



EyeCGas[®] Multi Performance Envelope

In the new European methane reduction regulation, the technology detection requirement for the most frequent type 1 LDAR survey is 17 g/h of methane in mass flow units. For the less frequent type 2 LDAR Survey, the requirements are 1 g/h and 5 g/h. The EyeCGas published performance envelopes for these three detection requirements. Field conditions such as viewing distance to the monitored component, wind speed, ambient air temperature, and background temperature can impact the OGI camera

operator's ability to detect a leak. Therefore, an operating envelope has been established for field use of the EyeCGas Multi camera. Detection surveys must not be performed when field conditions are outside of the developed operating envelope. Opgal has completed a series of operating envelope tests, and the results are presented in Tables 1-3. These results show the maximum wind speed at which a survey may be performed, given specific distance and delta-T field conditions.

Table 1 Maximum wind speed for detecting 17 g/h of methane.

Distance [m]	Envelope Wind Speed [m/s] @ΔT=<2°C	Envelope Wind Speed [m/s] @ΔT=5°C
3	7	10.5
12	4.5	7.5

Table 2 Maximum wind speed for detecting 5 g/h of propane.

Distance [m]	Envelope Wind Speed [m/s] @ΔT=<2°C	Envelope Wind Speed [m/s] @ΔT=5°C
3	4.5	6.5
12	2	4

Table 3 Maximum wind speed for detecting 1 g/h of butane.

Distance [m]	Envelope Wind Speed [m/s] @ΔT=<2°C	Envelope Wind Speed [m/s] @ΔT=5°C
3	2.5	3.5
12	ND	ND

The results are consistent with an independent third-party result, performed by EXERA France. In most cases of distances of up to 3 meters to the imaged component and ambient minimal delta-T is up to +/- 2 oC, the operator may perform a type 1 survey (detection requirement of 17 g/h) when wind speed is lower than 7 m/s.

* Exera, Evaluation Report- E 6061 X 15, Evaluation of the Infrared Camera for Detection of Gas Leak Opgal EyeCGas. Dec-2015