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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



real-time colored wastewater detector for industrial applications

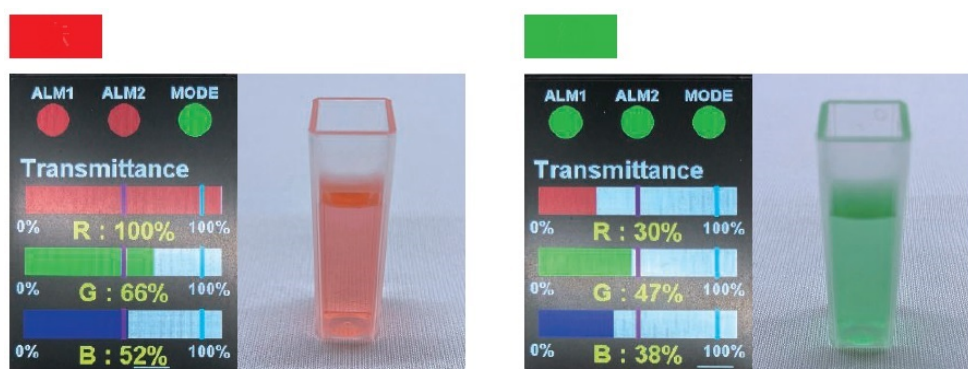
- ✓ Real-time color detection
- ✓ Accurate RGB analysis
- ✓ Perfect for wastewater & effluent monitoring
- ✓ Plug & play installation
- ✓ Automatic air cleaning
- ✓ Direct integration with your system

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 \pm 10%, 50/60 Hz, approx. 6 W
Signal Output	2 \times 4–20 mA analog outputs (configurable per RGB channel), alarm, and fault relays
Sensor Dimensions	\varnothing 90 \times 300 mm
Display Unit Dimensions	160 \times 260 \times 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 specifications: color detector technical data | acni

Description		Metric	Imperial
1	Model name	ECD-100 Specifications: Color Detector Technical Data Acni	ECD-100 Specifications: Color Detector Technical Data Acni
2	Model number	ECD-100	ECD-100
Ambient		Metric	Imperial
3	Ambient temperature maximum	40 °C	104 °F
Electrical		Metric	Imperial
4	Unit phase Ø voltage	AC 100 V ±10%, 50/60 Hz	AC 100 V ±10%, 50/60 Hz
5	Unit power consumption	6 watts	6 watts
Dimensions & weight		Metric	Imperial
6	HS code	9027-9090	9027-9090