Bright and Clear Field of View. Best Performance in Small-model Class.

**FEATURES**

- Newly designed LED illuminators provide enhanced observation for higher accuracy and resolution.

**Optional Accessories**

Eyepieces and Objectives see page 4

**Digital Imaging with Software**

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>64AAB429</td>
<td>MOTICAM 2, 2.0 MEGAPIXEL-1/3&quot; CMOS, USB</td>
</tr>
<tr>
<td>64AAB529</td>
<td>MOTICAM 3+, 3.0 MEGAPIXEL-1/2&quot; CMOS, USB</td>
</tr>
<tr>
<td>64AAB431</td>
<td>MOTICAM 5, 5.0 MEGAPIXEL-1/2.5&quot; CMOS, USB</td>
</tr>
<tr>
<td>64AAB526</td>
<td>MOTICAM 1080, 2.0 MEGAPIXEL-1/2.8&quot; CMOS, USB/HDMI</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Order No.</td>
<td>176-818A</td>
<td>176-820A</td>
<td>176-819A</td>
<td>176-821A</td>
</tr>
<tr>
<td>Optical tube</td>
<td>Monocular type (Vertical tilt angle: 60°)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>1&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation image</td>
<td>Erect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyepiece protractor</td>
<td>Resolution (graduation): 1&quot;, Rotation angle: 360°, Resolution (angle): 6&quot;, Adjustable zero point</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eyepiece</td>
<td>Standard accessory: 15X (field number: 13), Options: 10X, 20X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objective lens</td>
<td>Standard accessory: 2X, Options: 5X, 10X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microscope head</td>
<td>Maximum height of workpiece: 4.53&quot; / 115mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focusing method</td>
<td>Manual (Coarse feed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illumination unit</td>
<td>Transmitted illumination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface illumination</td>
<td>Stepless brightness adjustment, White LED light source, With green filter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-travel stage</td>
<td>Measuring range: 2&quot; x 2&quot; / 50x50mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table size</td>
<td>6&quot; x 6&quot; / 52x52mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usable area of the stage glass</td>
<td>3.8&quot; x 3.8&quot; / 96x96mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum stage glass loading</td>
<td>11 lbs. / 5kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micrometer head travel range</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power supply</td>
<td>120VAC Maximum power consumption: 4.2W</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main unit mass</td>
<td>31 lbs. / 14kg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Newly designed LED illumination**

Conventional illumination

Optional LED circular illuminator available for applications requiring all-round lighting.

176-208A

Optional LED ring light

64AAB214

A vernier scale mounted outside the eyepiece enables simple angle measurement.

164-164 (Two units are required for an X Y table.)

Optional Accessories

Eyepieces and Objectives see page 4

208A

LED ring light

64AAB214

Digimatic Micrometer Heads

(LCD readout)

164-164

(Two units are required for an X Y table.)
DIMENSIONS (including digital micrometer heads)

**TM-505B**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working distance</td>
<td>2.6&quot; (67)</td>
</tr>
<tr>
<td>Max. workpiece height</td>
<td>4.5&quot; (115)</td>
</tr>
</tbody>
</table>

**TM-1005B**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working distance</td>
<td>2.6&quot; (67)</td>
</tr>
<tr>
<td>Max. workpiece height</td>
<td>4.21&quot; (107)</td>
</tr>
</tbody>
</table>

**System configuration (accessories are optional)**

- **Eyepiece 10X**
  - 176-115
- **Eyepiece 15X**
  - 176-116
- **Eyepiece 20X**
  - 176-117
- **Objective lens 2X**
  - 176-138
- **Objective lens 5X**
  - 176-139
- **Objective lens 10X**
  - 176-137
- **LED circular illumination unit**
  - 176-208
- **Rotary table**
  - 176-106
- **Swivel center**
  - 176-197
- **V-block with clamp**
  - 172-378
- **Holder with clamp**
  - 176-107
- **Micrometer head travel range**
  - 25mm for X-axis; Metric: 0-25mm
  - 25mm for Y-axis; Metric: 0-25mm
- **Micrometer head travel range**
  - 1" (25) for both axes
- **For digital measurement**
  - **Connection cable**
    - 152X-107
    - 264-002
  - **Connection cable C**
    - 12AAD194
  - **2D Data processing unit**
    - 12AAD200
    - 12AAD155A
  - **Receipt printer**
    - DPU-414
    - 12AAD034
  - **Connection cable C**
    - 12AAD194
  - **Workplace clip for cross-travel stage**
    - 990561

**Notes:**
1. One or two micrometer heads are required for linear dimension measurement.
2. If a measuring range longer than the micrometer head travel range is to be used, a gauge block accessory is required.
3. Some order numbers differ depending on the connector form.

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- **Dial indicator attachment for height measurement**
  - 176-204
- **Dial indicator with stem diameter of ø8 (or linear gage) and gauge block**
  - 176-204
- **Micrometer heads shown are optional on other models**
  - TM-A505B
    - 176-821A
  - TM-A1005B
    - 176-820A

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- **For full range of measurement**
  - TM505B requires a 25mm gauge block (2 pcs.
  - TM1005B requires a 25 and a 50mm block
- **For full range of measurement**
  - TM505B requires a 1" gauge block (2 pcs.
  - TM1005B requires a 1" and a 2" block
Whatever your challenges are, Mitutoyo supports you from start to finish.

Mitutoyo is not only a manufacturer of top-quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.