**Lightscope**

**Image fiber type**

Flexible

Flexible so it can be inserted into pipes

Interlock

Maintains its flexible position

**Uses a white LED**

Improved resolution!

Resolution of 7,400 to 10,000 pixels

NEW

For a clearer image!

Portable so it can be used anywhere.

- More pixels and greater resolution than the previous MSPS, MSPI Series.
  (Previous model: 3,500 pixels → New model: 7,400 pixels)
- A long-life white LED is used as the light source.
  Batteries also last longer.
- A clear image is obtained by using white light with a high color temperature.
- The tip and cord areas are waterproof (from 1 to 1.3 atmospheres).
- Camera photography is possible with a digital camera adapter (sold separately).
- The distance from the object can be any distance greater than 10 mm.
- If a right angle adapter (sold separately) is attached and the endoscope is rotated, a 360° view can be obtained.

The ideal endoscope for studying and making observations within tight areas and deep spaces.

The distance from the object can be adjusted from any distance greater than 10 mm, and with a waterproof cable, there is no possibility of water leakage. An interlocking type and flexible type is available, offering clear viewing, photographing and recording of clear image data.

**Accessories**

For the Lightscope

- **Standard set (supplied with the Lightscope)**
  - Battery handle
  - Lightscope hard carry case
    - Protects the scope and makes carrying the Lightscope easy
- **Optional extras**
  - 90° right angle adapter
    - Allows observation of internal walls of pipes
    - Dimensions: Small ø7.5 mm
      - Large ø10 mm

**Comparison of images with previous models**

(Company comparison)

- MSPS-1000
  - 7,400 pixels (white LED)
- MSPS-1000III
  - 3,500 pixels (halogen lamp)

SUS flexible pipe (internal diameter ø10)

**Tel:** 510.226.0889
**info@ysctech.com**
CCD Video Endoscopy

Allows the clear images displayed on a TV monitor to be studied further.

The ideal endoscope for studying and making observations within tight areas and deep spaces. This CCD camera type industrial video endoscope allows clear images to be displayed and studied on a TV monitor.

- Clear images obtained from the CCD camera.
- Bright images obtained using 6 chip type LEDs.
- A group of people can study the image displayed on a TV monitor.
- Video data can be recorded and used for a variety or purposes.
- The distance from the object can be any distance greater than 40 mm.
- If a right angle adapter (sold separately) is attached and the endoscope is rotated, a 360° view can be obtained.
- The image can be inverted by using the selector switch on the endoscope. (a normal view can be obtained when the right angle adapter is attached)

Optional extras

- 90° right angle adapter
- Internal light source type
- 9.8 mm Diameter of endoscope end
- Interlock type

For the CCD Video Endoscope

- Standard set (supplied with the CCD Video Endoscope)
- Accessories
- Battery case
- AC adapter
- Connector cord

- Optional extras
- 90° right angle adapter
- Internal light source type
- 9.8 mm Diameter of endoscope end
- Interlock type

Accessories

- CCD Video Endoscope hard carry case
- Protects the scope and makes carrying the CCD Video Endoscope easy
- AC adapter
- Battery case
- Connector cord

- Optional extras
- 90° right angle adapter
- Allows observation of internal walls of pipes.
- Dimensions: ø11 mm
- LCD monitor
- Small LCD monitor that is easy to carry around

Uses of the Endoscope for industry

- Automobiles
- Engines, Transmissions, Differentials, Air conditioners
- Building Inspections
- Observation of asbestos, Water pipes, Condition of rust, Condition of defects
- Gas
- Inside pipes and exhaust openings
- Aerospace
- Turbine blades, Combustion chamber interiors, Rocket engines
- Sewage pipes
- Inside pipes, Toilet clogs, Other plumbing problems
- Petrochemical Plants
- Process pipes, Pressure storage tanks, Heat exchangers, Boilers
- Vessels
- Boiler internals, Turbine internals, Diesel engine

Tel: 510.226.0889
info@ysctech.com
**SYSTEM FLOW**

- **Lightscope** (MSP / MSP-1000V)
  - Battery handle
  - Digital camera adapter
- **Borescope** (MSP / MSPS-1000V)
  - 90° right angle mirror adapter
  - C mount adapter
- **Lightsource unit LSSG-1000V Video Endoscope Light Guide**
  - A compact and lightweight, high luminance and highly reliable illumination device.
  - Delivers light effectively from the light source unit to the endoscope.

