

Alpha Spectra, Inc. Data Sheet

Demountable Type Detectors

Grand Junction, Colorado

Alpha Spectra, Inc. manufactures many different type scintillation detectors. Demountable style detectors provide the option for the user to replace the PMT without sending the unit back to ASI for replacement. This alternative is useful in many situations including field operations where downtime can be costly. Our demountable units are used in both gross counting and gamma ray spectroscopy applications.

ASI detectors have been used in numerous applications including: hand held survey instruments, density and level gauges in industry, homeland security, x-ray detection, medical diagnostics, medical radioimmunoassay, academic research, educational labs, nuclear power plant monitoring and low background counting applications.

ASI offers several different demountable configurations including: standard, thin integral, side well, and end well types. ASI has built many unusual designs that have met interesting requirements. Each type of detector can be configured with a voltage divider and a preamp. Be sure to give us a call if you have a special configuration in mind.

Typical demountable type detectors have from 1" to 5" diameters, but other sizes are also available upon request. A general schematic for these detectors is shown here in Figure 1.

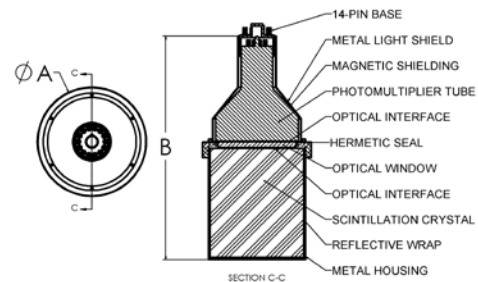


Figure 1. General layout of Demountable Type Detectors.



Figure 2. Special Low Background Demountable End Well Type with and without the PMT mounted.



Figure 3. Demountable Type End Well Detectors. (ASI photo)

Alpha Spectra, Inc. NaI(Tl) Specifications

Detector Style:	Standard, thin demountable, side well, end well
Crystal Materials Offered:	NaI(Tl), Sodium Iodide
Density:	3.67 g/cc
Effective Atomic Number:	51
Hygroscopic:	Yes
Wavelength of Maximum Emission:	415 nm
Principle Decay:	0.23 μ sec (at room temperature)
Index of Refraction:	1.85
Energy Resolution at 662 KeV:	7.5% or better (typical) depends on design configuration.
Dimensions:	As required by customer design
Crystal Housings:	Aluminum, stainless steel
Electronics:	14 pin, voltage divider or preamp configuration.
Other Crystal Materials Offered:	CsI(Na), CsI(Tl), BGO, CeBr ₃ and others. See our materials data sheet. Call for details.

