



Ultraviolet Detectors

Operation Manual



Caution: Always Wear Laser Protective Eyewear

1. DESCRIPTION

The VIEW-IT® Ultraviolet Detector product line features various substrates and target sizes designed to convert invisible ultraviolet light to visible red light. A very convenient tool for viewing ultraviolet light sources, laser beam shape, mode structure, and alignment. These tools provide unlimited viewing of both pulsed and continuous-wave sources operating between 190-390nm.

2. LASER SAFETY

Depending on the operating parameters of the laser source and the potential to exceed MPE (Maximum Permissible Exposure) limits, there may be a significant risk of eye injury. Under such conditions, we recommend using the appropriate laser protective eyewear. Laser protective eyewear must be evaluated in accordance with ANSI Z136.1 Standard for the Safe Use of Lasers.

3. INSTRUCTIONS

1. Calculate your laser beam power density and verify a location that is safe to use the VIEW-IT® UV Detector.
2. Never use the product in a location above the maximum laser damage threshold as damage may occur to the VIEW-IT® UV Detector.
3. Wear appropriate safety eyewear for your application. Place the VIEW-IT® UV Detector target in the path of the infrared light source being careful not to reflect it towards you or others.
4. VIEW-IT® UV Detector will illuminate with no charging or external power. Simply apply the minimum required sensitivity to the target area for viewing.
5. Reflected 620-660nm red visible light conversion will be 0.4~1% of incoming ultraviolet light.

4. SPECIFICATIONS

1. **Spectral sensitivity:** 190-390nm
2. **Minimum sensitivity:** 1mJ or 1mW/cm²
3. **Maximum damage threshold:** Maximum Laser Irradiance 30 W/cm²

5. OTHER HAZARDS

Composition evaporation may occur upon interaction with strong infrared radiation with energy fluency of more than 100J/cm² at pulse durations between 30 nanosecond - 40 milliseconds. Also, emission of hydrogen sulfide (H₂S) under influence of acidic environment with pH 2-3 may occur. Use the VIEW-IT® UV tool in a well-ventilated area.

6. PREVENTIVE MAINTENANCE

Inspect product before each use.

- Verify that the target surface hasn't been damaged by the laser.
- Make sure the target is clean before placing it in the path of the laser beam.

7. COMPLIANCE

This product line is RoHS, REACH and LaserSmart® compliant.



Spectral Sensitivity	Sensitivity Threshold
190-390nm (Ultraviolet)	1 millijoules/cm ² (pulsed), 1 milliwatt/cm ² (CW).

Part Number	Target Size
V2-UV-SET	0.78 inches [20mm] diameter (VSPOT-UV) and 2 inches [50.8mm] square (VC-22UV)
VB-UV50X50	2 inches [50.8mm] square
VC-22UV	2 inches [50.8mm] square
VDISC-UV	1.49 inches [38mm] diameter
VF-UV10-10	10 inches [254mm] square
VF-UV20-20	20 inches [508mm] square

Laser Damage Threshold	Emission Range
Maximum Laser Irradiance 30 W/cm ²	620-660nm (Red)

Part Number	Target Size
VF-UV5-5	5 inches [127mm] square
V-UV-SET	1.37 inches [35mm] diameter (VW-UV) and 2 inches [50.8mm] square (VC-22UV)
VSPOT-UV	0.78 inches [20mm] diameter
VS-UV	1.37 inches [35mm] diameter
VT-UV-3	3.75 inches [95.25mm] diameter
VW-UV	1.37 inches [35mm] diameter



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