

**OLYMPUS**<sup>®</sup>

Industrial Videoscope

**IPLEX GX/GT**

***IPLEX***

The Right Tool for the Job



# Versatility and Power for Multiple Jobs

With interchangeable insertion tubes and light sources, an 8 inch touch screen, and advanced imaging features, the IPLEX GX/GT videoscope delivers an optimal balance of versatility, imaging capabilities, and ease of use.



— Get the Most Out of Your Videoscope —

## Powerful Features at Your Fingertips

- Easy-to-use touch screen and hot key controls
- Position the screen where it's comfortable for you
- Bright and clear images with smart video

## One Tool for Many Jobs

- Change between white, ultraviolet, and infrared light sources
- Interchangeable scopes in a variety of diameters and lengths
- Tough enough to work in harsh environments



# Powerful Features at Your Fingertips

## Precise Movements with a Light Touch

Responsive TrueFeel articulation enables you to control the scope's tip with precise movement so that you can navigate to your target area quickly, and stay in position with locking capability. A light touch of the control helps minimize fatigue when working for long hours.



## Innovative Imaging Improves Inspections

### Bright Illumination

The LED light source of IPLEX GX/GT is 30% brighter than its predecessor (IPLEX RX/RT).

### Crisp images

The videoscope uses a new noise reduction algorithm to make it easier to locate problems and defects in dark areas.

### Smooth 60 fps video

Capture smooth videos with the videoscope's high frame rate. If you are recording a moving object, you can obtain clear videos with no stutter.

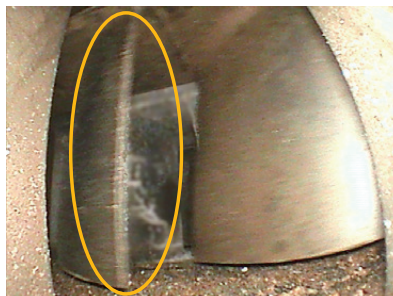
Bright and Crisp images



IPLEX RX/RT (predecessor)

IPLEX GX/GT

Smooth 60 fps video



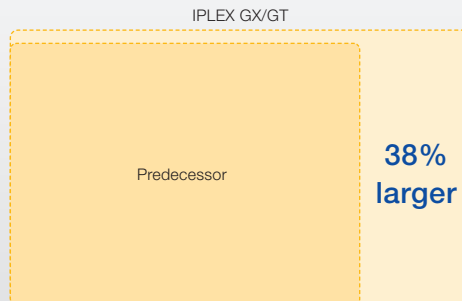
IPLEX RX/RT (predecessor)

IPLEX GX/GT



### See the Difference

A vivid 8 inch LCD monitor delivers clear, bright images, helping you spot defects more quickly.



### Convenient Controls

The large monitor leaves plenty of room to display both your inspection image and quick control buttons. Most functions can be controlled using the touch screen, including the articulation. If you want to use the full screen to view images, the hot keys on the controller give you control over the most important functions.

### Smart Video Recording

#### Record still images and video simultaneously

With the push of a button, you can capture still images while recording a video without interruption.

#### Bookmark

Add bookmarks to save time and quickly find critical moments during video reviews.



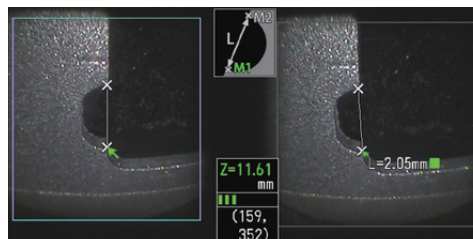
#### Constant video\*

Never lose critical inspection recordings. The videoscope automatically records the last 30 minutes of your inspection even if you forget to press the record button.

\*Available only with IPLEX GX and requires optional microSDHC card

### Powerful Measurement at Your Fingertips

The videoscope is equipped with scalar measurement as a standard feature, enabling you to size objects using a reference defect. For more advanced functionality, upgrade to the stereo measurement option to size objects using precise three-dimensional coordinates.



Distance



Depth



Visit our website for more information.

# One Tool for Many Jobs

## Interchangeable Scopes and Light Sources. Modular Components Enable You to Adapt the Videoscope to Your Inspection Tasks

Scopes are available in 4 mm and 6 mm diameters with lengths up to 10 meters (32 feet). Interchangeable illumination modules also allow you to change between White LED, UV, or IR.

