



Detector QED™

Easy Placement Dose Monitoring

Introduction

The QED is ideal for treatments where diode placement is relatively normal to the beam. Five models offer three different buildup configurations for each of the low, medium and high photon energy ranges. The electron QED detector is suitable for all electron energies. There is also a skin (scatter) QED detector which has no buildup.

Clinical Characteristics

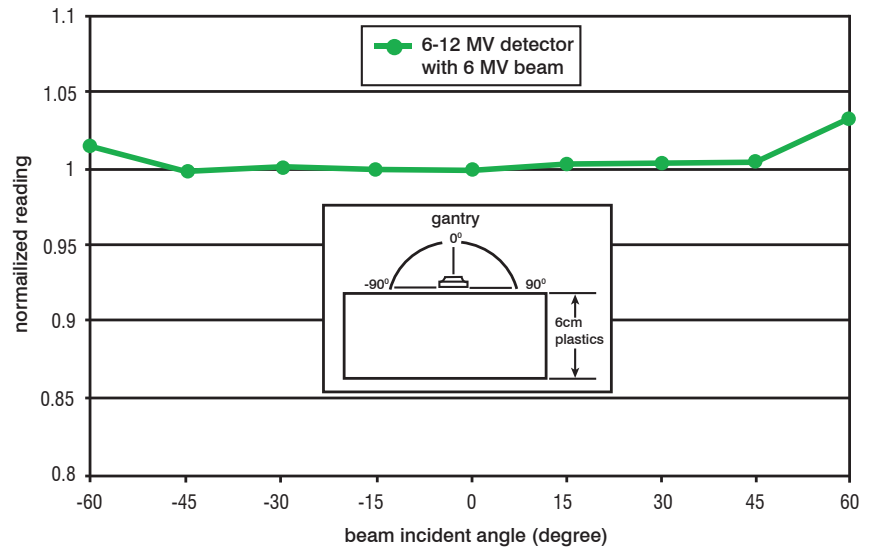
Superior Radiation Resistance - The radiation degradation rate is 1.5% per kGy at 10 MeV and < 0.5% per kGy at 6 MV.

Minimized Instantaneous Dose Rate Dependence - Normalized to 100cm SSD, the diode response variation is less than $\pm 1.5\%$ for both 6 and 18 MV beams from 80 cm to 130 cm.

Reproducible - QED reproducibility error is less than 0.5% for measurements > 1cGy.

Features

- Radiation hardened silicon diode
- Active dimension of 0.8 x 0.8mm
- 32 nC/Gy sensitivity
- 3m cable length
- LEMO cable connector (adapters available)



QED Specifications

Voltage range	ELECTRON	SKIN	1-4 MV	6-12 MV	15-25 MV	
Buildup material	Acrylic	None	Aluminum	Brass	Brass	
Total buildup (g/cm ²)	0.36	0.11	1.09	1.91	3.10	
Response (30°)*	104.0%	101.5%	99.5%	100.5%	98.5%	
Response (45°)*	-	103.5%	99.5%	101.5%	97.5%	
Response (60°)*	-	-	100.0%	103.5%	97.0%	
Energy used for directional response	6 MeV	Co-60	Co-60	6 MV	18 MV	
Color	GREY	BLACK	BLUE	YELLOW	RED	
Model	Negative output	1112000-2	1113000-2	1114000-2	1115000-2	1116000-2
	Positive output	1112000-3	1113000-3	1114000-3	1115000-3	1116000-3

* The angular dependence measurements were conducted on a Clinac 2100C or a Co-60 machine, with the detectors placed on a 6cm solid phantom.

All data used is best available at time of publication. Data is subject to change without notice.