportional to the concentration of the molecule, so this provides a simple method for quantitative analysis of a variety of compounds.



Features

- Economical method of monitoring air quality
- Long PID life and low power consumption provides low maintenance solution
- Fast detection with high sensitivity ideal for low concentration VOC measurement
- Simple integration of technology for rapid deployment into the field

Technical Data

- RF PID lamp Ø 6 mm
- Photon energy 10.6 eV
- Lifetime > 4000 h

