ABSTRACT

SIDE ILLUMINATED MULTI POINT MULTI PARAMETER OPTICAL FIBER SENSOR

A side illuminated multi point multi parameter optical fiber sensor that requires no sensitive coating is provided. This sensor comprises an optical fiber having at least one removed cladding section as the sensitive region, at least one probing light source that side illuminates the fiber, a power supply, a detector, a signal processor and a display. The sensitive optical fiber is optically affected by the presence of a measurand medium that can fluoresce, phosphoresce, absorb and/or scatter the probing light. This probing light is guided by the fiber core towards a detector which measures the light intensity and this light intensity is correlated with a measurand.

FIG. 9a