



**Scintillation Materials, Detectors and Electronics**

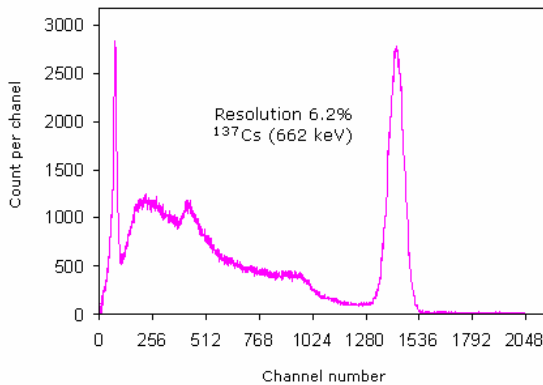
## Product Data Sheet

### STANDARD DETECTORS

Standard detectors based on NaI (TI), CsI (TI) and CsI (Na) are produced in different modifications. Standard detector consists of a scintillation crystal hermetically packed in to aluminum, stainless steel or titanium container with UV transmitting protective glass. Scintillation crystal is wrapped in reflector material for maximum light detection. Standard detectors can be produced in low-background and ruggedized versions.



Standard detector based on alkali halide scintillators are used for registration and gamma radiation spectrometry in the photons energy range from 50 keV to 8.0 MeV under the influence of a radioactive source as well as for kitting of measurement devices for ionizing radiation of general purpose.



<sup>137</sup>Cs spectrum for a NaI(Tl)  
12D12 mm [3"x3"]

#### **Additional information and features:**

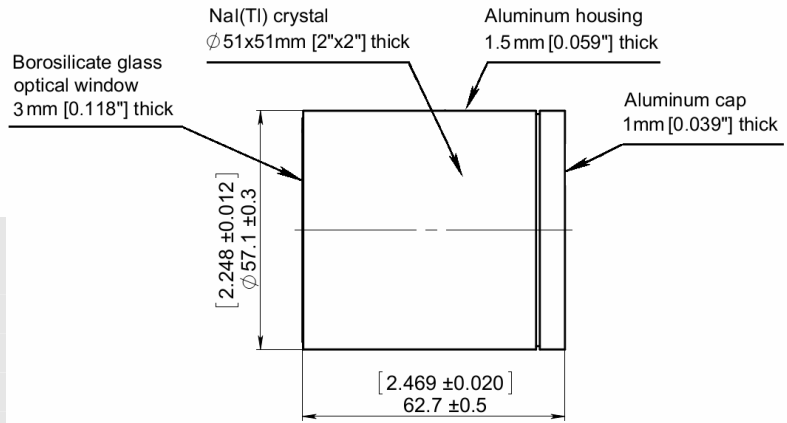
- production of any dimensions and design
- aluminum, stainless steel or titanium containers
- quartz or borosilicate protective glass
- reflecting material with the highest characteristics
- resistance to mechanical, climatic and temperature loads
- perfect scintillation parameters of products
- ruggedized and low-background, x-ray and well-type versions are available
- products reliability is confirmed by the warranty



**Popular configurations**

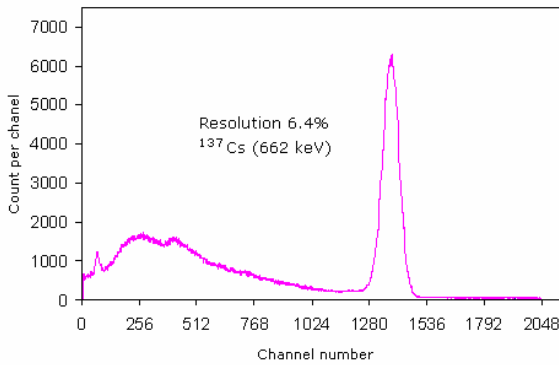
Standard configurations

Model	Crystal size, mm [inches]
4D4	25x25 [1"x1"]
8D8	51x51 [2"x2"]
12D12	76x76 [3"x3"]
20D20	127x127 [5"x5"]
24D24	152x152 [6"x6"]

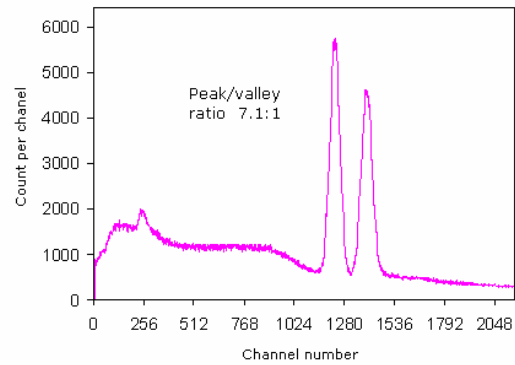


Model 8D8

A well-type receptacle in NaI (Tl) detectors provides maximum absorption of radiation from a sample by approximating 4π geometry. Standard detectors with well-type crystals are used in medicine, biological research, environmental monitoring, etc. We have different modifications of well-type detectors in productions.



