

CZT Spectrometric Detection Probes

Introduction

CdZnTe/CdTe is a room temperature semiconductor which allows the manufacture of X-Ray and Gamma Ray detectors with comparably high energy resolution and high count rate capability without cooling. The performance of CdZnTe/CdTe based detectors has proven successful in the Nuclear Industry, Medical, Homeland Security and many other industrial and laboratory applications.

SDP500, SDP1500, SDP4000 Spectrometric Detection Probes

Spectrometric Detection Probes SDP500S, SDP1500, and SDP4000 are room temperature operating portable devices with large volume CZT detectors. The detection probes are designed for application in equipment for recording and analysis of gamma radiation energy spectra. The detection probes consist of the CZT detector and a charge sensitive preamplifier.

Application

- Fresh and spent nuclear fuel verification
- Nuclear waste treatment facilities
- Nuclear power plant monitoring
- Field and industrial gamma-spectrometry
- Application in difficult of access places
- Portable instruments



Features

- Small dimensions and weight
- High energy resolution
- Room temperature operation
- Wide detection range
- High efficiency
- High count rate capability
- Small consumption power



Specification

Detector	Probe head dimensions, mm	Detector Volume, cm ³	Bias Voltage, V	Energy Resolution (FWHM) at 662 keV, %*	Peak-to-Compton Ratio at 662 keV*
SDP 500S	Ø 24 x 58	0.5	≤ 1500	≤ 2.5	≥ 4.0
SDP 1500	Ø 32 x 58	1.6	≤ 2500	≤ 3.5	≥ 4.0
SDP 4000	Ø 40 x 58	4.0	≤ 3000	≤ 4.0	≥ 4.0

* Measured at room temperature