

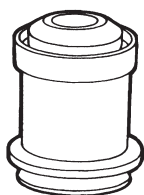
IMMERSION TYPE DARKFIELD CONDENSER/  
 DRY TYPE DARKFIELD CONDENSER

# U-DCW/U-DCD

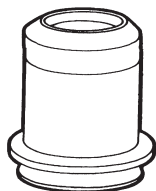
# INSTRUCTIONS

This unit employs a UIS (universal infinity system) optical design, and should be used only with UIS microscope frames, eyepieces, objectives, etc. Less than optimum performance may result if inappropriate accessories are used.

## 1 Appearance and Specifications



U-DCW



U-DCD

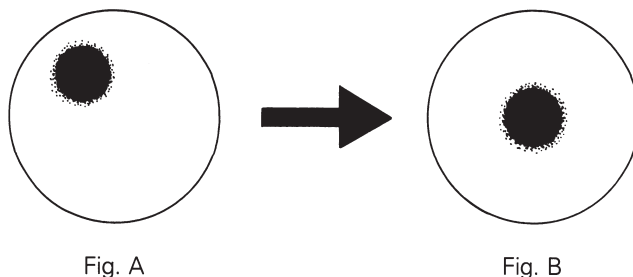
Specifications	U-DCW	U-DCD
NA	1.2 to 1.4	0.92 to 0.8
Working distance	0.5 mm (with 1.0 mm slide glass)	4.52 mm
Focal length (f)	7.8 mm	11.8 mm
Applicable objectives	20X or more (FN 26.5) FN22 at 20X	10X to 40X (FN 26.5) FN22 at 10X
Applicable microscope frames	BX/BX2	
Restrictions	<ul style="list-style-type: none"> <li>Objectives with no iris and an NA of 1.2 or more cannot be used.</li> <li>Objectives with iris are usable if the iris can be stopped down to the extent that the NA becomes less than 1.2.</li> <li>When observing at FN 26.5 with a 20X objective, illumination at the perimeter may be inadequate.</li> </ul>	<ul style="list-style-type: none"> <li>When observing at FN 26.5 with a 10X objective, illumination at the perimeter may be inadequate.</li> </ul>

## 2 Mounting and Centering

1. Lower the condenser holder of the microscope frame to its lower limit. Then replace the mounted condenser with the darkfield condenser.
2. Place a drop of immersion oil on the top of the immersion type darkfield condenser (U-DCW), then carefully place the specimen on the stage. Confirm that the clearance between the condenser surface and the slide glass is completely bridged by the immersion oil.
  - ⦿ This procedure is not required in case of the dry type darkfield condenser (U-DCD).
3. Engage the 10X objective and bring the specimen into focus.



4. While looking through the eyepieces and using the condenser height adjustment knob, carefully adjust the height of the condenser until a dark circular spot becomes visible. (Fig. A)
5. Turn the condenser centering screws to move the dark spot to the center of field of view. (Fig. B)  
This completes the centration.



6. Engage the desired objective. Using the condenser height adjustment knob, adjust until a good darkfield image is obtained and then continue with the darkfield observation.  
★ When using an iris equipped objective, stop down the iris to block undesired light.

### 3 Troubleshooting

Problem	Cause	Remedy
Even when the condenser is raised to the upper limit, the darkfield effect is inadequate.	The NA of the objective is incompatible. Adjust correctly. The iris of an iris equipped objective is not correctly adjusted.	The objective is not usable. Replace with an objective having compatible NA, or use an iris equipped objective. Adjust correctly.
	When using immersion type darkfield condenser (U-DCW), immersion oil is not applied.	Apply immersion oil.
	Bubbles in the immersion oil.	Re-apply immersion oil.
	The specimen is dirty.	Clean.