**Dimensions**

- **Lightscope (MSP / MSP-1000V)**
  - 1000
  - 250
- **Borescope (MSP / MSPS-1000V)**
  - BS-2.4-102 (BS-2.4-180)
  - Effective length 102 (102)
  - BS-4.2-180 (BS-4.2-305, BS-4.2-435)
  - Effective length 180 (205, 435)
  - BS-6.35-180 (BS-6.35-305, BS-6.35-435)
  - Effective length 180 (305, 435)

**Optional extras**

- **Digital camera adapter**
  - MDA-M1
  - A digital camera adapter is available for optimum photography at client locations or work sites. This adapter allows a large range of different digital cameras to be attached. The adapter allows groups of people on site to check images, take photographs, record data and file images on computers.

- **C mount adapter**
  - Attachment adapter for a CCD camera. Allows a camera to be attached to the Lightscope to view images.

- **Light source unit**
  - Light source unit LSSG-1000V Video Endoscope Light Guide
  - A compact and lightweight, high luminance and highly reliable illumination device.

**Contact**

- Tel: 510.226.0889
- info@ysctech.com
For studying and observing inside spaces with no light or direct view.

Non-destructive endoscope that makes visual inspections so simple.

- Instead of using an expensive and compact lens, multiple glass rod lenses are used to keep costs down.
- The special construction means reduced distortion or blurring due to lens aberration.
- Focus adjustments mean the object can be at any distance from the tip of the endoscope.
- Camera photography is possible with a digital camera adapter (sold separately).
- If a right angle adapter (sold separately) is attached and the endoscope is rotated, a 360° view can be obtained.

Construction

Construction of the Borescope is extremely simple. An optical fiber tube is passed through a thin stainless steel pipe to illuminate the object, delivering clear images of the object to the eyepiece. The Borescope offers easy access to observations within tight areas and deep spaces at an unprecedented cost performance.

For the Borescope

- **Standard set** (supplied with the Borescope)
  - Battery handle
  - 90° right angle adapter
  - Borescope hard carry case

- **6.35 mm 1.85 mm 4.2 mm 2.4 mm**

- **Endoscope for industry**
- **Borescope**
- **Internal light source type**
- **Uses a white LED**

- **NEW**

- **Diameter of endoscope end**: 1.85 mm, 2.4 mm, 4.2 mm, 6.35 mm

- **Tel:** 510.226.0889
  - **info@ysctech.com**
### Lightscope

<table>
<thead>
<tr>
<th>Category</th>
<th>Type</th>
<th>Interlock type</th>
<th>Flexible type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(Maintains its flexible position)</td>
<td>(Flexible so it can be inserted into pipes)</td>
</tr>
<tr>
<td>Material</td>
<td>Acrylic</td>
<td>Glass</td>
<td>Acrylic</td>
</tr>
<tr>
<td>Fiber</td>
<td>Resolution</td>
<td>7,400 pixels</td>
<td>7,500 pixels</td>
</tr>
<tr>
<td></td>
<td>End diameter</td>
<td>ø8 mm</td>
<td>ø8 mm</td>
</tr>
<tr>
<td></td>
<td>Strand diameter</td>
<td>20 µm</td>
<td>15 µm</td>
</tr>
<tr>
<td>Tube</td>
<td>Material</td>
<td>SUS Interlock + PVC sheath</td>
<td>SUS Flexible + PVC sheath</td>
</tr>
<tr>
<td></td>
<td>Effective length of standard item</td>
<td>1,000 mm (maximum 360°)</td>
<td>40 mm (maximum 360°)</td>
</tr>
<tr>
<td>Light source</td>
<td>Power source</td>
<td>2 × size C batteries (sold separately)</td>
<td></td>
</tr>
<tr>
<td>Optical system</td>
<td>Direction of view</td>
<td>Straight view, right angle view possible with an optional adapter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Angle of view</td>
<td>Approximately 60°</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focus length</td>
<td>10 mm to infinity (fixed focus point)</td>
<td></td>
</tr>
<tr>
<td>Waterproofing</td>
<td>Operating temperature range</td>
<td>Output end: -20°C to 60°C / Battery handle: 0°C to 40°C</td>
<td></td>
</tr>
</tbody>
</table>

