

RTI Dose Probe



RTI

From Radiation
to Information

For Low Dose Rate Measurements

The RTI Dose Probe is an external dose probe, designed to perform very low dose rate measurements for instance on image intensifiers.

To avoid or minimize interference with AEC (Automatic Exposure Control) on X-ray equipment, the probe is very small. This also enables to fit it into the table bucky. Since it is a solid-state detector, no corrections for pressure or temperature are needed. Neither is bias voltage.



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Low Dose Rate

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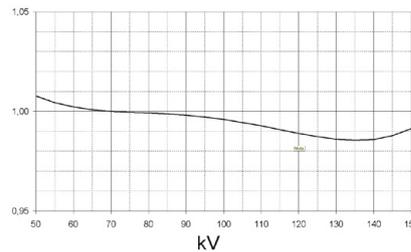
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Fluoroscopy

The RTI Dose Probe is small and has a fast response which makes it ideal for pulsed fluoroscopy. It can detect the individual pulses, determine pulse rate and show waveforms even at the highest pulse rates used on modern fluoroscopy systems and be used both for continuous and pulsed fluoroscopy. This is not possible with ionization chambers since their response is too slow to resolve individual pulses.

The RTI Dose Probe supports the ADI (Automatic Detector Identification) system. When connected, the Piranha or Cobia automatically identifies the probe and makes all necessary adjustments without any need for interaction from the user. The Piranha ADI system also gives full interchangeability of probes between different Piranha systems using the same type of probes.

Beam quality - W/3 mm A



Specifications

With Black Piranha

Type:	R100B
Sensitivity:	55 $\mu\text{C}/\text{Gy}$
Size:	20 x 45 x 7.4 mm, 0.79" x 1.8" x 0.29"
Weight:	85 g (3 oz)
Active detector area:	10 x 10 mm, 0.39" x 0.39"
Cable length:	2.0 m (6.6 ft)
Connector:	Piranha type with automatic detector identification
Dose range:	0.1 nGy - >1.5 kGy 12 nR - >170 kR
Dose rate range:	1 nGy/s - 76 mGy/s 0.4 mR/h - 31 kR/h
Dose per pulse:	1 nGy/pulse - 3 kGy/pulse 120 nR/pulse - 340 kR/pulse
Backscatter protected:	Yes

With Cobia Flex / Sense

Type:	R100B
Inaccuracy:	$\pm 5\%$
Size:	20 x 45 x 7.4 mm, 0.79" x 1.8" x 0.29"
Weight:	85 g (3 oz)
Cable length:	2.0 m (6.6 ft)
Pulse frequency:	1/6 - 260 Hz
Dose:	5 nGy - 2 kGy 0.6 μR - 250 kR
Dose rate:	0.2 $\mu\text{Gy}/\text{s}$ - 200 mGy/s 1.5 mR/min - 1.5 kR/min
Dose per 180 R/p:	1 nGy/pulse - 1600 mGy/pulse 0.1 $\mu\text{R}/\text{pulse}$ -
Backscatter protected:	Yes