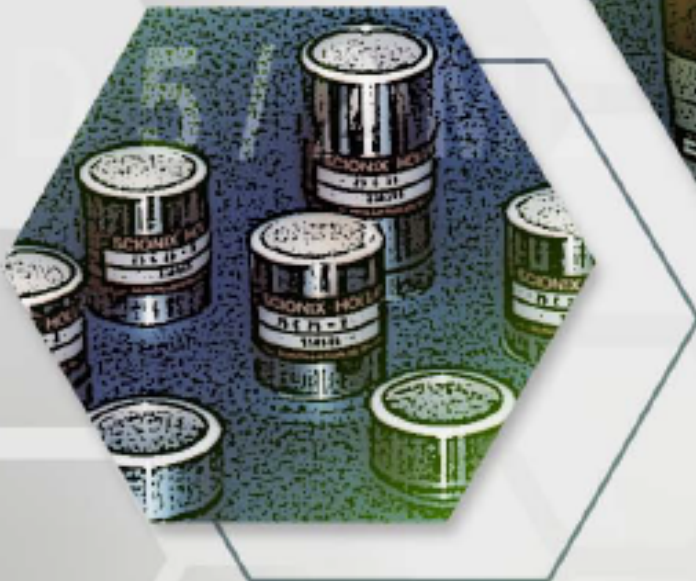
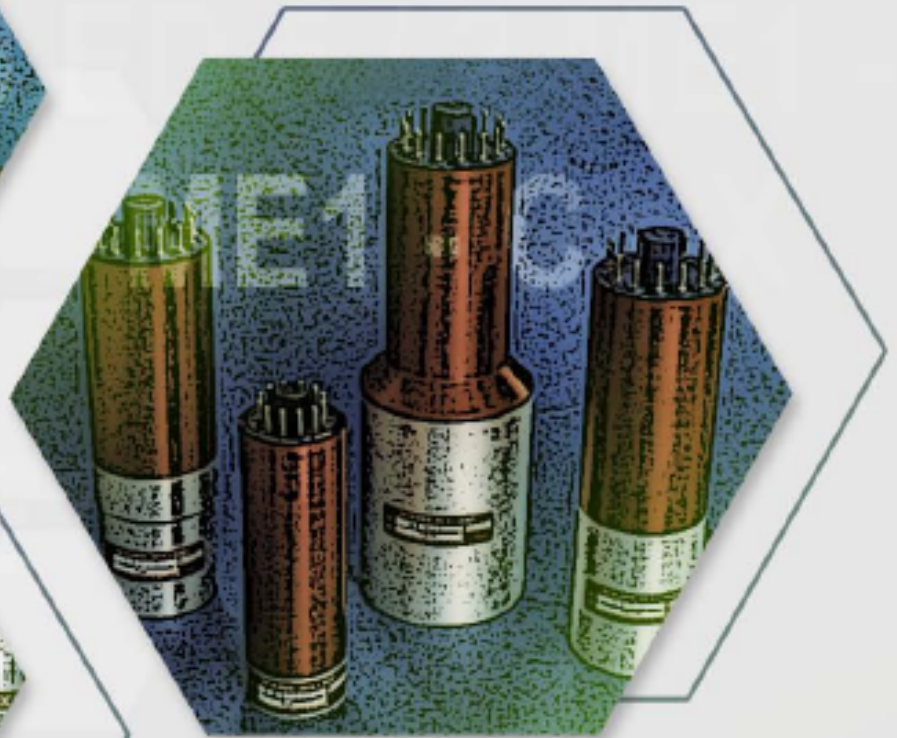
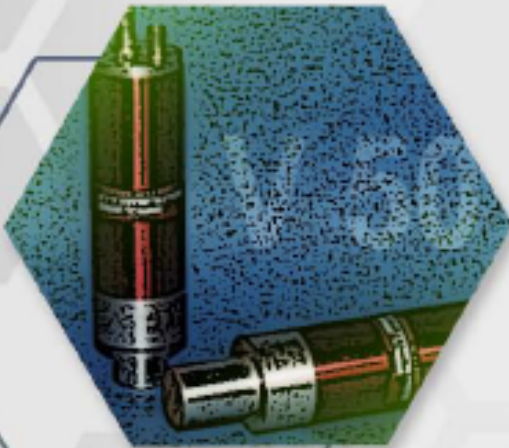


# Nomenclature



# Type Numbering



**BNC**

Berkeley Nucleonics Corporation

SCIONIX scintillation detectors are characterized by a type number in which most of the properties of the instrument can be found. However, there remain features that are not "captured" in the type number (e.g. special geometries or electronic features) since there is a large number of ways a scintillation detector can be constructed. In this case the *suffix -X* is added to the type number which refers to "special". Note that for some of the nine features below, more than one option may apply.