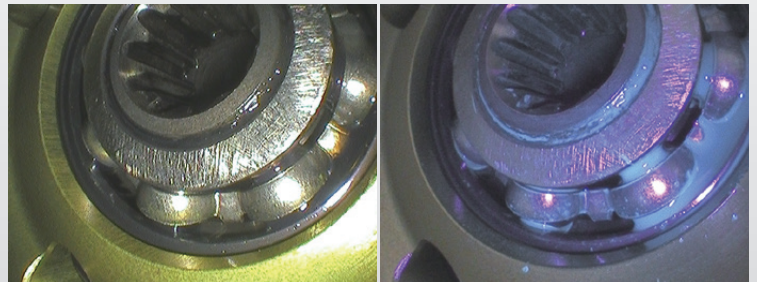
### Scope unit

- Scope diameter 6.0 mm: length 2.0 / 3.5 / 7.5 / 10 m
- Scope diameter 4.0 mm: length 2.0 / 3.5 m

### Light sources

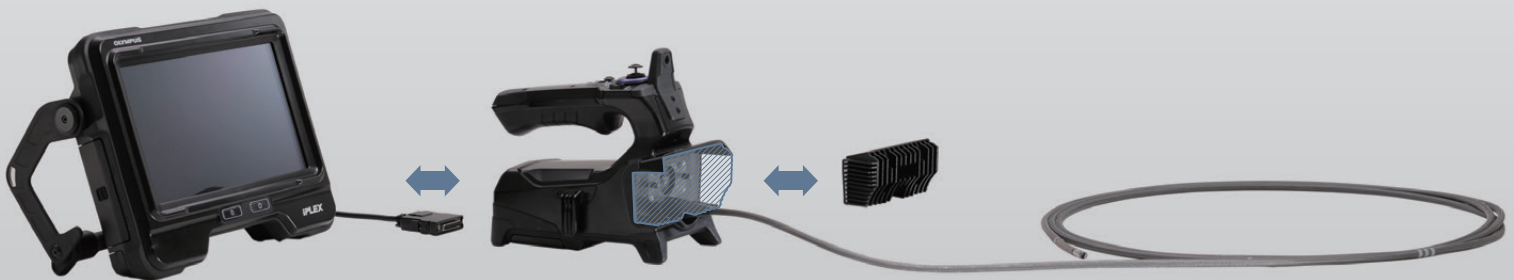
- White light: standard inspections
- Ultraviolet (UV): detect hairline cracks, lubricants
- Infrared (IR): view objects in dark areas

The scopes and illumination modules can be changed on-site quickly and easily, reducing downtime.



White light

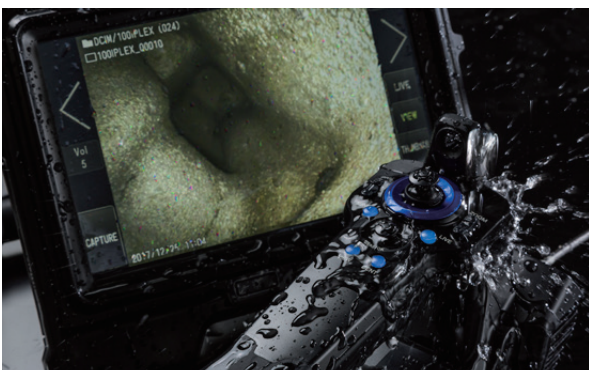
UV light



## Stream Inspection Images for Quick Decision Making

Using the recommended USB wireless LAN adaptor, images can be shared with colleagues using smartphones or tablets during the inspection. This helps make it easy to diagnose problems with the assistance of other inspectors.

The Olympus IPLEX Image Share app is available on the App Store for compatible iOS devices.



## Tested Tough

The videoscope is designed to meet IP65 standards for dust and water resistance and built to pass U.S. Department of Defense testing (MIL-STD) for protection against:

- Drops of up to 1.2 meters (4 feet)
- Vibration
- Blowing rain
- Dust
- High humidity
- Salt fog
- Freezing rain
- Electromagnetic environments
- Explosive atmospheres

Base Unit



Scope diameter  
6.0 mm



10.0 m

7.5 m

3.5 m

2.0 m

Scope diameter  
4.0 mm



3.5 m

2.0 m



Light sources



White light  
(standard)



UV light  
(optional)



IR light  
(optional)

## Accessories

### Carrying Case

The hard-walled carry case is small enough to fit in the overhead bin of most airplanes, while protecting the videoscope against the rigors of travel.



### Scope Case

(optional)

**MAJ-2339**



### Lithium-ion Battery

The battery provides up to 150 minutes of operation.

