



lightsense  
TECHNOLOGY

## DrugDetect-M1



### Product

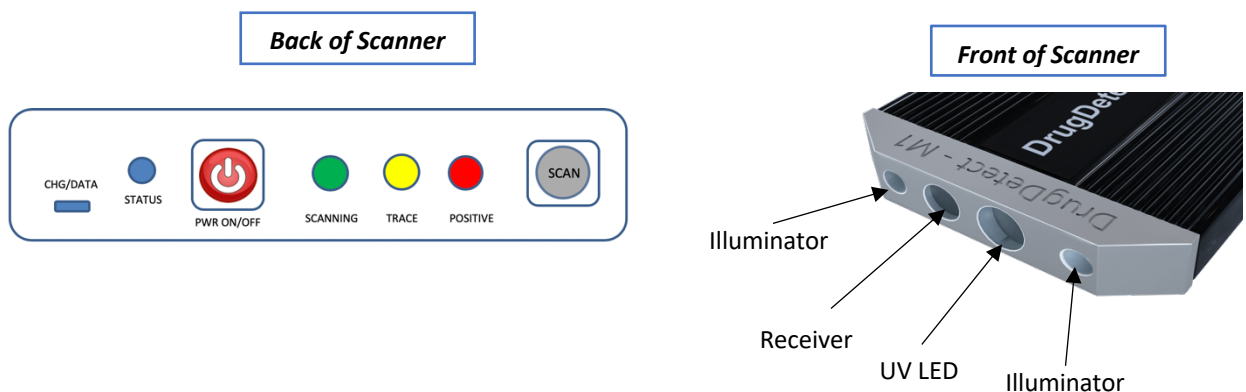
The DrugDetect–M1 Methamphetamine Drug Detector is a handheld, battery-operated non-contact optical scanner for detecting all forms of visible and detectable amounts of methamphetamine on most surfaces, including skin, clothing, plastics, wood, masonry and metals. DrugDetect-M1 is available in two versions—one for Law enforcement, where prosecutable amounts are indicated [ $>1.0\%$ ] and the “I” version for Building Inspection, where maximum reference doses [ $>1.5\mu\text{g}/100\text{cm}^2$ ] are indicated for remediation purposes, and special sample swipe techniques must be used.

### Principles of operation

Photoemission from an optically excited surface is used to detect minute quantities of methamphetamine. This patented device uses an energy source within the instrument to provide optical excitation at the appropriate wavelength and the DrugDetect-M1’s detector senses the resulting photoemission.

### Product Features and Benefits

- Handheld, lightweight, ergonomic design
- Continuous scan, instant results
- Non-contact detection with illumination of the surface being scanned
- Detects through plastic wrap and plastic bags
- Easy to read results – Three LED’s [Green, Yellow, Red] indicate “Scanning” & meth concentration
- No disposables or chemicals – No messy, expensive “Test Kits”
- Long-life rechargeable Li-ion battery, virtually no operating cost
- USB interface for storing results/reporting with date/time stamp and positive/negative results



## Technical Specification

**Type: Handheld, self-contained, optical non-contact illicit drug detector**

Substances detected	Powdered and crystalline methamphetamine, pseudoephedrine w/without adulterants
Maximum Sensitivity: Law Enforcement	0.1%-1%: yellow LED >1%: red LED
Maximum Sensitivity: Building Inspection/Remediation	.0000015grams/100cm <sup>2</sup> [1.5 micrograms]/100cm <sup>2</sup>
Environmental	-20°C to +60°C [-4°F to 140°F], non-condensing
Substance detected display	Yellow LED = trace detected; Red LED = positive above threshold + internal beeper
Min/max operating distance	2.0" (51mm)

### Optical Specifications

Operating wavelength	235nm to 450nm
Detection method	UV Photoemission Reflection Spectroscopy
Scan area indicator	2 intersecting red laser pointers
Active scan area	0.5" diameter @ 2" standoff
Max scanning speed	5 inches (12.7 cm) per second
Photon collection area	87mm <sup>2</sup>
Photoemission illumination	UV LED

### Mechanical Specifications

Size	0.625"(H) x 3"(W) x 6"(L) (1.6cm x 7.7cm x 15.4cm)
Weight	13 Oz. (370 g)
Case color	Black

### Display/Controls

Meth positive indicator	Yellow = trace detected; Red = positive above threshold
Battery low indicator	Flashing blue LED, rear panel
Power on indicator	5 rapid flashes of blue LED, rear panel
Power On/Off	Pushbutton, rear panel
Data Interface/Battery charge	Micro-B USB connector

### Electrical Specifications

Battery life	125 days with unit off; 10 hours scanning with full charge
Power source	Li-ion rechargeable battery
Programming interface	Micro-B USB, female
Scan switch	Membrane on side and rear panel