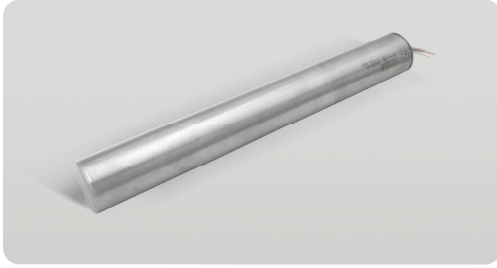


## 1. Overview



EPHD17903 scintillation detector is a high temperature resistant and anti-vibration scintillation detector. It integrates high temperature NaI(Tl) crystal, high temperature PMT and voltage divider circuit. The unique design ensures the 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. It is mainly used in natural gamma spectrum measurement in oil logging environment.

## 2. Specifications

▶ Detector diameter (mm)	Φ40
▶ Detector length (mm)	310
▶ Scintillator size (mm)	Φ34×200
▶ Input voltage Max. (V)	1800
▶ Plateau length 175°C Min. (V)	100
▶ Pulse amplitude resolution <sup>137</sup> Cs 25°C Max.	15%
▶ Pulse amplitude resolution <sup>137</sup> Cs 175°C Max.	20%
▶ Pulse amplitude resolution <sup>40</sup> K 25°C Max.	10%
▶ Pulse amplitude resolution <sup>40</sup> K 175°C Max.	14%
▶ High temperature output pulse amplitude decreases <sup>2)</sup> 175°C relative to 25°C Max.	70%
▶ High temperature life <sup>3)</sup> Min.	400
▶ Vibration <sup>4)</sup>	5g rms, 50Hz~500Hz
▶ Shock	100g, 11ms
▶ Operating temperature <sup>5)</sup> (°C)	-30~175
▶ Storage temperature <sup>5)</sup> (°C)	-30~70

- The resolution of <sup>40</sup>K full energy peak is tested in natural gamma environment, other performance tests use <sup>137</sup>Cs
- 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 life: Total time accumulated in high temperature operation when the output pulse amplitude drops to 50% of the initial value or the noise edge exceeds 60 keV when the detector is operating at high temperature
- Resonance frequency ≥500Hz
- Temperature change rate during detector operation and storage ≤3°C/min

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

### ● EPHD17903