### Rigid Sleeve Sets

(optional)

**MAJ-1253** (for 6.0 mm)

**MAJ-1737** (for 4.0 mm)

Sets are available for 6 mm and 4 mm scopes. Each set comes with three rigid sleeves, measuring 250 mm, 340 mm, and 450 mm in length.

### Optical Adaptors

(optional)

A variety of optical adaptors for the scope enable you to change the angle, direction, and depth of view.

### Guide Tube

(optional)

**MAJ-2341** (for 7.5 m)

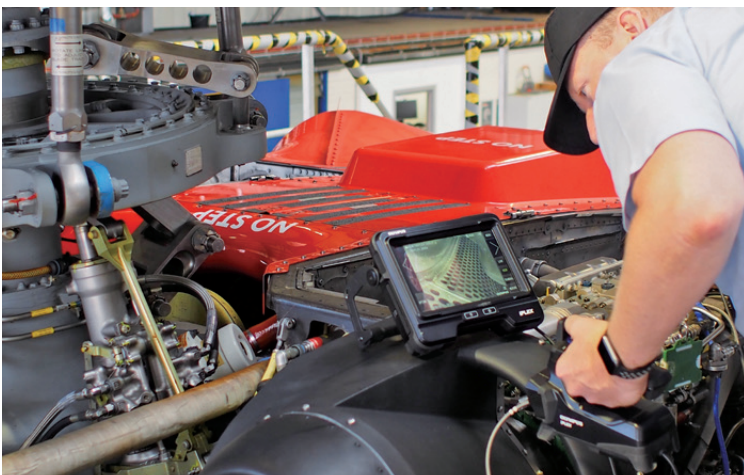
**MAJ-2342** (for 10.0 m)



Capillary action to draw oil away

### See clearly in Oily Environments

The grooves on the oil clearing tip adaptor uses capillary action to draw oil away from the lens, keeping your images clear and visible so that you don't have to stop your inspection to wipe oil off of the scope's lens.



Visit our website for more information.

# IPLEX GX/GT Features and Specifications

## BASIC FUNCTIONS SCOPE UNIT

| Model No.              | IV9420G   | IV9435G  | IV9620G           | IV9635G   | IV9675G           | IV96100G          |
|------------------------|---|--|-------------------|---|-------------------|-------------------|
| Insertion tube         | Scope diameter  | ø 4.0 mm   |                   | ø 6.0 mm  |                   |                   |
|                        | Scope length  | 2.0 m (6.6 ft.)  | 3.5 m (11.5 ft.)  | 2.0 m (6.6 ft.)   | 3.5 m (11.5 ft.)  | 10.0 m (32.8 ft.) |
|                        | Exterior  | High durability tungsten braid   |                   |   |                   |                   |
|                        | Tube flexibility  | Uniform stiffness  |                   | Tapered Flex tube with flexibility gradually increasing toward the distal end |                   |                   |
| Articulation section   | Temperature sensor  | 2-stage indicator for high temperature warning   |                   |   |                   |                   |
|                        | Articulation angle up/down/right/left   | 130°   |                   | 150°  |                   | 120°              |
|                        | Articulation operation  | TrueFeel electronic scope tip articulation / Fine mode articulation control by touch screen menu |                   |   |                   |                   |
| Approx. weight         | 0.99 kg (2.2 lbs)   | 1.05 kg (2.3 lbs)  | 1.06 kg (2.3 lbs) | 1.17 kg (2.6 lbs)   | 1.47 kg (3.2 lbs) | 1.66 kg (3.7 lbs) |
| Dimensions (W x D x H) | 97 mm x 188 mm x 158 mm (3.8 in. x 7.4 in. x 6.2 in.) Protruding parts not included |  |                   |   |                   |                   |
| Illumination           | LED illumination  |  |                   |   |                   |                   |

## BASE UNIT

| Model No.                          | IPLEX GX   | IPLEX GT   |
|------------------------------------|--|--|
| Weight (with battery)              | 1.77 kg (3.9 lbs)  |  |
| Dimensions (W x D x H)             | 241 mm x 190 mm x 70 mm (9.5 in. x 7.5 in. x 2.8 in.) Protruding parts not included            |  |
| Dimensions of carrying case        | 375 mm x 525 mm x 243 mm (14.8 in. x 20.7 in. x 9.6 in.) Carry-on size on most airlines        |  |
| Display                            | 8 inch daylight view WVGA LCD with capacity-type touch screen, 5 step adjustable LCD backlight |  |
| Power supply                       | AC power   | 100 V to 240 V, 50/60 Hz (with supplied AC adapter)  |
|                                    | Battery  | 10.8 V nominal, approx.(with supplied battery) Battery operation time: approx. 150 minutes |
| Video output standard              | HDMI   | TypeA HDMI 1.4   |
| Headset (microphone in/ audio out) | ø 3.5mm mini plug CTIA   |  |
| Live image streaming               | Attach the recommended USB wireless LAN adapter to the Type A USB connector                    |  |
| Scope unit interchangeability      | Available for all scope model combination  | Available between the same scope model   |

