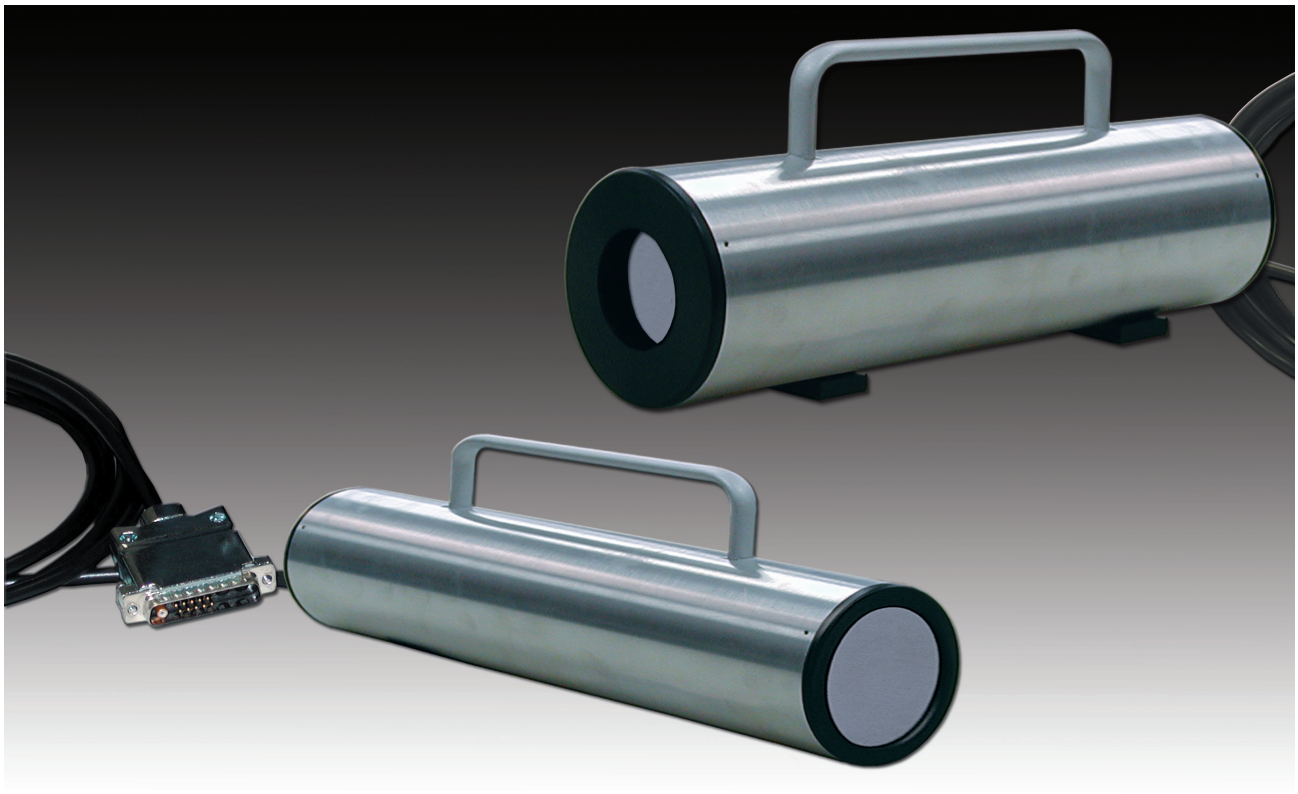
ORTEC®

2BY2/2BY2-DD
3BY3/3BY3-DD
Integral NaI(Tl) Detector

Complete Rugged NaI Detector Probes for In-Field Gamma Spectroscopy Measurements



- Rugged integrated NaI detectors in tough aluminum housing — available in 2" x 2" and 3" x 3" sizes.
- Integral preamplifier and high voltage (HV) for convenience and safety.
- Low power consumption (240 mW), ideal for portable applications.
- Single-cable connections for most applications.
- 2BY2-DD and 3BY3-DD available for use with ORTEC digiDART and digiDART-LF.

Everything You Need in One Compact Package

2BY2 or 3BY3 is a complete NaI(Tl) probe, ready to go to work in your application. Each models contains a NaI(Tl) crystal (2" x 2" or 3" x 3") with photomultiplier tube (PMT) and a PMT base with integral preamplifier and HV supply securely encased in a compact aluminum housing.

Ultra Low Power; the End of Bulky, External, HV Supplies

The model 296 ScintiPack™ PMT base includes a low-power, adjustable high-voltage supply, an active bias network, and a charge-sensing preamplifier. Incorporating the bias supply in the PMT base eliminates high voltage cable connections to bulky, external, HV supplies. The ACTIVE bias network permits high-rate operation with minimal peak shift. ScintiPack's ultra-low power consumption (240 mW) makes it attractive for portable applications.

Single-Cable Operation

A single cable supplies power to the preamplifier and the HV supply as well as the signal out of the preamplifier. For the "-DD" versions, the connection is direct to the digiDART or digiDART-LF (also other ORTEC DSP spectrometers). An optional break-out cable can be used with the model 2BY2 or 3BY3 should you want the signal on a BNC output connector.

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Electrical and Mechanical

Power Required

2BY2 or 3BY3 +12 V at 20 mA. Supplied via a captive power cord terminated in a standard preamplifier power plug (9-pin D connector). Power cord length is nominally 3 m or 10 ft. The preamplifier power plug is compatible with standard preamplifier power connectors provided on most nuclear spectroscopy amplifiers. The preamplifier output signal is delivered on pin-3 of the connector. An optional signal break-out adapter is available for extracting the preamplifier output signal at the power connector.

2BY22-DD or 3BY3-DD Power is provided by the digiDART or digiDART-LF.

Net Weight

2BY2 or 2BY2-DD 2.5 kg (5.5 lb)

3BY3 or 3BY3-DD 4 kg (8.8 lb)

Shipping Weight

2BY2 or 2BY2-DD 4.6 kg (10 lb)

3BY3 or 3BY3-DD 4.6 kg (10 lb)

Dimensions

2BY2 and 2BY2-DD 35.5 cm (14 in.) long x 7.62 cm(3 in.) diameter

3BY3 and 3BY3-DD 38.9 cm (15.3 in.) long x 10.2 cm (4 in.) diameter

Optional Accessories

296-ADAPT Signal Break-Out Adapter Connects to the end of the power cable of the 2BY2 or 3BY3 and separates the preamplifier signal cable from the preamplifier power cable. The adapter 9-pin D connector plugs into the standard preamplifier power connector on the rear of most spectroscopy amplifiers. The 60 cm preamplifier signal cable from the adapter terminates in a male BNC connector for connection to the input of a spectroscopy amplifier.

C-24-12 93 Ω, Coaxial Cable connects the preamplifier output to an amplifier input.

Ordering Information

Model	Description
2BY2	Integrated 2" x 2" NaI(Tl) Detector
3BY3	Integrated 3" x 3" NaI(Tl) Detector
296-ADAPT	Signal Break-Out Adapter. For use with 2BY2 or 3BY3.
C-24-12	RG62A/U, 93 Ω cable with two BNC male plugs; 12-ft. length. For use with 2BY2 or 3BY3.
2BY2-DD	Integrated 2" x 2" NaI(Tl) Detector for use with digiDART or digiDART-LF.
3BY3-DD	Integrated 3" x 3" NaI(Tl) Detector for use with digiDART or digiDART-LF

Specifications subject to change
090309

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