The following example, type number **V 50 ED 5 / 2 ME1 - C - X** indicates a 50 mm square CsI(Tl) crystal, 5 mm high, integrally coupled to a 51 mm diameter (2") photomultiplier tube, provided with a beryllium entrance window, solid Mu-metal detector housing and built-in voltage divider. It is a customer special. Standard "off the shelf" scintillation detectors are provided with silver anodized aluminum housings, bialkali photocathode PMTs and positive (+) high voltage operation.

## **V 50 B D 5 / 2 - ME1 - C - X**

GEOMETRY OF SCINTILLATOR (V)	
<b>V</b>	<b>Square</b>
<b>R</b>	<b>Rectangular</b>
<b>C</b>	<b>Spherical</b>
<b>Z</b>	<b>Hexagonal</b>
<b>-</b>	<b>Circular</b>
ACTUAL SCINTILLATION DIAMETER IN mm (50)	
TYPE OF CRYSTAL/LIGHT DETECTOR COUPLING (B)	
<b>A</b>	<b>Demountable photomultiplier</b>
<b>B</b>	<b>Integrally mounted photomultiplier</b>
<b>C</b>	<b>Crystal without photomultiplier</b>
<b>K</b>	<b>Gamma cameracrystal</b>
<b>P</b>	<b>Photodiode readout</b>
<b>T</b>	<b>High temperature detector</b>
<b>H</b>	<b>Crystal readout side perpendicular to PMT</b>
<b>F</b>	<b>Fiberoptics lightguide</b>
<b>Q</b>	<b>Quartz light guide or window</b>
<b>NAL</b>	<b>Undoped NaI light guide</b>

TYPE OF WINDOW/HOUSING (D)	
<b>A</b>	<b>Thin window aluminum entrance window</b>
<b>D</b>	<b>Beryllium entrance window</b>
<b>M</b>	<b>Mylar entrance window</b>
<b>S</b>	<b>Steel housing (chrome plated or stainless)</b>
<b>C</b>	<b>Copper housing</b>
<b>P</b>	<b>Axial well in crystal</b>
<b>R</b>	<b>Ruggedized construction</b>
<b>-</b>	<b>Standard 0.5 mm thick aluminum housing</b>
HEIGHT OF CRYSTAL IN mm (5)	
<p>In case of phoswiches, the height of the primary crystal precedes the letters PH followed by the height of the secondary (guard) crystal.</p>	
DIAMETER OF PHOTOMULTIPLIER TUBE IN INCHES (2)	
<p>In case of more than one PMT, the number is indicated in brackets after the diameter; e.g. / 3(3) indicates three 76 mm PMTs. In case of photodiode readout, the size of the photodiode is indicated in mm.</p>	
ELECTRONICS/FEATURES OF PMT (ME1)	
<b>M</b>	<b>External solid m-metal shield</b>
<b>L</b>	<b>Version with flying PMT leads</b>
<b>F1</b>	<b>Built-in Voltage Divider (VD)</b>
<b>E2</b>	<b>Voltage divider / preamplifier</b>
<b>E3</b>	<b>Customer electronics special</b>
<b>HV</b>	<b>Built-in high voltage generator</b>
<b>-NEG</b>	<b>Negative high voltage</b>

SCINTILLATION MATERIAL (C)	
<b>C</b>	<b>CsI(Tl)</b>
<b>CN</b>	<b>CsI(Na)</b>
<b>BGO</b>	<b>BGO</b>
<b>BAF</b>	<b>BaF2</b>
<b>YAP</b>	<b>YAP:Ce</b>
<b>CaF</b>	<b>CaF2</b>
<b>P</b>	<b>Plastic scintillator</b>
<b>ZnS</b>	<b>ZnS(Ag)</b>
<b>-</b>	<b>NaI(Tl)</b>
EXTRA FEATURES (X)	
<b>Am</b>	<b>Am light pulser</b>
<b>T</b>	<b>Built-in thermistor</b>
<b>O</b>	<b>Fiber optic for gain monitoring PMT</b>
<b>L</b>	<b>Built-in Led or laser port</b>
<b>X</b>	<b>Non standard or custom configuration</b>
<b>LB</b>	<b>Low background selected materials</b>



Standard B-style Assemblies



B-style Assemblies with  
Built-in VD / Preamp



Standard C-style Assemblies