

## GE-135 Luminescent Optical Dissolved Oxygen Analyzer

(Water Online Industry Monitor Meter)

This Dissolved Oxygen analyzer uses unique luminescent optical technology to measure dissolved oxygen in water and waste water applications. The optical dissolved oxygen meter has been specifically designed to meet the demanding requirements of the environmental monitoring and scientific research sectors, providing long term, accurate and reliable dissolved oxygen measurement. The output could be 4-20mA, and RS485 is optional, the relay is adjustable in high/low limit

This A.YITE GE-135 Luminescent optical dissolved oxygen analyzer meter have an accuracy of  $\pm 1\%$ . Measurements are automatically compensated for temperature, pressure, and salinity. Measurements didn't require flow & stir like other technologies.



### Applications for Optical Dissolved Oxygen Analyzer:

- \* Water quality monitoring around industrial outfall
- \* Scientific research projects, both long and short term projects
- \* Long term monitoring of dissolved oxygen in streams, rivers and lakes
- \* Fish farm and aquaculture water quality monitoring
- \* Homeland security & Food and wine industry
- \* Wastewater industry & Thermocline profiling

### Character:

- \* No consumable components
- \* Luminescent optical principle, sensitive and stability
- \* No consume oxygen, No requirement for stir and flow
- \* No interference from sulfide and other chemicals
- \* The sensor is ppb ppm grade, suitable for all kinds of water treatment
- \* Easy install & low maintenance

### Specification:

- \* Range: 0~20mg/L
- \* Resolution: 0.01ppm
- \* Accuracy:  $\pm 1.0\%$  or 0.05mg/L
- \* Temperature: 0 ~ 65C (for sensor)
- \* Response Time: 45s (99%)
- \* Temperature Compensation: 0 ~ 60C automatically
- \* Display: LCD big screen
- \* Output: 4~20mA

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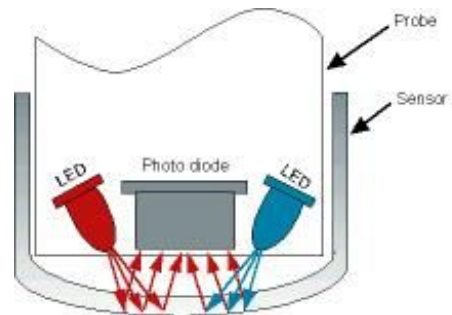
Email: [sales@ayite.net](mailto:sales@ayite.net)



- \* Communication: RS-485 (Optional)
- \* Relay: adjustable in high/low limit, 230VAC 5A
- \* Power Supply: 24VDC 220~240VAC (110VAC in optional)
- \* Environmental Temperature & Humidity: -20C ~ 50C; 3% ~ 85%
- \* Protect Grade: IP65 for transmitter; IP68 for sensor

### Principle - Optical Dissolved Oxygen Meter

Unlike conventional dissolved oxygen analyzer meter, the A.YITE GE-135 Luminescent optical dissolved oxygen analyzer meter's sensing element utilizes fluorescence to measure dissolved oxygen. The sensing element in the optical dissolved oxygen transmitter consists of a fluorescing compound suspended stably in a robust optical "window". A light source at controlled wavelength briefly pulses the optical window. This "excites" the fluorescent material, causing it to emit a specific wavelength of light. The intensity of this fluorescence or light is determined by the amount of dissolved oxygen in the water in contact with the optical window. A highly stable and accurate optical sensor circuit inside the A.YITE GE-135 Luminescent optical dissolved oxygen analyzer meter measures the emitted fluorescence. As a result, the A.YITE GE-135 Luminescent optical dissolved oxygen analyzer meter provides accurate dissolved oxygen measurements over long periods of time without the need for re-calibration.



### Advantages than Traditional Dissolved Oxygen Sensors

Traditional Galvanic and Polarographic dissolved oxygen sensors have been used to measure dissolved oxygen in water. Galvanic and polarographic dissolved oxygen sensors utilize chemical electrical signatures based on a semi-permeable membrane covering electrodes that are immersed in an electrolyte. These dissolved oxygen sensors have been poorly suited to long term reliable and accurate monitoring of lakes, streams, and rivers. The semi-permeable membranes and electrolyte require frequent replacement. The Galvanic and Polarographic dissolved oxygen sensor electrodes are subject to deterioration and "poisoning". These dissolved oxygen sensors require constant water flow otherwise oxygen consumption occurs causing inaccurate at readings. Galvanic and Polarographic dissolved oxygen sensors require frequent calibration resulting in high upkeep and labor costs.

Unlike conventional Galvanic and Polarographic dissolved oxygen sensors, the A.YITE GE-135 Luminescent optical dissolved oxygen analyzer meter have no consumable components that require replacement, minimizing servicing requirements. Neither do the A.YITE GE-135 Luminescent optical dissolved oxygen analyzer meter consume oxygen. Consequently the measurement of dissolved oxygen by the optical dissolved oxygen sensor is unaffected by water flow.