3. How does the GasFinder work.

Boreal Laser's Tunable Diode Laser measures gas concentration over an open path. It consists of an integrated transmitter/receiver unit and a remote, passive retro reflector array.
The transceiver houses the laser diode source, the drive electronics, the detector module, and microcomputer subsystems.

The laser light emitted from the transceiver unit propagates through the atmosphere to the retroreflector and returns to the **GasFinder2.0**, where it is focused onto a photodiode detector. A portion of the laser beam is passed through an onboard reference cell to provide a continuous calibration update. These two optical signals are converted into electrical waveforms, which the micro controller processes to determine the actual concentration of gas along the optical path. The computed gas concentration is then displayed on the back panel of the instrument and can be transmitted to a coordinating computer where the data can be collected, stored and graphically displayed.
Response times are in the order 1 second, and can be made faster for specific applications. The instrument is self-calibrating due to the presence of an on board reference cell, and is characterised by having of low operating costs and no consumables. The range of measurement can be up to 4 orders of magnitude.