

1. Overview



EPHD2480300 scintillation detector (while drilling) is a high temperature resistant and vibration-resistant scintillation detector. It integrates high temperature vibration-resistant NaI (TI) crystal, high temperature PMT assembly and voltage divider circuit. The unique design ensures stable performance of the detector in high temperature vibration environment. This product has the advantages of simple and convenient use, high reliability and not easy to damage, and is mainly used to measure formation natural gamma counting in oil logging environment.

2. Specifications

Detector diameter (mm)	Φ24 (No vibration-damping rubber pad)
Detector length (mm)	276
Scintillator size (mm)	Φ20.4 × 121
High temperature plateau length ²⁾ Min. (V)	100
Pulse amplitude resolution ²⁾ 25°C Max.	15%
Pulse amplitude resolution ²⁾ 175°C Max.	20%
Natural gamma counting rate Min. (s ⁻¹)	80
High temperature and normal temperature counting rate deviation Max.	5%
Counting rate change induced by vibration Max. (s ⁻¹)	√BASE ³⁾
High temperature life ⁴⁾ Min.	400
Vibration ⁵⁾	15g rms, 50Hz~1000Hz
Shock	500g, 0.5ms
Operating temperature ⁶⁾ (°C)	-30~175
Storage temperature ⁶⁾ (°C)	-30~70

- Tested in natural gamma environment without special instructions
- Test with ¹³⁷Cs
- BASE: The average counting rate of continuous acquisition for 300s when the detector operates in non-vibration state
- 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 ≥1000Hz
- Temperature change rate during detector operation and storage ≤3 °C/min

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

● EPHD2480300

