Air quality monitoring at London Heathrow
PID lamps track 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.

PID lamps manufactured at Heraeus Noblelight Analytics in Cambridge, England, are 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 measuring urban air pollution caused by road and air traffic around Heathrow airport. Heraeus Noblelight supplies Photoionisation Detector lamps (PID lamps) used in the SNAQ sensors. 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, volatile organic compounds (VOCs) and airborne particulates. The system works wirelessly – data transmission is via GPS and GPRS to a central server.

Measurement of Volatile Organic Compounds (VOCs) using portable Photoionisation Detectors (PID) enables fast detection at ppb level sensitivity. Heraeus PID lamps are the industry-leaders for lifetime and spectral purity for cost-effective, reproducible analysis. Photoionisation is the term for the absorption of high energy photons by a molecule which results in ionisation of that molecule. The current created by ionisation is proportional to the concentration of the molecule, so this provides a simple method for quantitative analysis of a variety of compounds.

Features
- Economical way for air monitoring
- Fast detection with high sensitivity
- VOCs measurement
- Low power consumption, battery-powered
- Long lifetime

Technical Data
- RF PID lamp Ø 6 mm
- Photon energy 10.6 eV
- Lifetime > 4000 h
- Ident number 8005 8892

*For local contacts please visit also our website http://www.heraeus-noblelight.com/en/contact/worldmap.aspx