



# Mentor Visual iQ UV VideoProbe

## Fluorescent Penetrant Testing with UV Light

The Mentor Visual iQ Video Borescope, combined with a UV light source, integral quartz light fibers and correct UV optics and filters, presents the optimal solution for fluorescent penetrant inspections. This solution delivers maximum UV light levels, with low reflection, and the ability to access small remote areas of equipment.

### Functional Principle of the Fluorescent Penetrant Test

The surface is first cleaned, then wetted with a fluorescent penetrant. The penetrant is drawn into small surface defects by capillary action. After a rinse step, the penetrant remains only in the defect, which can be seen and measured using the UV light.

### Scope of Application

The compact size of the integrated probe and UV light makes new applications possible. Difficult to access components such as turbine blades or weld seams can be examined insitu. In automotive manufacturing, some manufacturers add UV fluorescent substance to auto body sealing wax to inspect and verify the coating process. The Mentor Visual iQ system with UV is available from 4.0 mm to 8.4 mm diameter probes, so inspections are possible in equipment with access of only 4.0mm!

### UV Light Source

In order for UV-versions of the Mentor Visual iQ system to meet\* ASTM Specification E1417/E1417M - 16, it is recommended that the UV light source used to supply UV-light energy to the Mentor Visual iQ system be GEIT P/N ELS-50LEDUV. This is a White-Light / UV-Light switchable light source that when used with the Mentor Visual iQ UV probes allows conformance with ASTM E1417/E1417M - 16 UV and white light specifications. See product specification data sheet for the ELS-50LEDUV for full technical specifications.



Quartz Fiber QuickChange™ probe with quartz light guide and LED UV/White Light Source PN: ELS-50LEDUV. Olympus and ACMI style light source connector



Mentor Visual iQ UV QuickChange probe and UV light source standard case and accessories

\*Mentor Visual iQ UV probe has been tested using Labino Apollo 1.0 to meet UV and visible light outputs as specified in ASTM E1417/E1417M - 16

## Mentor Visual iQ UV QuickChange™ Probes

| Model Number     | Diameter       | Length            | Illumination Fibers | Optical Tips |
|------------------|----------------|-------------------|---------------------|--------------|
| MVIQAP4020-8947  | 4.0 mm (0.15") | 2.0 m (6.6 ft.)   | Quartz              | Standard     |
| MVIQAP4030-8890  | 4.0 mm (0.15") | 3.0 m (9.8 ft.)   | Quartz              | Standard     |
| MVIQAP4035-9021  | 4.0 mm (0.15") | 3.5 m (11.5 ft.)  | Quartz              | Standard     |
| MVIQAP6120-8948  | 6.1 mm (0.24") | 2.0 m (6.6 ft.)   | Quartz              | Custom       |
| MVIQAP6130-8889  | 6.1 mm (0.24") | 3.0 m (9.8 ft.)   | Quartz              | Custom       |
| MVIQAP6160-9101  | 6.1 mm (0.24") | 6.0 m (19.7 ft.)  | Quartz              | Custom       |
| MVIQAP61100-8960 | 6.1 mm (0.24") | 10.0 m (32.8 ft.) | Quartz              | Custom       |
| MVIQAP8420-8949  | 8.4 mm (0.33") | 2.0 m (6.6 ft.)   | Quartz              | Standard     |
| MVIQAP8430-8937  | 8.4 mm (0.33") | 3.0 m (9.8 ft.)   | Quartz              | Standard     |
| MVIQAP8445-8956  | 8.4 mm (0.33") | 4.5 m (14.8 ft.)  | Quartz              | Standard     |
| MVIQAP84100-8982 | 8.4 mm (0.33") | 10.0 m (32.8 ft.) | Quartz              | Standard     |

### 6.1mm UV-Optimized Tips

| Optical Tips        | Color  | FOV (deg) | DOF mm | (in)       |
|---------------------|--------|-----------|--------|------------|
| <b>Forward View</b> |        |           |        |            |
| XLG3T61UV-8528      | White  | 50        | 12-200 | (.47-7.87) |
| XLG3T61UV-8553      | Orange | 80        | 3-20   | (.12-.79)  |
| XLG3T61UV-8581      | Black  | 120       | 5-120  | (.20-4.72) |
| XLG3T61UV-8593      | Yellow | 90        | 20-inf | (.79-inf)  |
| <b>Side View</b>    |        |           |        |            |
| XLG3T61UV-8535      | Green  | 50        | 9-160  | (.35-6.30) |
| XLG3T61UV-8582      | Blue   | 120       | 4-100  | (.16-3.94) |
| XLG3T61UV-8554      | Red    | 80        | 1-20   | (.04-.79)  |

**The 6.1 mm diameter Mentor Visual iQ uses custom optical tips with superior UV transmitting material to optimize UV output performance.**



© 2017 General Electric company. All rights reserved.

GE reserves the right to make changes in specifications and features shown herein, or discontinue the product described at any time without notice or obligation. Contact your GE representative for the most current information. GE and the GE Monogram, are trademarks of General Electric Company.