# **Micrometers**

## How to Read the Scale

#### Micrometer with standard scale (graduation: 0.01mm)



The thimble scale can be read directly to 0.01mm, as shown above, but may also be estimated to 0.001mm when the lines are nearly coincident because the line thickness is 1/5 of the spacing between them.



#### Micrometer with vernier scale (graduation: 0.001mm)

The vernier scale provided above the sleeve index line enables direct readings to be made to within 0.001mm.



Note) 0.21 mm (2) is read at the position where the index line is between two graduations (21 and 22 in this case). 0.003 mm (3) is read at the position where one of the vernier graduations aligns with one of the thimble graduations.

### Micrometer with mechanical-digit display (digital step: 0.001mm)



Note) 0.004 mm (2) is read at the position where a vernier graduation line corresponds with one of the thimble graduation lines.

# **Measuring Force Limiting Device**

	Audible in operation	One-handed operation	Remarks
Ratchet stop	Yes	Unsuitable	Audible clicking operation causes micro-shocks
Friction thimble	No	Suitable	Smooth operation without shock or sound
Ratchet thimble	Yes	Suitable	Audible operation provides confirmation of constant measur- ing force
Ratchet thimble	Yes	Suitable	Audible operation provides confirmation of constant measur- ing force

# Measuring Face Detail



These drawings above are for illustration only and are not to scale