

# Lightweight Chemical Detector (LCD)

smiths

Smiths Detection

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## VENDOR DESCRIPTION

The LCD heralds a new generation of small, lightweight, and sophisticated detectors designed to provide the military user and civilian first responder with an effective means of detecting a wide range of chemical warfare threats.

The LCD can be contained within a very small UAV or UGV payload or can be carried and worn by an individual. A communications port is used for remote and networked systems.

The LCD has been developed and is currently in use on the FINDER unmanned air vehicle (UAV) system for the USAF as part of the CP2 ACTD for the European Command. The LCD will detect chemical agents within a plume and that data will be used to predict the plume's path and resulting threatened areas.

When operating, the LCD will continuously sample the air for simultaneous detection of CW agents. The LCD can detect, identify, quantify and warn personnel of CWA vapor hazards.

The LCD is designed to meet the needs of the US DoD with respect to the JCAD (Joint Chemical Agent Detector) Program, and the detector is being evaluated by SBCCOM (Soldier, Biological & Chemical Command) and SOCOM (Special Operations Command) as part of the JCAD FCT (Foreign Comparative Testing) Program.



**Product Manager Robotic & Unmanned Sensors**  
 Telephone: (732) 427-5827 / DSN 987  
 Fax: (732) 427-5072 / DSN 987  
 e-mail: SFAE-IEWS-NV-RUS@IEWS.monmouth.army.mil



Business Category: Large Business

CAD

Hardware	
Power: 0.2 watts	Operating Altitude: 0 ft to 10,000 ft AGL
Weight: 0.43 kg or 0.95 lbs	Operating Speed: N/A
Dimensions: 180 mm x 110 mm x 31.5 mm	Operating Temp.: -31°C to 50°C
Internal Volume: 490 cc	Storage Temp.: -30°C to 80°C
On Board storage capacity to handle 72 hours (Will be available soon)	Interface: RS-232 & RS-422
Sensor Type: IMS Ion Mobility Spectrometer (Non-Radioactive)	Bandwidth Required: 57600 bytes/second
Sensor Field of View: N/A	TCDL Compatibility: Not currently available
Internal Permanent Archive on Information: Yes (Available soon)	MTBOMF: > 3500 hrs
Concentration Level: 0.1 mg/m <sup>3</sup>	MTTR: 0.5 hrs
	Maintainability: 2-level BIT to LRM level – Yes

Performance
Completes 98% of the Missions it states w/out experiencing a mission abort
Sensor Hardened to Mitigate Damaging effect from EMP: Yes
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Operate & Communicate in Electromagnetic Energy Emission Environment: Yes
Provide detection of nerve, blister and blood agent vapors, liquid, solid, rain and aerosol (all CWA and Toxic Industrial Chemicals (TIC) listed in NG1C-1671-0813-01 Chemical Biological Warfare Capabilities and Toxic Industrial Chemicals dated 20 April 2001.