

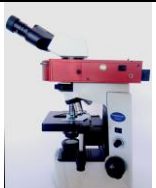



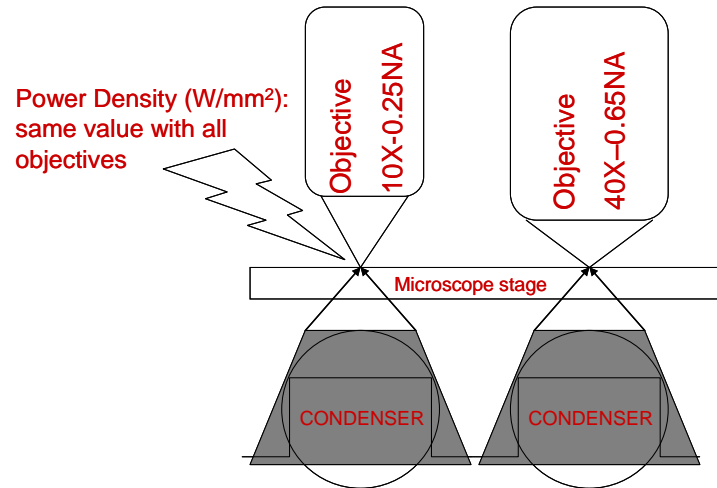
## FLUOLED<sup>®</sup> comparison chart

A tool for rapid product selection

No.	FLUOLED <sup>®</sup>		Fluorescence excitations	FOW (field of view)	Intensity regulation	Field diaphragm	When	Benefits
1	<u>EASY</u> Transmitted light fluorescence		1 (Royal Blue, Blue or Green - fixed)	22 mm	No	No	<ul style="list-style-type: none"> <li>For 1 colour fluorescence</li> <li>For low to medium power objectives, from 5x to 40x</li> </ul>	<ul style="list-style-type: none"> <li>Illumination and observation of a wide portion of the sample.</li> <li>Very high illumination intensity when using low power objectives.</li> </ul>
2	<u>2CFW</u> 2 Color Filter Wheel Reflected light fluorescence		2 (any colour – interchangeable)	21 mm	No	No	<ul style="list-style-type: none"> <li>For 2 colours fluorescence, for instance UV-Blue and Blue-Green</li> <li>For objectives with magnifications up to 100x oil immersion</li> </ul>	<ul style="list-style-type: none"> <li>All-round system for 2 colours reflected light fluorescence: for example bacteriology and parasitology</li> <li>3 positions filter wheel for rapid and smooth change of excitation filters.</li> </ul>
3	<u>1CFW</u> 1 Color Filter Wheel Reflected light fluorescence		1 (any color - interchangeable)	23 mm	Yes	Yes	<ul style="list-style-type: none"> <li>For 1 colour fluorescence on upper-class microscopes</li> <li>For objectives with magnifications up to 100x oil immersion</li> </ul>	<ul style="list-style-type: none"> <li>Wide field of view equally illuminated.</li> <li>4 positions filter wheel for rapid and smooth change of excitation filters.</li> </ul>
4	<u>3CFW</u> 3 Colors Filter Wheel Reflected light fluorescence		3 (any color - interchangeable)	23 mm	Yes	Yes	<ul style="list-style-type: none"> <li>For 2 colours fluorescence on upper-class microscopes</li> <li>For objectives with magnifications up to 100x oil immersion</li> </ul>	<ul style="list-style-type: none"> <li>Wide and equally illuminated field of view.</li> <li>4 positions filter wheel for rapid and smooth change of excitation filters.</li> <li>All LED cassettes can stay permanently installed.</li> </ul>

### Transmitted light fluorescence

FLUOLED® Easy uses transmitted light fluorescence excitation, where the light emitting diode (LED) is used in transmission mode rather than reflected mode. Bright field microscopy is not affected since the halogen white light function remains intact, which means transmitted light observation is possible without major changes in the optical configuration.



In transmitted light fluorescence the condenser creates a specific power density of light on the sample, which is a fixed value. Objectives with smaller numerical aperture typically have a larger diameter of the front lens and therefore are able to capture more light emitted by the sample. Furthermore conveniently priced objectives have less glass inside allowing very high signal intensity at low magnification (10x, 20x). At 40x or 50x still very good illumination is achieved.

Excitation light remains constant when changing the objective, regardless of numerical aperture, and consequently always the same area is illuminated.

### Fluorescence excitations

The number of different colours available. For example FLUOLED® 2CFW comes with two distinct LEDs to excite two different fluorochromes.

### Field of view (FOV)

Typically the diameter of the image seen when looking into a microscope. In most cases, the eyepiece opening diameter determines the size of the field. The field of view gets smaller when changing to higher power objective.

### **Intensity regulation**

The possibility to adjust LED illumination intensity. This feature is useful in case of digital imaging on very light-sensitive samples; it allows to search and observe at 50% LED intensity, then switch to 100% and take picture.

### **Field diaphragm**

Even on vertical illuminators for reflected light fluorescence an iris diaphragm can be placed in front of the collecting lens of the condenser. With Kohler illumination, the image of the field diaphragm is focused by the condenser onto the image plane and consequently is seen in the oculars. This will help to properly illuminate the specimen, increase contrast and resolution. Available on FLUOLED® 1CFW and 3CFW.



FLUOLED® 3CFW – detail of field diaphragm