## SOFTWARE FEATURES

|                         |   |      |
|-------------------------|---|------|
| Image features          | 5X digital zoom, 16-step brightness control   |      |
| Gain control            | 4-step adjustable gain control(Manual, Auto, Wider1, Wider2)                                  | Auto |
| Dynamic noise reduction | Available   | —    |
| Sharpness control       | 4-mode adjustable sharpness control   | —    |
| Saturation control      | 3-step adjustable control of color saturation (Monotone, Natural, Vivid)                      | —    |
| Display text options    | 30-character title display  |      |
| Note text options       | 30-character title display, mark, free drawing  | —    |
| Image display functions | Live image can be inverted to right and left, inverted to up and down and rotated 180 degrees |      |

## RECORDING MANAGEMENT FUNCTIONS

|                         |   |   |   |
|-------------------------|---|---|---|
| Recording media         | Normal  | SDHC (with supplied SDHC)   |   |
|                         | Constant Video  | micro SDHC (using the recommended parts) Set the Constant video function to ON    | — |
| Internal memory         | Available (only the still images are recorded)  |   | — |
| Overlay                 | Zoom, Brightness, Date/Time, Title, Optical Tip Adaptor, OLYMPUS logo, and system setting |   |   |
| Thumbnail image display | Recorded images can be displayed as thumbnails  |   |   |
| Still image recording   | Resolution  | H768 x V576 (Pixel)   |   |
|                         | Recording format  | Compressed JPEG format  |   |
| Video recording         | Resolution  | H768 x V576 (Pixel)   |   |
|                         | Recording format  | MPEG 4 AVC/H.264 conforms to Baseline Profile. Windows Media Player 12 compatible |   |
|                         | Frame rate  | 60 fps / 30 fps   |   |

## MEASUREMENT FUNCTIONS

|                    |   |  |
|--------------------|---|--|
| Scaler measurement | Using reference length to measure object length |  |
|--------------------|---|--|

## STEREO MEASUREMENT FUNCTIONS

|               |  |   |
|---------------|--|---|
| Distance      | Distance between two points *1   | — |
| Point-to-line | Perpendicular distance between a point and a user-defined line *1            | — |
| Depth         | Orthogonal depth/height distance between a point and a user-defined plane *1 | — |
| Area/Lines    | Multiple point circumference and area measurement *1                         | — |

## OPERATING ENVIRONMENT

|                                  |                |  |
|----------------------------------|----------------|--|
| Operating temperature            | Insertion tube | In air: -25 °C to 100 °C (-13 °F to 212 °F);<br>in water: 10 °C to 30 °C (50 °F to 86 °F)  |
|                                  | Other parts    | In air: -10 °C to 40 °C (14 °F to 104 °F) (with battery)<br>In air: 0 °C to 40 °C (32 °F to 104 °F)<br>(with AC power adapter and battery charge)  |
| Relative humidity                | All parts      | 15 to 90%  |
| Liquid resistance                | All parts      | Operable when exposed to machine oil, light oil or 5% saline solution  |
| Dust proofing and water proofing | Insertion tube | Operable under water with viewing tip adaptor attached<br>Not operable under water with stereo measurement tip adaptors<br>IV94 series - Up to an equivalent to 3.5 m (11.5 ft) in depth<br>IV96 series - Up to an equivalent to 10 m (32.9 ft) in depth |
|                                  | Other parts    | IP65; not operable under water<br>(battery cover and others must be closed)  |

## MIL-STD COMPLIANCE

| Type                               | Method  |
|------------------------------------|---|
| Vibration                          | MIL-STD-810G, METHOD 514.7, Procedure I (General vibration test)                    |
| Shock                              | MIL-STD-810G, METHOD 516.7, Procedure IV (Transit drop test)                        |
| Water Resistance                   | MIL-STD-810G, METHOD 506.6, Procedure I (Rain and Blowing rain test)                |
| Humidity                           | MIL-STD-810G, METHOD 507.6, Procedure II (Aggravated Cycle)                         |
| Salt Fog                           | MIL-STD-810G, METHOD 509.6  |
| Sand and Dust                      | MIL-STD-810G, METHOD 510.6, Procedure I (Blowing dust test)                         |
| Icing/Freezing Rain                | MIL-STD-810G, METHOD 521.4  |
| Explosive Atmosphere               | MIL-STD-810G, METHOD 511.6, Procedure I (Operation in an explosive atmosphere test) |
| Electromagnetic Interference (EMI) | MIL-STD-461G, RS103 Above decks   |

The operating environment performance is confirmed by the above MIL-STD-810G and MIL-STD-461G. No warranty is given as to damage-free under any conditions. Please ask Olympus sales representative for details.

