



# Urea Quality Sensor For Diesel Engines

For NOx exhaust control system used in diesel engines

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[www.sun-awks.co.jp](http://www.sun-awks.co.jp)

SUN-A have for many years cultivated sensor technology based on thin film devices and electronic circuit technology. Using this technology, SUN-A has developed automotive environment improvement products, and continue to develop in various types of applications.

Urea Quality Sensor(UQS) contributes to enhance the functionality of the Urea-SCR system which is an indispensable system for detoxifying NOx exhaust from large diesel engines of trucks, construction and agricultural machinery, as well as passenger vehicles with smaller diesel engines. The UQS has a role in monitoring of the quality level of the urea solution. UQS uses a unique technology: It employs the method of detecting thermal coefficient: the world's first technology developed by SUN-A. Urea solution, like all other liquid, have particular heat transfer rate depending upon urea concentration. Thus, the sensor is designed to detect the infinitesimal difference in thermal coefficient. Our UQS can measure the urea concentration and the temperature with high resolution and accuracy, and it detects if the tank is empty and if the tank is contaminated from diesel oil.

