

✓
QUALITY ASSURANCE DATA SHEET
GEM Series HPGe (High-Purity Germanium) Coaxial Detector System

STOCK

Model and Serial Numbers

Detector Model No. GEM50

Cryostat Configuration SH-GEM

Dewar Model 30

Preamplifier Model 257P

Preamplifier S/N 1142

H.V. Filter Model 138

H.V. Filter S/N 10835

Important Reference Data

Ship Date 9-19-01

Serial No. 41-P41090A

When calling Customer Service, always
reference this Detector Serial No.

Cryogenic Information

Dewar Capacity 30L Static Holding Time 14 Days Detector Cool-Down Time 8 hrs.

Dimensions

Crystal Diameter 66.5 mm

Crystal Length 65.7 mm

End Cap to Crystal 4 mm

Absorbing Layers

Aluminum 1.00 mm

Magnesium — mm

Inactive Germanium 200 μ m

High Voltage Bias

Recommended Operating Bias, POSITIVE 3000 V

Performance Specifications*

	Warranted	Measured	Amplifier Time Constant
Resolution (FWHM) at 1.33 MeV, ^{60}Co	<u>1.90</u> keV	<u>1.82</u> keV	<u>6</u> μ s
Peak-to-Compton Ratio, ^{60}Co	<u>66:1</u>	<u>75:1</u>	<u>6</u> μ s
Relative Efficiency at 1.33 MeV, ^{60}Co	<u>50</u> %	<u>51</u> %	<u>6</u> μ s
Peak Shape (FWTM/FWHM), ^{60}Co	<u>1.9</u>	<u>1.9</u>	<u>6</u> μ s
Peak Shape (FWFM/FWHM), ^{60}Co	<u>2.6</u>	<u>2.5</u>	<u>6</u> μ s
Resolution (FWHM) at 122 keV, ^{57}Co	<u>.90</u> keV	<u>.76</u> keV	

Other: _____

Data Certified by: Pete Kelly

Date: 9-19-01

*Measured at a nominal rate of 1000 counts/s unless otherwise specified.

D.R.
D.