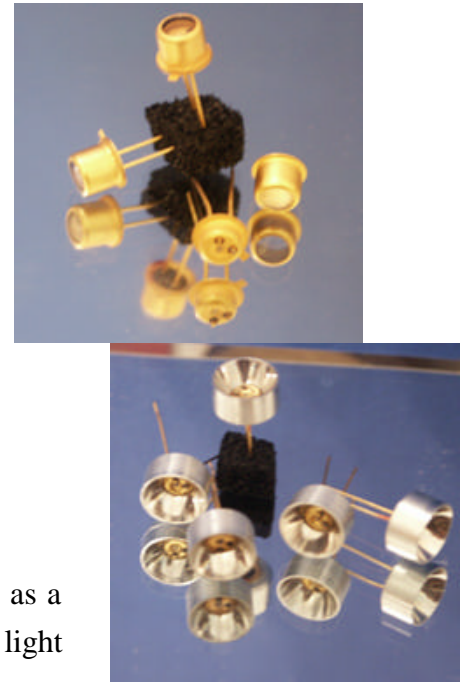
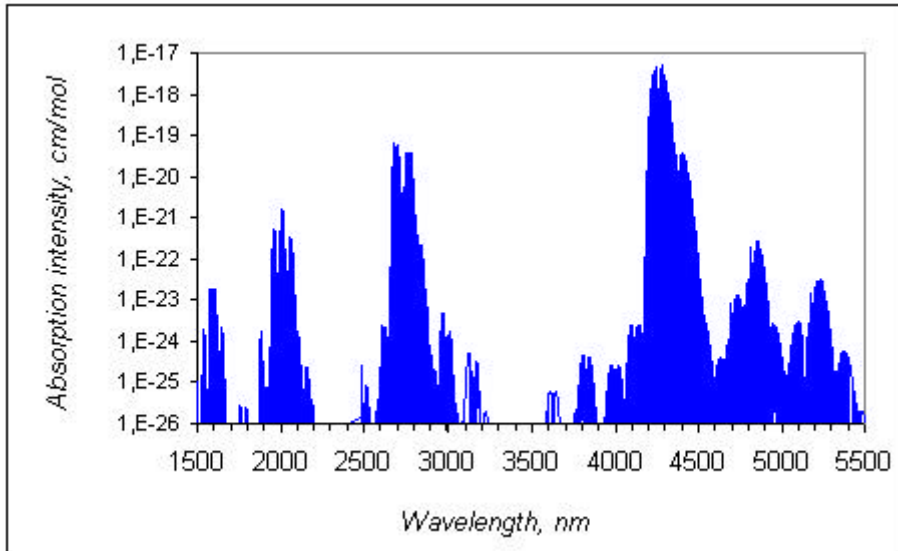


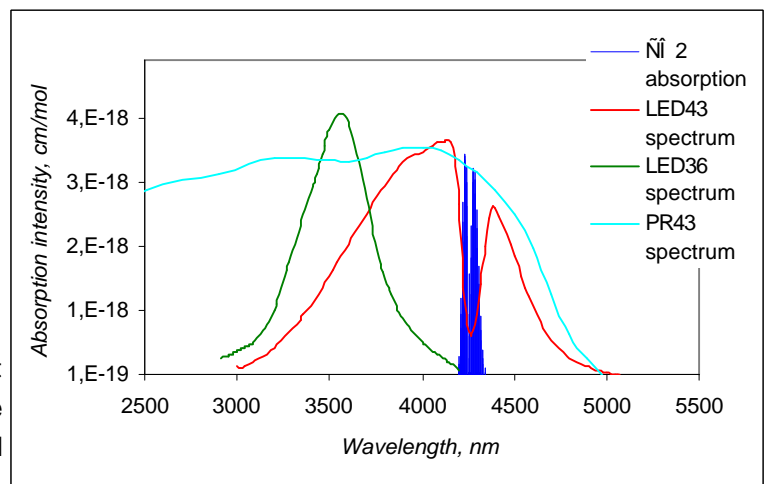
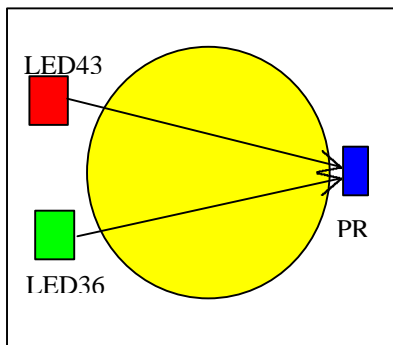
# APPLICATION in Gas Sensors

## Light Emitting Diodes for CO<sub>2</sub> sensors

Carbon Dioxide has very strong absorption band in the range 4200-4320 nm. Other not so strong absorption bands that can be used are placed around 2700 nm and 2000 nm.



For main absorption band we recommend using of our model **LED43** as a light source in the measuring channel and **LED36** as a reference light source. We have not appropriate photodiode for this range but room temperature PbSe photoresistor **PR43** can be used as a detector.



Second absorption band near 2700 nm is not convenient for using because there is placed strong absorption of the water. But for some application using of the third band around 2000 nm can be preferable. This band is much weaker than main one but optical power of LEDs and detectivity of photodiodes for 2 nm spectral range are much better in comparison with 4 nm spectral range. In this case **LED20** and **LED17** can be used in measuring and reference channel and **PD24** as a detector.

All Light Emitting Diodes and Photodiodes can be mounted in standard package TO-18, in TO-18 with parabolic reflector (PR) or in 9 mm package TO-5 with microcooler (TEC) and thermistor inside. For saving you time at the first stage of development of new gas sensor we suggest you to use our LED Drivers and Preamplifiers.