## OPTICAL TIP ADAPTOR SPECIFICATIONS

### 6.0 mm Viewing Tip Adaptors

|                | AT40D-IV96G       | AT80D/NF-IV96G | AT80D/FF-IV96G | AT120D/NF-IV96G | AT120D/FF-IV96G | AT80S-IV96G | AT120S/NF-IV96G | AT120S/FF-IV96G | AT220D-IV76 | AT100D/100S-IV76 |             |
|----------------|-------------------|----------------|----------------|-----------------|-----------------|-------------|-----------------|-----------------|-------------|------------------|-------------|
| Optical system | Field of view     | 40°            | 80°            | 80°             | 120°            | 120°        | 80°             | 120°            | 220°        | 100°/100°        |             |
|                | Direction of view | Forward        |                |                 |                 |             | Side            |                 |             |                  |             |
|                | Depth of field*2  | 200 to ∞ mm    | 9 to ∞ mm      | 35 to ∞ mm      | 2 to 200 mm     | 19 to ∞ mm  | 15 to ∞ mm      | 1 to 25 mm      | 3 to ∞ mm   | 1.6 to ∞ mm      | 2.0 to ∞ mm |
| Distal end     | Outer diameter*3  | ø 6.0 mm       |                |                 |                 |             |                 |                 |             |                  |             |
|                | Distal end*4      | 18.4 mm        | 18.9 mm        | 18.8 mm         | 18.9 mm         | 18.8 mm     | 24.2 mm         |                 | ø 8.4 mm    | ø 6.0 mm         | 29.5 mm     |
| Oil clearing   | Available         |                |                |                 |                 | —           |                 |                 |             |                  |             |

### 4.0 mm Viewing Tip Adaptors

|                | AT80D/FF-IV94G    | AT120D/NF-IV94G | AT120D/FF-IV94G | AT100S/NF-IV94G | AT100S/FF-IV94G |           |
|----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------|
| Optical system | Field of view     | 80°             | 120°            | 120°            | 100°            | 100°      |
|                | Direction of view | Forward         |                 |                 | Side            |           |
|                | Depth of field*2  | 35 to ∞ mm      | 2 to 200 mm     | 17 to ∞ mm      | 2 to 15 mm      | 8 to ∞ mm |
| Distal end     | Outer diameter*3  | ø 4.0 mm        |                 |                 |                 |           |
|                | Distal end*4      | 19.0 mm         |                 | 21.7 mm         |                 |           |
| Oil clearing   | Available         |                 | —               |                 |                 |           |

### Stereo Tip Adaptors (4.0 mm and 6.0 mm)

|                | AT50D/50D-IV94    | AT50S/50S-IV94 | AT60D/60D-IV96 | AT60S/60S-IV96 |           |
|----------------|-------------------|----------------|----------------|----------------|-----------|
| Optical system | Field of view     | 50°/50°        |                | 60°/60°        |           |
|                | Direction of view | Forward        | Side           | Forward        | Side      |
|                | Depth of field*2  | 5 to ∞ mm      | 4 to ∞ mm      | 5 to ∞ mm      | 4 to ∞ mm |
| Distal end     | Outer diameter*3  | ø 4.0 mm       |                |                |           |
|                | Distal end*4      | 24.3 mm        | 28.4 mm        | 24.9 mm        | 31.3 mm   |

\*1. Upgrade for optional function.

\*2. Indicates the viewing distance with optimal focus.

\*3. The adaptor can be inserted into a ø4.0 mm, ø6.0 mm and ø8.4 mm hole when it is mounted on the scope.

\*4. Indicates the length of the rigid portion at the scope's distal end when mounted.

• OLYMPUS CORPORATION is ISO14001 certified.

• OLYMPUS CORPORATION is ISO9001 certified.

• This product is designed for use in industrial environments for the EMC performance.

• Using it in a residential environment may affect other equipment in the environment.

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• Images on the PC monitors are simulated.

• Specifications and appearances are subject to change without any notice or obligation on the part of the manufacturer.

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