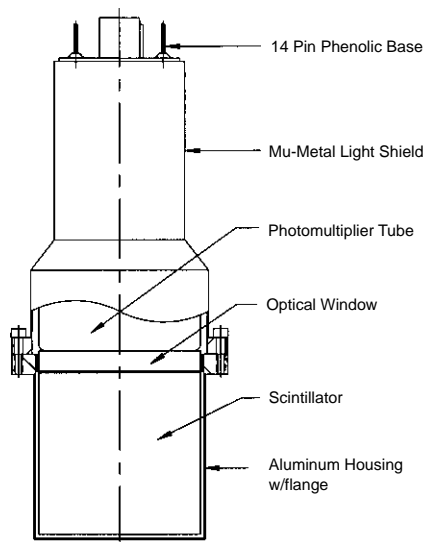


multiline

Scintillation Detector with Demountable PMT(s)

■ features/advantages

- PMTs can be removed in-the-field for replacement or servicing
- Detector performance can be guaranteed for energy and/or timing resolutions
- Large scintillator volumes can be accommodated



Bicron *Multiline* detector assemblies are scintillator-photomultiplier combinations that allow the removal of the photomultiplier tube or tubes without disturbing the scintillator package. The scintillator is mounted with appropriate reflector material in a low-mass metal container that has a glass or quartz optical window for each PMT. The magnetic light shield of each PMT is mechanically fastened to the flange or other mounting hardware on the scintillator container.

Multiline detectors are usually 101.6 mm (4") in diameter and larger.

■ options

- Scintillator containers of low-background stainless steel or copper
- PMTs selected for low background, premium resolution, fixed HV use, or gain matching
- Special flanges, mounting fixtures or other modifications
- Integrated, low-background voltage divider/preamp bases
- Non-circular cross-sections
- Premium resolution assemblies

■ other configurations

- Ruggedized and high-temperature detectors
- Detectors with side or end wells

■ design notes

- Large detectors may require multiple PMTs.
- PMT viewing ports can be located at positions other than at the ends of detectors.
- For a multiple PMT assembly, the PMTs are matched for gain and balanced. This makes it possible to sum the output of all tubes and obtain one uniform signal with optimum pulse height resolution. Records for each detector in Bicron's database allow us to supply replacement PMTs that match existing PMTs.
- Scintillator areas not viewed by PMTs are covered with a reflector for optimum light collection.



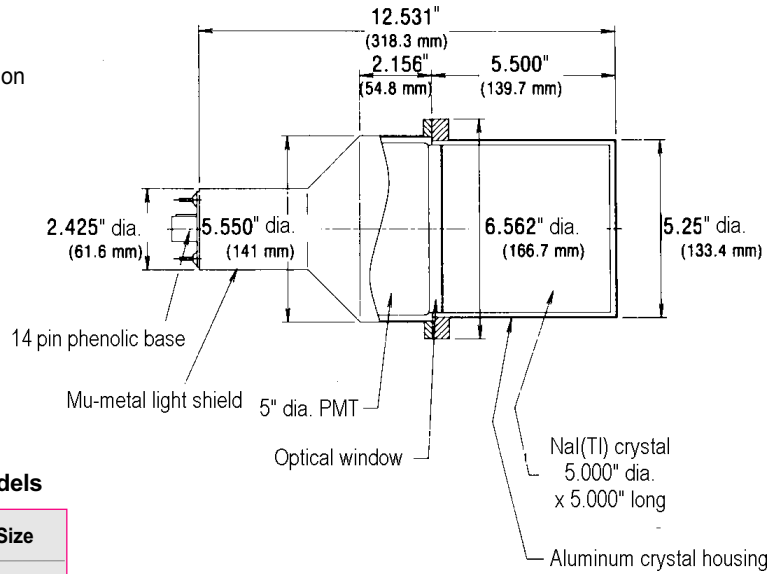
BICRON[®]

popular configurations

solid with single PMT

General purpose. For material assay, activation analysis and other higher energy counting applications.

Model 5H5/5 shown



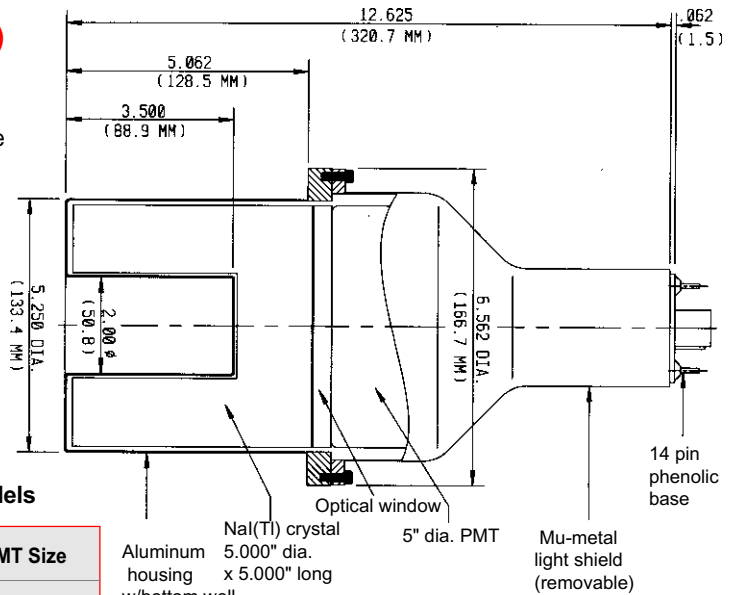
Typical Solid Crystal Multiline Models

Model	Crystal Size	PMT Size
4H3/3	4" x 3"	3"
4H4/3	4" x 4"	3"
5H4/5	5" x 4"	5"
5H5/5	5" x 5"	5"
5H6/5	5" x 6"	5"
6H6/5	6" x 6"	5"

end well (side well also available)

Highly efficient for measuring activity of small-sized sources. Applicable to higher energy emitting isotope measurements.

Model 5HW5/5 shown



Typical End Well Crystal Multiline Models

Model	Crystal Size	Well Size**	PMT Size
4HW4/5	4" x 4"	1 x 2	5"
5HW5/5	5" x 5"	1 x 2	5"
6HW4/5	6" x 4"	1 x 2	5"

** Custom well sizes available

Manufacturer reserves the right to alter specifications.



BICRON®

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