

FEATURES:

- Large total active area: 2500 mm²
- Four independent 625 mm² detector segments
- Ceramic frame package
- SiO₂ layer thickness: 0.9 μm
- Cost-effective design

APPLICATIONS:

- Alpha-particle spectrometry
- Detection of protons, electrons, and ions
- Radon detection and monitoring
- Physics experiments
- Spectrometric and counting systems



Table 1 - ABSOLUTE MAXIMUM RATINGS

Parameter	Rating
Maximum reverse voltage	300 V

Table 2 - SPECIFICATIONS

Parameter	Value	Conditions / Notes
Total active area	2500 mm ²	Four 625 mm ² segments
Operating reverse voltage	1 to 250 V	
Leakage current	0.1 to 10 μA	
Capacitance	250 pF	V _R = 1 V
Capacitance	125 pF	V _R = 300 V
Energy resolution	230 to 250 keV	
Weight	22 g	

CAUTION: DO NOT TOUCH THE DETECTOR ACTIVE AREA.



ESD CAUTION

This detector may be damaged by electrostatic discharge (ESD). Handle the detector only at an ESD-protected workstation and observe appropriate ESD precautions.

EXAMPLE ALPHA-PARTICLE SPECTRA

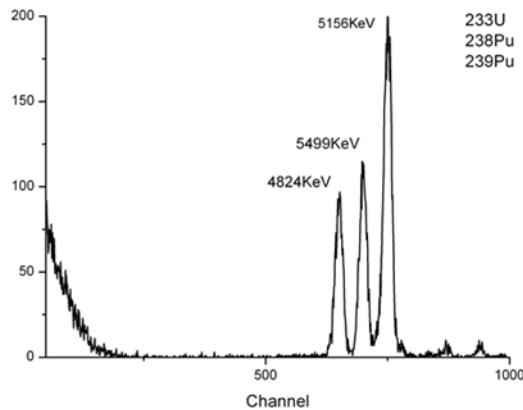


Fig. 1. Example alpha-particle spectrum of a mixed $^{233}\text{U}/^{238}\text{Pu}/^{239}\text{Pu}$ source measured in vacuum. ⁽¹⁾

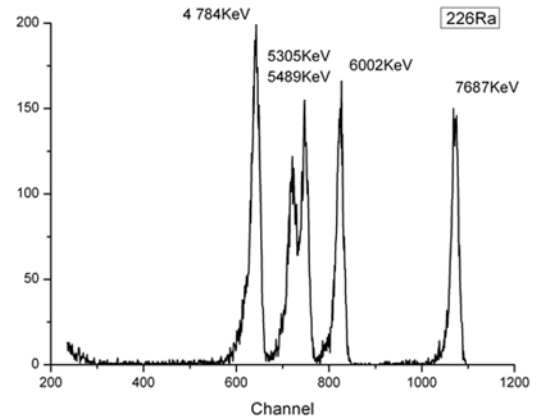


Fig. 2. Example alpha-particle spectrum of a ^{226}Ra source measured in vacuum. ⁽¹⁾

- (1) The spectra were acquired in vacuum at $V_R = 200$ V. Spectral performance depends on the radioactive source, source-to-detector geometry, vacuum level, bias voltage, readout electronics, and signal-processing parameters. The spectra are provided for reference only and do not constitute guaranteed performance characteristics.

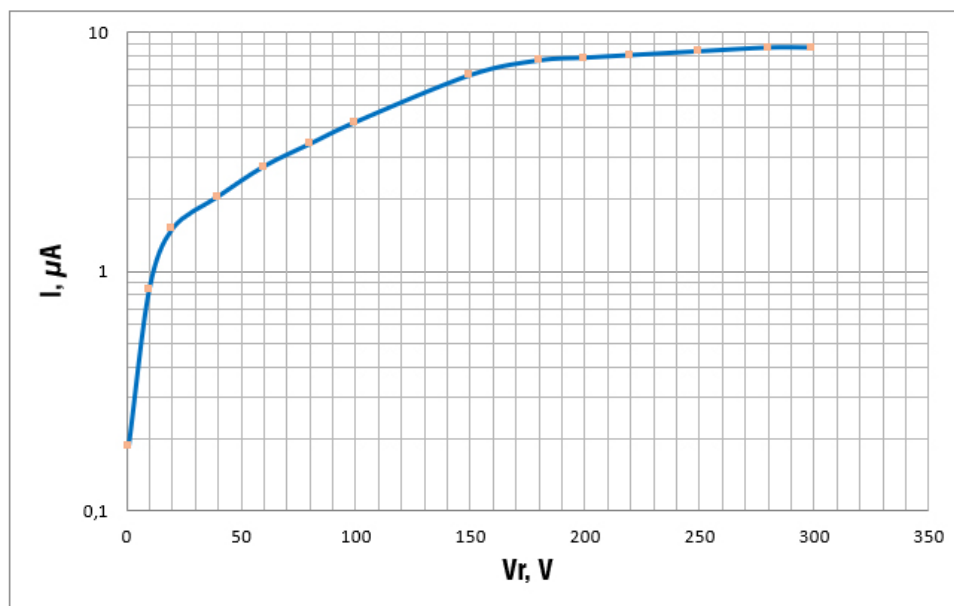


Fig. 3. Leakage current vs. reverse voltage.

