

O₂ Sensing | TDLAS

(Tunable Diode Laser Absorption Spectroscopy)

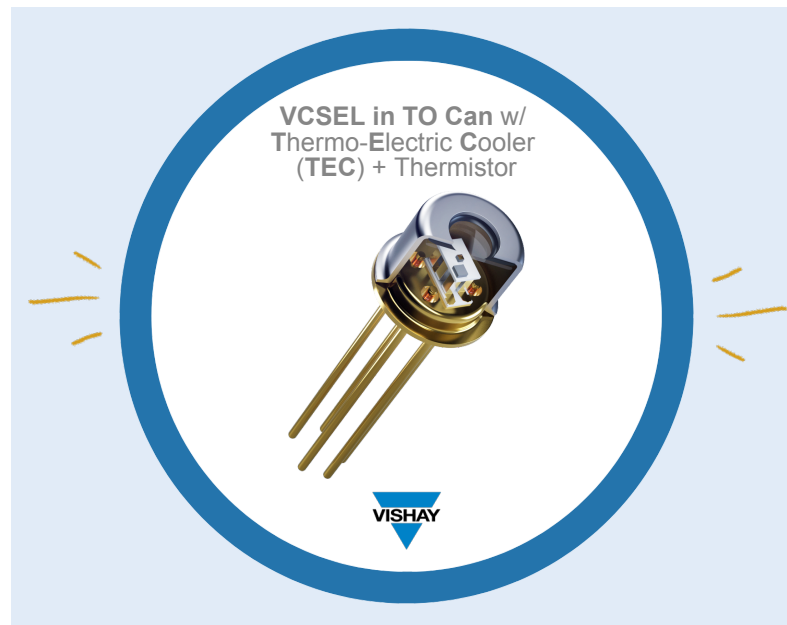
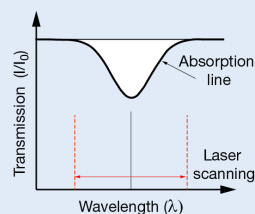
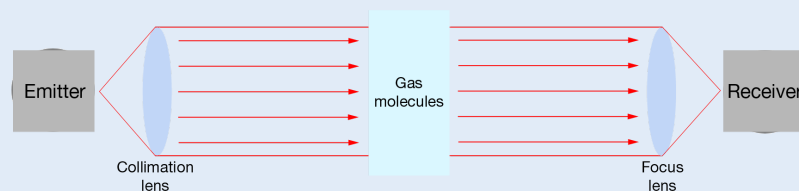
Functional Principle

VCSEL **Wavelength (WL)** tuned with current (0.3 nm/mA to 0.6 nm/mA) and / or temperature using TEC (0.06 nm/K)

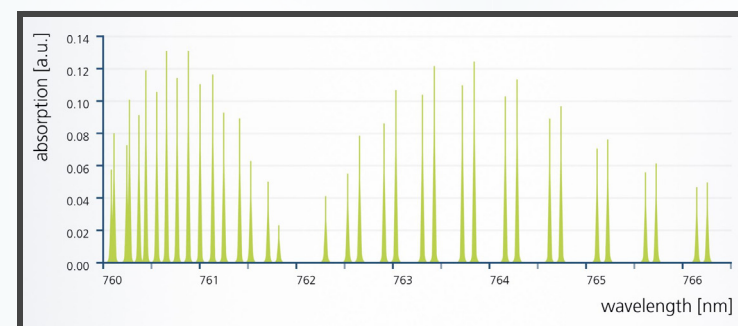
Transmitted light through gas container vs. WL measured

O₂ molecules absorb light at 760 nm and 763/4 nm

→ Oxygen concentration proportional to absorption dip in the measured transmission curve



Spectral Absorption Lines of O₂ Molecules



For technical questions: consumersensors@vishay.com

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