

1. Overview



EPHD21803 high temperature scintillation detector is a high temperature resistant natural gamma counting logging scintillation detector. It integrates high temperature NaI (TI) crystal, PMT and voltage divider circuit. The unique design ensures the stable performance of the detector in high temperature logging environment. This product has the advantages of simple and convenient use, high reliability and not easy to damage. It is mainly used in natural gamma counting measurement in oil logging environment.

2. Specifications

▶ Detector diameter (mm)	Φ62.5
▶ Detector length (mm)	429
▶ Scintillator size (mm)	Φ50×260
▶ Pulse amplitude resolution ¹⁾ 25°C Max.	15%
▶ Pulse amplitude resolution ¹⁾ 175°C Max.	20%
▶ High temperature output pulse amplitude decreases ²⁾ Max.	70%
▶ High temperature plateau length Min. (V)	100
▶ High temperature and normal temperature counting rate deviation ³⁾ Max.	5%
▶ High temperature life ⁴⁾ Min.	400
▶ Vibration ⁵⁾	5g rms, 50Hz~500Hz
▶ Shock	100g, 11ms
▶ Operating temperature ⁶⁾ (°C)	-30~175
▶ Storage temperature ⁶⁾ (°C)	-30~70

- Performance tests use ¹³⁷Cs (Among which, the plateau length of high temperature and high temperature and normal temperature counting rate deviation is tested in natural gamma environment)
- High temperature output pulse amplitude decrease = (Output pulse amplitude at 25°C - Output pulse amplitude at 175°C) / Output pulse amplitude at 25°C × 100%
- High temperature and normal temperature counting rate deviation = | Output counting rate at 25°C - Output counting rate at 175°C | / Output counting rate at 25°C × 100%
- High temperature life: Total time accumulated in high temperature operation when the detector operates at 175°C with output pulse amplitude falling to 50% of initial value or noise edge exceeding 60keV
- Resonance frequency ≥ 500Hz
- Temperature change rate during detector operation and storage ≤ 3°C/min

3. Overall dimensions and connection methods (unit: mm)

● EPHD21803

