



# TN-15 – High Sensitivity Ultra-compact Thermal Neutron Scintillation Detector

## Features

- Surpasses the performance of a 100 mm long, 13 mm diameter He<sup>3</sup> tube at four atmospheres
- All-in-one detector, electronics, and MCA
- Miniaturized package: 131 x 33 x 24 mm, 110 g
- USB Connection to PC for control and power
- Power consumption: <250 mW

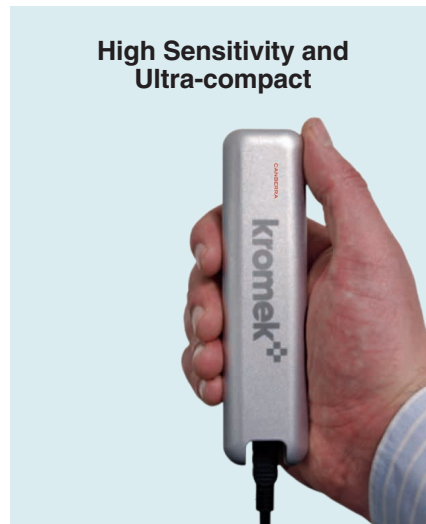
## Description

The TN-15 high sensitivity thermal neutron detector utilizes a state-of-the-art Silicon photosensor (SiPM) and offers world-leading specification in a compact form. The TN-15 surpasses the performance of a 100 mm long 13 mm <sup>3</sup>He tube at four atmospheres.

This highly compact device is completely self-contained, with a built-in preamplifier, shaping amplifier, pulse discrimination, and HV supply. The digitized neutron data is sent to a PC via the mini-USB which also powers the unit, so no external power supply is required.

The TN-15 comes with K-Spect, Kromek's entry-level Windows®-based (XP/Vista/7/8) software, built for detailed sample and spectral analysis.

K-Spect, which is available to download, free of charge, from the Kromek website, provides the spectrum acquisition, display, analysis, and storage functions.



**TN-15 Thermal Neutron  
Scintillation Detector**

## Specifications

### PERFORMANCE

- DETECTOR – Neutron Sensitive Scintillator with SiPM detector.
- INTRINSIC EFFICIENCY – > 50%.
- MAXIMUM THROUGHPUT – 10,000 cps.

### PHYSICAL

- HOUSING SIZE – 131 x 33 x 24 mm (5.16 x 1.3 x 0.9 in.).
- WEIGHT – 110 g (3.9 oz).

### INPUTS/OUTPUTS

- USB (mini USB Connector) – Signal and Power.
- POWER CONSUMPTION – 250 mW.

### ENVIRONMENTAL

- OPERATING TEMPERATURE RANGE – -10° to +40 °C (+14 to +104 °F).

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## ORDERING INFORMATION

TN-15	Compact Thermal Neutron Detector
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### Other Ranger Family Products

#### GR1

- GR1 Gamma-Ray Spectrometer with
- 2.5% FWHM resolution at 662 keV
  - Without MCX I/O ports

#### GR1+

- GR1+ Gamma-Ray Spectrometer with
- 2.0% FWHM resolution at 662 keV
  - Without MCX I/O ports

#### GR1-A

- GR1-A Advanced Gamma-Ray Spectrometer with
- 2.5% FWHM resolution at 662 keV
  - With MCX I/O ports (includes 3x MCX to BNC adaptors)

#### GR1-A+

- GR1-A+ Advanced Gamma-Ray Spectrometer with
- 2.0% FWHM resolution at 662 keV
  - With MCX I/O ports (includes 3x MCX to BNC adaptors)

#### ISXCZT-GR1

Generic ISOCS Characterization for the GR1, GR1+, GR1-A or GR1-A+

#### SIGMA25

USB enabled CsI scintillator (1" x 1" x 1") detector with integrated MCA

#### ISXCSI25

Generic ISOCS Characterization for the SIGMA25

#### SIGMA50

USB enabled CsI scintillator (1" x 1" x 2") detector with integrated MCA

#### ISXCSI50

Generic ISOCS Characterization for the SIGMA50

#### LAB CPG (10 x 10 x 10)

1 cm<sup>3</sup> CZT detector for use with external MCA electronics

#### ISXCZT-LAB1000

Generic ISOCS Characterization for the LAB CPG (10 x 10 x 10)



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