

1 FD illuminated loupe for checking the holes, grooves, and inside walls.

# BORELOUPE Series



It is suitable for simple check holes or deep grooves in mass production workshops.

A bright white LED is used at the light source and the line magnification of the loupe lens can be switched between 2X and 3X. The dust prevention cover is installed to the objective lens end and the protection cover is installed to the upper lens.

### BORELOUPE-F

- Free arm and clamp type
- Lens magnification: Switchable between 2X and 3X (Line magnification)
- Effective diameter of lens:  $\phi 40$
- Weight: 2.0kg
- Light source: LED light (estimated life time: 40,000hours)
- Input voltage range: AC100 ~ 240V 50/60 Hz
- Power consumption: 1.2W

Clampable range: 15~60

### BORELOUPE-ST

- Long bar type
- Lens magnification: Switchable between 2X and 3X (Line magnification)
- Effective diameter of lens:  $\phi 40$
- Weight: 1.3kg
- Light source: LED light (estimated life time: 40,000hours)
- Input voltage range: AC100 ~ 240V 50/60 Hz
- Power consumption: 1.2W

Clampable range: 15~60

## Comparison of between BORELOUPE and nearby lighting method

	Inside of pen cap	Burrs in horizontal hole	Deep hole made by die casting
Object			
Field of view of BORELOUPE			
Field of view of nearby lighting			

### Out line

- BORELOUPE is an illuminated loupe consisting of two lenses.
- Since the coaxial lighting optical system is employed, Bore loupe can light up parts which cannot be lit up and are difficult to check with an ordinary illuminated magnifier or an illuminated loupe.
- A bright white LED is used at the light source and the line magnification of the loupe lens can be switched between 2X and 3X. The dust prevention cover is installed to the objective lens end and the protection cover is installed to the upper lens.
- There are two types of the stand: model F of free arm type and Model ST in which the crossbar is jointed to the stand pole.

Conventional microscope or bore scope of incident illumination type of endoscope have been used for checking the parts mentioned above, but they are not easy to use in mass production workshops for various reasons. BORELOUPE is suitable for all check of stop holes or deep grooves in mass production workshops. Try BORELOUPE to reduce the time and cost, and to improve the quality.

### Difference in lighting method

**BORELOUPE**  
It can light up not only surface brightly but also inside deep hole.

**Proximity lighting system (Illuminated Loupe)**  
It can light up the surface brightly. But the end of deep hole is shaded, because the light is applied obliquely.

**(Illuminated magnifier)**  
It can light up the surface evenly and brightly, but the end of deep hole is shaded and dark since the light is applied obliquely.

### The polarizing filter for BORELOUPE (Exclusive use for 3X lens)

The polarizing filter has a characteristic of transmitting only the light wave components in one oscillating direction among components in random oscillating directions. Using this characteristic, unnecessary surface reflecting light from a specimen can be estimated to improved observation and inspection efficiency, and reduce fatigue. This filter also has dimming effect and can reduce the intensity of light from a fluorescent lamp.



### The Power up lens for BORELOUPE (Exclusive use for 3X lens)

When 3x or large magnification is necessary, you can increase the magnification to 3.3x by simply mounting this lens onto the upper lens. If this option is used, the working distance (the distance between the bottom of the BORELOUPE and the specimen) becomes very short. Take care not to hit the specimen against the glass parts in the BORELOUPE.



### The Extender of working distance for BORELOUPE (Exclusive use for 3X lens)

Mounting it on 3X lens could make working distance 3 times (not changing magnification, normally working distance is 55mm) If you use the power up lens for BORELOUPE with it, magnification could become 3.8X and working distance could become 38mm.