

# RAZOR<sup>Detector</sup>

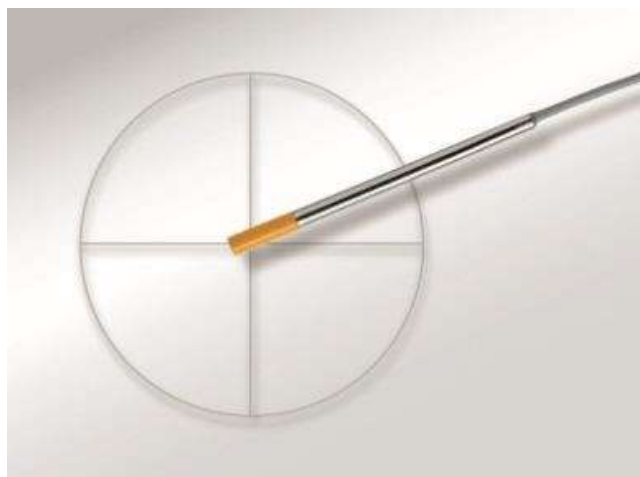
## Field Diode Detector for stereotactic beams

Diode detector with very low dose rate dependency, effective measurement depth 0.50 mm from surface, very high geometric resolution (0.6 mm in plane perpendicular to central axis, 0.06 mm in depth).

The Razor detector for relative dosimetry is a very small sized, rigid and long-lasting semiconductor detector with high dosimetric performances.

The Razor detector is based on a p-type silicon diode chip, specifically designed for radiation therapy applications, and in particular for the relative dosimetry of electron and stereotactic photon fields. Performances have been verified in the range of photon beam qualities <sup>60</sup>Co-15MV, and 6-15MeV electron energies.

The detector features a low sensitivity dependence on dose and dose per pulse.



The Razor detector works in photovoltaic mode, without any bias voltage. Due to the ionizing effect of radiation, electron-hole pairs are created in silicon. The signal is mostly generated by electrons which, after freely diffusing through the crystal, reach the n-p junction region and are swept by the built-in electric field of the depleted region. Electrons of pair directly generated inside the depleted region provide a minor contribution to signal as well.

Item	Value
Stem material	Stainless steel
Enclosure material	ABS plastic (acrylonitrile butadiene styrene) and epoxy
Position of measurement point	Indicated by a cross-hair at the top of the detector
Effective measurement point	0.8 ± 0.2 mm from surface
Chip size (mm)	0.95 × 0.95 × 0.4
Active detector diameter (mm)	0.6
Active detector thickness (mm)	0.02
Head diameter (mm)	4.0
Head length (mm)	15
Stem diameter (mm)	4.0
Total length (mm)	60

**Stealth<sup>Chamber</sup> in combination with Razor Detector makes Your Perfect Package for Small Field Dosimetry!**

### Ordering Information

999-760-T  
999-760-BT

**Razor Detector**, with TNC Triax connector  
**Razor Detector**, with BNC Triax connector