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# ecd-100: real-time wastewater color detection | acniti

The ECD-100 Colored Wastewater Detector monitors industrial effluent in real-time using RGB-LED visible light transmission technology. It detects color abnormalities instantly without complex installation or reagents. Automatic air purge cleaning and 4-20mA analog outputs ensure reliable, continuous monitoring for wastewater treatment plants, food processing, chemical manufacturing, and environmental compliance applications.

# ecd-100: real-time wastewater color detection | acniti

**real-time colored wastewater detector for industrial applications**

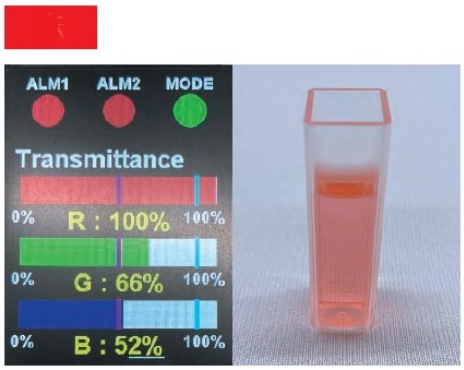
- Real-time color detection
- Accurate RGB analysis
- Perfect for wastewater & effluent monitoring
- Plug & play installation
- Automatic air cleaning
- Direct integration with your system

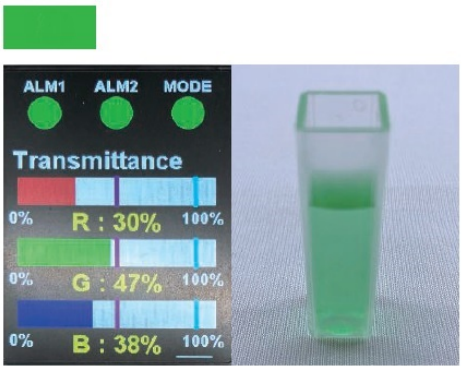
## key features

- **Direct Submersion & Reagent-Free:** The sensor unit is submerged directly into the target water. It requires no chemical reagents and provides rapid, continuous measurement.
- **Low Cost:** Minimal initial investment and low running costs.
- **Easy Maintenance:** No specialized skills are required to maintain the detector.
- **Color Prediction:** Colors can be predicted based on the balance of RGB values.
- **Automatic Cleaning:** Equipped with an automatic cleaning function using compressed air.

## intelligent, cost-effective real-time monitoring of color pollution in wastewater

Instantly detect discoloration in industrial wastewater without complex systems or expensive installation. The ECD-100 Colored Wastewater Detector combines simplicity, reliability, and continuous monitoring in a single, robust design. The system detects subtle color changes using intelligent visible light transmission (iVLT) with RGB-LED. Ideal for wastewater treatment, process control, and environmental compliance.




## applications

- Industrial wastewater
- Effluent discharge monitoring
- Food, chemical, and paper industries
- Water reuse and environmental compliance
- Alternative to expensive color or turbidity sensors

## technical specifications

| Parameter | Specification |
|---|---|
| Measurement Range | 0–100% transmission / 0.00–2.00 absorbance / 0–100% attenuation |
| Measurement Frequency | Every ~5 seconds (value held during cleaning) |
| Sensor Type | Submersible (in-tank or channel) |
| Cleaning Method | Automatic air purge (0.05–0.50 MPa) |
| Power Supply | AC 100 V ±10%, 50/60 Hz, approx. 6 W |
| Signal Output | 2 × 4–20 mA analog outputs (configurable per RGB channel), alarm, and fault relays |
| Sensor Dimensions | Ø 90 × 300 mm |
| Display Unit Dimensions | 160 × 260 × 130 mm |
| Cable Length | 5 meters (sensor to display) |

## installation & components

- **Control Unit:** Mounted on a pole or flat surface.
- **Sensor Unit:** Submerged in the water.
- **Note:** If the installation site is exposed to direct sunlight, please install a sunshade to protect the device.

With its fast setup, automatic cleaning, and straightforward 4–20 mA output, the ECD-100 is ideal for any site where discoloration indicates contamination, process deviations, or product loss. Compressed air 0.05~0.50 MPa (Compressed air supply must be prepared separately)

# ecd-100: colored wastewater detector 100v | acniti

| | General | | |
|---|---|---|---|
| 1 | Model name | Real-Time Colored Wastewater Detector for Industrial Applications | |
| 2 | Model number | sensor_colored_wastewater_detector_ECD-100 | |
| | **Liquid** | **Metric** | **Imperial** |
| 3 | Strainer availability and size | | |
| | **Ambient** | **Metric** | **Imperial** |
| 4 | Ambient temperature maximum | 40 °C | 104 °F |
| | **Gas** | **Metric** | **Imperial** |
| 5 | Gas quality | | |
| 6 | Gas remark | | |
| | **Electrical** | **Metric** | **Imperial** |
| 7 | Unit phase Ø voltage | AC 100 V ±10%, 50/60 Hz | |
| 8 | Unit power consumption | 6 watts | |
| 9 | Wetted parts | | |
| 10 | Pump model | | |
| 11 | Pump phase Ø voltage | | |
| 12 | Pump phase Ø voltage 60Hz | | |
| 13 | Pump pressure setting | | |
| 14 | Control | | |
| | **Connections** | | |
| 15 | Water inlet | | |
| 16 | Water outlet | | |

| | Connections | | |
|---|---|---|---|
| 17 | Gas inlet | | |
| | **Dimensions & weight** | **Metric** | **Imperial** |
| 18 | HS code | 9027-9090 | |