

Technical Specifications

ZY6260-PC

Heat Release

and Smoke Production Test Apparatus

Standards Compliance	EN 50575 / EN 50399
Scope of Application	For combustion-performance test of construction-used cables and optical cables. Test outputs: --Flame spread (FS). --Heat release rate (HRR). --Total heat release (THR). --Smoke production rate (SPR). --Total smoke production (TSP). --Flaming growth rate index (FIGRA). --Burning drops/particles
Combustion Chamber	$(1000 \pm 50) \times (2000 \pm 50) \times (4000 \pm 50)$ mm
Test Chamber Air Inlet	$(800 \pm 20) \times (400 \pm 10)$ mm
Air Flow Rate	8000 L/min $\pm$ 400 L/min
Specimen Regular Mounting	W (500 ± 5) mm * H (3500 ± 10) mm; SUS304 stainless steel
Special Specimen Mounting	Equipped with non-combustible calcium silicate backboard; density: 870 ± 50 kg/m ³ , thickness: 11 ± 2 mm, width: 415 ± 15 mm, length: 3500 ± 10 mm
Smoke Hood	Min. size: 1500 mm $\times$ 1000 mm
Smoke Exhaust Duct	Inner diameter: 300 mm
Smoke Exhaust Duct Material	Inner layer: 1.2 mm SUS304 stainless steel; middle: asbestos layer; outer layer: 1.2 mm galvanized steel
Smoke Exhaust Duct Volume Flow	1.0 m ³ /s $\pm$ 0.05 m ³ /s
Bi-directional Probe	Stainless-steel cylinder, L 32 mm, OD 16 mm
Differential Pressure Sensor	Range: 0-200 Pa, accuracy: ± 1 Pa
Thermocouple	Type K, 1.5 mm wire diameter
Smoke Exhaust Fan	Exhaust capacity > 1.5 m ³ /s at 25 °C under atmospheric pressure; Power: 7.5 kW
Oxygen Analyzer	Measuring range: (0-25)% Signal output: 4-20mA Resolution 100×10^{-6} Relative humidity: <90% (no condensation) Linearity deviation: $< \pm 0.1\%$ O₂

	Zero drift: $\leq 0.5\%$ /month Range drift: $\leq 0.5\%$ /month Internal signal processing time $< 1\text{S}$ Response time: $T_{90} < 5$ seconds Repeatability: $< \pm 0.02\%$ O ₂ Analog output: $4 \sim 20\text{mA}$ 750Ω Ambient temperature: $5^{\circ}\text{C} \sim +45^{\circ}\text{C}$ Power supply: $220\text{VAC} \pm 10\%$, $50 \sim 60\text{Hz}$ Noise drift $\leq 100 \times 10^{-6}$ within 30 min
CO₂ Measurement	Measuring range: 0-10% Repeatability: $< \pm 1\%$ Zero drift: $\leq 0.5\%$ /month Range drift: $\leq 0.5\%$ /mont Linearity deviation: $< \pm 1\%$ Response time: $T_{90} < 3.5$ seconds Output resolution of data acquisition system is better than 100×10^{-6} Analog output: $4 \sim 20\text{mA}$ 750Ω Ambient temperature: $5^{\circ}\text{C} \sim +45^{\circ}\text{C}$ Power supply: $220\text{VAC} \pm 10\%$, $50 \sim 60\text{Hz}$ 5000W Noise drift $\leq 100 \times 10^{-6}$ within 30 min
Ignition Source	Venturi air-propane mixed burner, length: 341 mm
Mass Flow Meter	Range: $0 \sim 2.5$ g/s
O₂ & CO₂ Analyzer	Accuracy: 100×10^{-6} (0.01 %)
Temperature Measurement	$0-400^{\circ}\text{C}$. Accuracy $\pm 0.5^{\circ}\text{C}$
Device for Measuring Relative Humidity of Indoor Air	$20\% \sim 80\%$, accuracy 5%
Accuracy of Time Recording System	0.1S
Test Time	$1 \sim 99\text{m/s}$
Data Acquisition Time	Auto-sample & store every 3 s
Machine Installation Space	L 11 m, W 7 m, H ≥ 5.5 m
Control Room	Size: L 3 m, W 3 m, H 2.8 m; responsible by buyer
Power Supply	AC 380 V, 3-phase 5-wire; power > 15 kW
Operating Temperature	$5^{\circ}\text{C} \sim 30^{\circ}\text{C}$
Ambient Pressure	$86 \text{ kPa} \sim 106 \text{ kPa}$