

Smoke Detector

Primary Lithium Cylindrical Batteries

Primary battery for smoke detector use

Fire creates many dangers including heat, smoke and the toxic gas Carbon Monoxide CO. To prevent loss of life and avoid the damage caused by smoke and fire, a smoke detector must be reliable.

Therefore it is mandatory by law in several countries to install smoke detectors in new builds of houses and flats and also to upgrade existing buildings to have an appropriate early-warning system.

Battery challenge

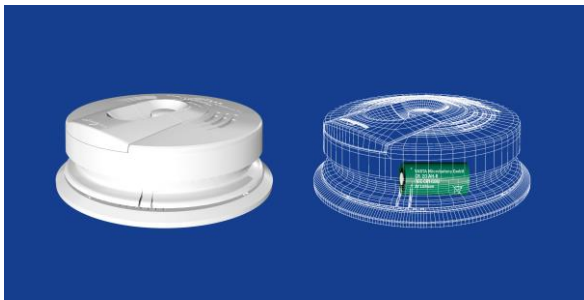
Today, the battery of choice is a 9V Block Primary Battery. However this is physically large, heavy, has a limited life time for the alkaline system and is high in cost for the lithium system. Further to this, modern electronics don't need a voltage level of 9V. The solution is a non replaceable single cell 3V Lithium Battery System. This embedded Lithium Primary Battery targets the new generation of Wireless Professional Smoke Detectors and provides up to 10 Years life time.

The battery has to cover the following sequences:

- base/stand-by mode
- End of life mode
- test mode
- alarm mode

For more information, please visit our website:

<https://www.varta-ag.com/en/industry/product-solutions/lithium>



Technical solution

Lithium Cylindrical Technology



Characteristics	CR 2/3 AH-R
Voltage Level	3.0V
Capacity	1600mAh
Discharge Temperature range	-20°C to +65°C
Weight	17.0g
Dimensions	17mm diameter 33.4mm height

Smoke detector battery

VARTA Microbattery Lithium MnO₂ Batteries offer extended battery life time solutions with reliable power supply for longlife enery demand and maintenance free use in dedicated OEM applications.

- Reliable LiMnO₂ System
- Low self discharge rate
- Wide temperature range
- High current capability
- Long life time up to 10 years
- Environmental friendly
- No passivation
- UL recognized