

The first complete, rugged probe, for solving the problems of in-field NaI spectroscopy



- Rugged, completely integrated 2" by 2" NaI(Tl) detector in tough aluminum housing
- Integral preamplifier and high voltage for convenience and safety
- Low power consumption (240 mW), ideal for portable applications
- Single-cable connection for most applications
- 2BY2 Accessory to the ORTEC MicroNOMAD portable MCA
- 2BY2-DD Accessory to the ORTEC DigiDART portable MCA

Everything You Need in One Compact Package The Model 2BY2 is a complete NaI(Tl) probe, ready to go to work in your portable application. It contains everything you need: a 2" by 2" ORTEC Model 905-3 integral NaI(Tl) detector coupled to a 296 "Scintipack" PMT base with integral preamplifier and HV supply — all securely mounted inside a compact aluminum housing.

Ultra Low Power; the End of Bulky, External, HV Supplies The Scintipack™ PMT base (Model 296) includes a low-power, adjustable high-voltage supply, an active bias network, and a spectroscopy preamplifier. Incorporating the bias supply in the photomultiplier 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 For both models 2BY2 and 2BY2-DD, the preamplifier output signal is bundled into a single cable connecting to the MCA unit. An optional break-out adapter can be used with the model 2BY2 should you want the signal on a BNC output connector.

2BY2/2BY2-DD

Integral NaI(Tl) Detector

Electrical and Mechanical

Power Required

2BY2: +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. The preamplifier power plug is compatible with the standard preamplifier power connector provided on most nuclear spectroscopy amplifiers. The preamplifier output signal is also delivered on pin 3 of this connector for use with ORTEC Portable MCAs. An optional signal break-out adapter is available for extracting the preamplifier output signal at the power connector.

2BY2-DD: Power is provided by the DigiDART from the battery.

Weight: 3 kg (6.75 lb)

Dimensions

Length: 35.5 cm (14")

Diameter: 7.62 cm (3")

2BY2 Optional Accessories

296-ADAPT Signal Break-Out Adapter: Connects to the end of the power cable of the 2BY2 and separates the preamplifier signal cable from the preamplifier power cable. The 9-pin D connector on the adapter plugs into the standard preamplifier power connector on the rear of most spectroscopy amplifiers. The 60-cm-long preamplifier signal cable from the adapter terminates in a 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. (Not necessary for use with MicroNOMAD). RG-62A/U, 93-Ω cable (3.7 m long) with two BNC male connectors.

Ordering Information

Model	Description
2BY2	Integrated 2" by 2" NaI(Tl) Detector for use with MicroNOMAD
296-ADAPT	Signal Break-Out Adapter. For use with 2BY2.
C-24-12	RG-62A/U, 93-Ω cable with two BNC male plugs; 12-ft. length. For use with 2BY2.
2BY2-DD	Integrated 2" by 2" NaI(Tl) Detector for use with DigiDART

Specifications subject to change
021005

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