<sup>137</sup>Cs spectrum for a NaI(Tl)  
20W20.C1 [5"x5"]

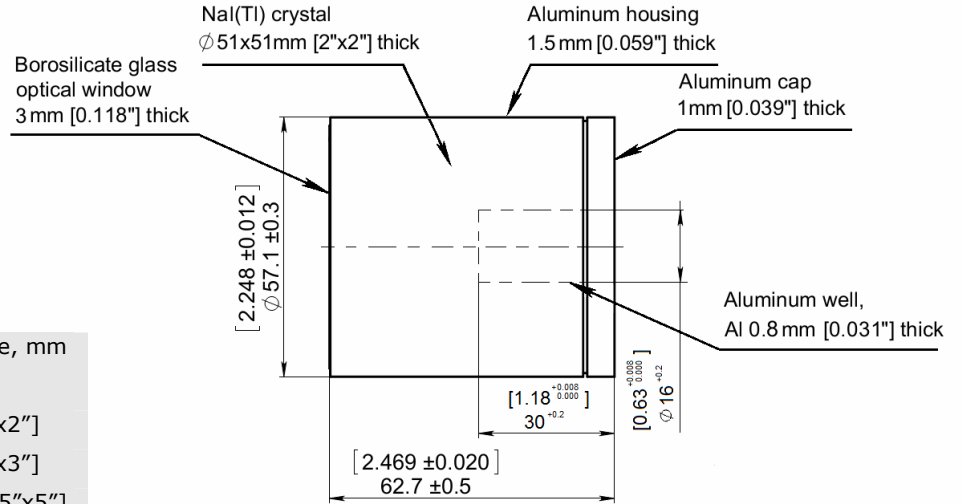


<sup>60</sup>Co spectrum for a NaI(Tl)  
20W20.C1 [5"x5"]



Axial well configurations

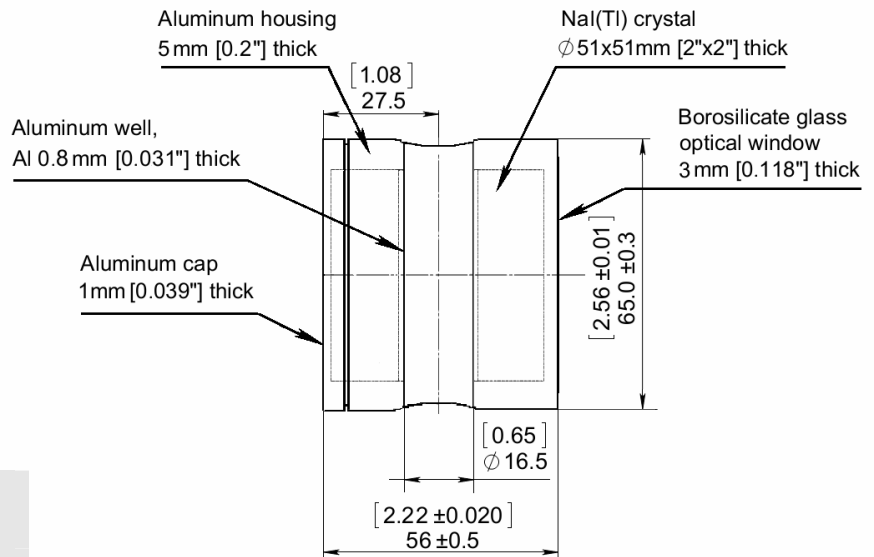
Model	Crystal size, mm [inches]
8W8.C1	51x51 [2"x2"]
12W12.C1	76x76 [3"x3"]
20W20.C2	127x127 [5"x5"]



Model 8W8.C1

Lateral well configurations

Model	Crystal size, mm [inches]
8W8.C3	51x51 [2"x2"]
12W12.C3	76x76 [3"x3"]



Model 8W8.C3



***Ruggedized detectors***

Detectors for geophysical (well logging) and special applications can be produced in ruggedized versions. Ruggedized detectors with improved mechanical and thermal characteristics are applied for gamma-ray logging in gas and oil industry.

In order to provide increased mechanical and thermal hardness ruggedized detectors are batched with NaI (Tl) polycrystals or other scintillation materials, usually CsI (Na), with damping system for qualitative work within assemblies' lifetime.

***Low-background detectors***

For detection and spectrometry of weak ionizing radiation and low activity levels of different radionuclides, low-background detectors are used which are characterized by a very low intrinsic background level. The low background is attained by the use of both crystals having a low intrinsic background level and suitable construction materials.