

Table S1. Main features and the applicability of sensors utilized in sensor array.

Sensor	Features	Application	Sensitivity characteristics
TGS 821	High sensitivity to hydrogen gas	Hydrogen gas detection for: <ul style="list-style-type: none"> <li>• transformer maintenance</li> <li>• batteries</li> <li>• steel industry usage</li> </ul>	1000-5000 ppm ethanol
TGS 822	High sensitivity to organic solvent vapors such as ethanol	<ul style="list-style-type: none"> <li>• Breath alcohol detectors</li> <li>• Gas leak detectors/alarms</li> <li>• Solvent detectors for factories, dry cleaners, and semiconductor industries</li> </ul>	50-5000 ppm ethanol
TGS 824	High sensitivity to amine compounds	<ul style="list-style-type: none"> <li>• Ammonia leak detection in refrigerators</li> <li>• Ventilation control for the agricultural and poultry industries</li> </ul>	30-300 ppm NH <sub>3</sub>
TGS 825	High sensitivity to hydrogen sulfide	Hydrogen sulfide detectors/alarms	5-100 ppm H <sub>2</sub> S
TGS 826	High sensitivity to amine compounds	<ul style="list-style-type: none"> <li>• Ammonia leak detection in refrigerators</li> <li>• Ventilation control for the agricultural and poultry industries</li> </ul>	9-100 ppm NH <sub>3</sub>
TGS 880	Sensitive to humidity fumes from food (alcohol, odor)	Kitchen – cooking control	30-3000 ppm ethanol
TGS 883	Sensitive to water vapor	Kitchen – cooking control	1-100 g/m <sup>3</sup> H <sub>2</sub> O
TGS 800	Sensitive to air Contaminants in general	<ul style="list-style-type: none"> <li>• Air quality control</li> <li>• Ventilation control</li> </ul>	1-100 ppm ethanol
TGS 2201	High sensitivity to gasoline & diesel exhaust gases	Automobile ventilation control	1-30 ppm ethanol
TGS 2201	High sensitivity to exhaust gases emitted by to gasoline & diesel-fueled engines	Automobile ventilation control	1-30 ppm ethanol
TGS 2106	High sensitivity to exhaust gases emitted by to diesel-fueled engines	Automobile ventilation control	0.5-5 ppm NO <sub>2</sub>
TGS 2104	High sensitivity to exhaust gases emitted by to gasoline-fueled engines	Automobile ventilation control	2-20ppm C <sub>10</sub> H <sub>22</sub>
TGS 2602	High sensitivity to VOCs and odorous gases	<ul style="list-style-type: none"> <li>• Air cleaners</li> <li>• Ventilation control</li> <li>• Air quality monitors</li> <li>• VOC monitors</li> <li>• Odor monitors</li> </ul>	1-30 ppm ethanol
TGS 2620	High sensitivity to alcohol and organic solvent vapors	<ul style="list-style-type: none"> <li>• Alcohol testers</li> <li>• Organic vapor detectors/ alarms</li> <li>• Solvent detectors for factories, dry cleaners and semiconductor industries</li> </ul>	50-5000 ppm ethanol
TGS 2600	High sensitivity to gaseous air contaminants	<ul style="list-style-type: none"> <li>• Air cleaners</li> <li>• Ventilation control</li> <li>• Air quality monitors</li> </ul>	1-100 ppm ethanol