### Borescope

<table>
<thead>
<tr>
<th>Model</th>
<th>Diameter of endoscope end</th>
<th>Light source</th>
<th>Power source</th>
<th>Waterproofing</th>
<th>Operating temperature range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model BSC-1.85-80N</td>
<td>ø1.85 mm</td>
<td>Lamp</td>
<td>2 × size C batteries (sold separately)</td>
<td>Not waterproof</td>
<td>Endoscope: -40°C to 120°C / Battery handle: 0°C to 40°C</td>
</tr>
<tr>
<td>BS-2.4-102N</td>
<td>ø2.4 mm</td>
<td>White LED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-2.4-185N</td>
<td>ø2.4 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-4.2-102N</td>
<td>ø3.0 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-4.2-180N</td>
<td>ø3.0 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-4.2-305N</td>
<td>ø5.0 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-4.2-365N</td>
<td>ø5.0 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-6.35-102N</td>
<td>ø6.35 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-6.35-180N</td>
<td>ø6.35 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-6.35-305N</td>
<td>ø6.35 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS-6.35-435N</td>
<td>ø6.35 mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CCD Video Endoscope

<table>
<thead>
<tr>
<th>Category</th>
<th>Type</th>
<th>Interlock type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>MSCI-1000</td>
</tr>
<tr>
<td>Camera</td>
<td>Diameter of endoscope end</td>
<td>ø9.8 mm</td>
</tr>
<tr>
<td></td>
<td>Number of effective pixels</td>
<td>1/4 inch interline 380,000 pixel CCD camera</td>
</tr>
<tr>
<td></td>
<td>Signal type</td>
<td>NTSC</td>
</tr>
<tr>
<td></td>
<td>AGC</td>
<td>Auto (MAX 24dB)</td>
</tr>
<tr>
<td></td>
<td>Electronic shutter</td>
<td>Auto (1/60 to 1/100,000)</td>
</tr>
<tr>
<td></td>
<td>Switching function</td>
<td>Left/right inversion, normal mirror switching</td>
</tr>
<tr>
<td></td>
<td>Field of view</td>
<td>Straight (right angle view available as an option)</td>
</tr>
<tr>
<td></td>
<td>Angle of view</td>
<td>Horizontal 68.8°, vertical 51.6°, diagonal 86°</td>
</tr>
<tr>
<td></td>
<td>Focus length</td>
<td>40 mm to infinity</td>
</tr>
<tr>
<td>Illumination (light source)</td>
<td>Power source</td>
<td>6 × size AAA batteries or AC adapter</td>
</tr>
<tr>
<td></td>
<td>Battery life</td>
<td>3 hours of continued use (when using alkaline batteries)</td>
</tr>
<tr>
<td>Waterproofing</td>
<td>Cord material</td>
<td>Interlock pipe PVC tube sheath</td>
</tr>
<tr>
<td></td>
<td>Operating temperature</td>
<td>-10°C to +60°C (actual operation)</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>700 g (including batteries)</td>
</tr>
<tr>
<td>Accessories</td>
<td></td>
<td>Main unit, battery case, image cord, AC adapter, special aluminum case, instruction manual</td>
</tr>
</tbody>
</table>

* Drip proof specifications are different from complete waterproof specifications. If the unit is immersed in water it will still become damaged. Damage due to water penetration is not covered by the warranty.