

# PYLON AB7

## Passive Cell Detector

The reliable, versatile, and user-friendly solution for a wide variety of radiation monitoring applications.



We understand that reliable radon detection is not a luxury - it is an absolute necessity.

The Passive Cell Detector is a Lucas type cell that is used on our next generation laboratory-grade instrument, the Pylon AB7 and AB6A Portable Radiation Monitors, for fast, accurate measurement of radon levels.

Every bit as reliable as our previous cells, it has been designed to match the detection specifications of the AB-5 passive cell detector to maintain detection compatibility.

Backed by over 30 years of radon and thoron detection and measurement expertise, superior engineering, and world-class customer service, the Pylon AB7 and passive cell provide radon detection you can depend on.

## Key Features

High Sensitivity	Can detect low radon levels	Radiation Immunity	Immune to beta and gamma radiation
Versatile	Can be used for Continuous sampling measurements	Stable	Insensitive to temperature and humidity changes
Simple Operation	Easy to use & transport		

## Applications

When combined with the Pylon AB7 or AB6A radiation monitors, the passive cell can be used for:

- Radon/Thoron Analysis
- Autonomous Continuous Monitoring
- Residential Monitoring
- Industrial Monitoring
- Environmental Monitoring
- Radioactive Site Monitoring
- Mining / Ore Processing
- Meteorological Studies
- Geological Studies
- Education
- Building Materials Research
- Health Protection
- ... And More





Lucas ZnS(Ag) scintillation cells are frequently used to measure radon gas. When radon decays into its daughter products, it gives off an alpha particle. When the alpha particle strikes the ZnS(Ag) scintillator that coats the inside of the cell, the scintillator gives off a photon of light. This photon is detected, converted to an electrical pulse, and amplified by the photomultiplier tube (PMT) in the monitor. The monitor further amplifies the pulse, discriminates out false pulses, and counts the number of pulses in periods of time. With other factors, this provides a measure of the radon that is present in the sample.

## Technical Specifications

### GENERAL

Radiation Detected:	Alpha
Scintillator:	ZnS(Ag)
Alpha Energy Range:	4.5 to 9 MeV
Radon Accuracy <sup>1</sup> :	± 4%
Calibration <sup>2</sup> :	Single Point
Primary Construction Material:	Aluminum

### DETECTION SPECIFICATIONS

Lowest Activity Detectable:	27.4 Bq/m <sup>3</sup> (0.74 pCi/l)
Sensitivity:	0.037 cpm/Bq/m <sup>3</sup> (1.36 cpm/pCi/l)
Active Volume:	272 ml (9.2 oz. [US Liquid])

### ENVIRONMENTAL

Operating Temperature Range:	0 to +50 °C (32 to +122 °F)
Storage Temperature Range:	-20 to +75 °C (-4 to +167 °F)
Relative Humidity Range:	0 to 90 % (Non-Condensing)

### DIMENSIONS

Diameter:	6 cm (2.38 in.)
Height:	15.6 cm (6.13 in.)
Weight:	167 g (0.4 lb.)

<sup>1</sup> At a 1σ Confidence Level.

<sup>2</sup> Custom calibrations are available.

### Ordering Information:

Model 600P Passive Cell: Order part number 7100200.

Values are nominal, based on new units, and for radon measurements. Specifications subject to change without notice. Trademarks are the properties of their respective holders. All Rights Reserved.

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