Website: <https://shmytov.com>

PURCHASE AND USE CONDITIONS FOR OEM PRODUCTS

OEM products are not intended for use by end users. They are supplied exclusively to developers and manufacturers of electronic equipment for integration into their own products. The manufacturer cannot verify the customer's storage, handling, or operating conditions; compliance with the Absolute Maximum Ratings, Specifications, and other requirements stated in the product documentation; or the customer's technical qualifications. By purchasing this product, the customer acknowledges that it is not eligible for return or replacement. Each production batch undergoes quality control before shipment.

MECHANICAL DIMENSIONS AND PIN CONFIGURATION

Manufacturer: AlexDetector

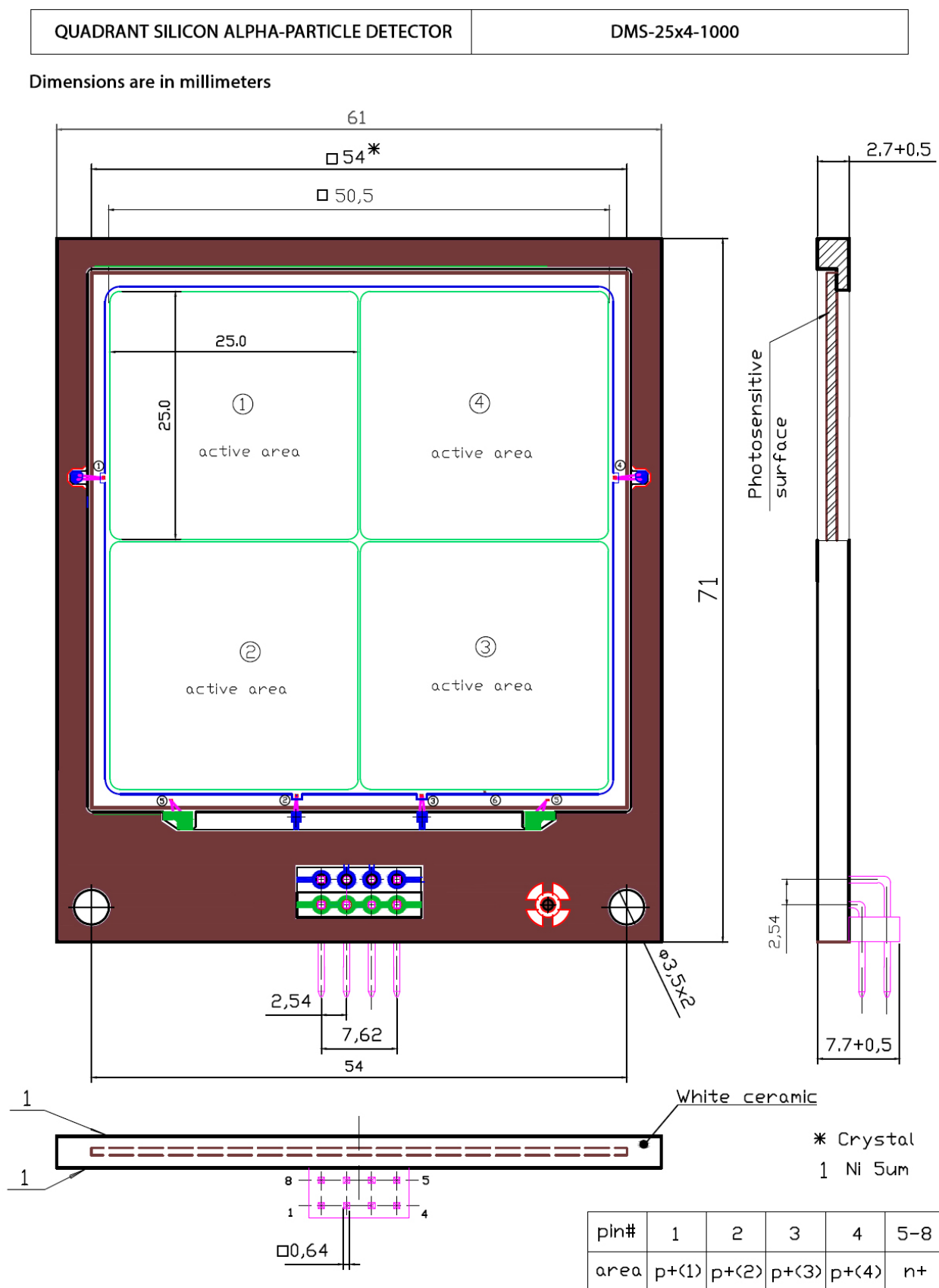


Fig. 4. Package outline and pin configuration.