EURORAD has developed a large set of probes incorporating:

* CdTe & CdZnTe detectors of both COUNTER & SPECTROMETER grade, with active sizes ranging from 1 to 1000 mm$^3$ for planar and hemispherical structures.
* Silicon based detectors
* Scintillators (CsI(Tl)) coupled to Si photodiodes

Some models are presented here but probes following customer's specific needs can be also manufactured in house.
RADIATION DETECTION PROBES

CdTe & CdZnTe PROBES

EXAMPLES OF GAMMA-RAY SPECTRA MEASURED WITH SO8W & SO21W PROBES

137Cs spectrum with SO8W probe

137Cs spectrum with SO21W probe
### RADIATION DETECTION PROBES

#### PROBES CHARACTERISTICS

<table>
<thead>
<tr>
<th></th>
<th>SO8W&lt;sup&gt;(2)&lt;/sup&gt;</th>
<th>SO21W&lt;sup&gt;(2)&lt;/sup&gt;</th>
<th>SO35</th>
<th>SC5050</th>
<th>PSD16&lt;sup&gt;(4)&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DETECTOR TYPE</strong></td>
<td>Hemispherical CdTe/CZT&lt;sup&gt;(3)&lt;/sup&gt;</td>
<td>Hemispherical CdTe/CZT&lt;sup&gt;(3)&lt;/sup&gt;</td>
<td>CsI(Tl) coupled to a 100mm&lt;sup&gt;2&lt;/sup&gt; photodiode</td>
<td>CsI(Tl) coupled to a 100mm&lt;sup&gt;2&lt;/sup&gt; photodiode</td>
<td>Si or filtered Si</td>
</tr>
<tr>
<td><strong>ENERGY RANGE</strong></td>
<td>Gamma rays from 30keV to 2MeV</td>
<td>Gamma rays from 30keV to 2MeV</td>
<td>Gamma rays from 90keV to 2MeV</td>
<td>Gamma rays from 90keV to 2MeV</td>
<td>Gamma rays from 90keV to few MeV</td>
</tr>
<tr>
<td><strong>DETECTOR SIZE</strong></td>
<td>Up to 65mm&lt;sup&gt;2&lt;/sup&gt;</td>
<td>From 100mm&lt;sup&gt;2&lt;/sup&gt; to 500mm&lt;sup&gt;3&lt;/sup&gt;</td>
<td>From 1000mm&lt;sup&gt;2&lt;/sup&gt; to 12000mm&lt;sup&gt;3&lt;/sup&gt;</td>
<td>From 45000mm&lt;sup&gt;2&lt;/sup&gt; to 80000mm&lt;sup&gt;3&lt;/sup&gt;</td>
<td>7mm&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>PREAMP. SENSITIVITY</strong></td>
<td>25mV/MeV</td>
<td>230mV/MeV</td>
<td>440mV/MeV (Si)</td>
<td>440mV/MeV (Si)</td>
<td>TTL output 30-40 kCps for 1Gy/h</td>
</tr>
<tr>
<td><strong>DIMENSIONS</strong>&lt;sup&gt;(1)&lt;/sup&gt;</td>
<td>Ø8X91mm</td>
<td>Ø21X133mm</td>
<td>Ø35X70mm</td>
<td>Ø65X100mm</td>
<td>Ø16X45mm</td>
</tr>
<tr>
<td><strong>COMMENTS</strong></td>
<td>Small size γ rays spectrometry Waterproof probe</td>
<td>High energy γ rays spectrometry waterproof probe, High efficiency</td>
<td>High energy γ rays spectrometry probe</td>
<td>High energy γ rays spectrometry probe</td>
<td>For dosimetry application</td>
</tr>
<tr>
<td><strong>TYPICAL ENERGY</strong></td>
<td>≤ 5 %</td>
<td>≤ 5 %</td>
<td>~ 7 – 10 %</td>
<td>~ 10 – 15 %</td>
<td>-</td>
</tr>
<tr>
<td><strong>RESOLUTION at 662 keV (&lt;sup&gt;137&lt;/sup&gt;Cs)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>(1)</sup> The dimensions are given without connector  
<sup>(2)</sup> 4m cable, other length on request  
<sup>(3)</sup> Planar detector on request  
<sup>(4)</sup> Energy discrimination externally adjusted
RADIATION DETECTION PROBES

CsI(Tl) SCINTILLATOR BASED PROBES

SOLID STATE GAMMA RAY PROBES USING A SILICON PHOTODETECTOR COUPLED TO A CsI(Tl) SCINTILLATOR

SCINTILLATION PROBES WORKING WITHOUT PHOTOMULTIPLIER TUBE

SO35

SC5050

137Cs spectrum with SO35 CsI probe

137Cs spectrum with SC5050 CsI probe

Si BASED PROBES

PSD16 Si miniature probe