

# Technical Newsletter

#tn12020-0007e  
# 1 / 5



## Notice Regarding Change to Laser Saw Microscope Light Source and Camera

### Notice

Due to ceased production of the microscope components, the specifications will change as follows.

- Due to ceased production of the halogen light source parts being discontinued, the halogen light source will change to an LED light source.
- Due to ceased production of the CCD element inside the camera, the camera will change from analog to digital.

Note: If you use alignment data that is common to the existing machines, it is possible that differences in image recognition will occur. Before use, make sure to verify the alignment operation using an actual workpiece. If it cannot be aligned, perform teaching again.

### Parts to be changed and replacement timing

Applicable model	Parts to be changed	Replacement timing
DFL7160	Light source for oblique light	Gradually replaced starting with machines shipped on September 1, 2020 
	Light source for direct light	
DFL7161*	Camera	Gradually replaced starting with machines shipped on September 1, 2020 
	Light source for oblique light	Gradually replaced starting with machines shipped on September 1, 2020 
DFL7161*	Camera	Gradually replaced starting with machines shipped on September 1, 2020 
	Light source for direct light	Not applicable (already LED)

Note: With the DFL7161, since the light source for direct light is already LED, it will not be changed.

# Technical Newsletter

#tn12020-0007e  
# 2 / 5



## Handling of maintenance parts

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Maintenance parts for machines that have already been shipped will be handled as follows.

Please ask a DISCO sales representative or a customer engineer for maintenance parts.

Parts	DISCO Part No.	Handling
Halogen lamp (standalone)	DEALMEB5001-*	Will be sold continuously
Light source box	DEBDHFS5004-*	Production discontinued • Will be sold as a maintenance part even after September 1, 2020, <u>as long as inventory remains</u>
Camera board	DAPB1170-01-*	Production discontinued • Will be sold as a maintenance part even after June 1, 2020, <u>as long as inventory remains</u>
Alignment camera	DBAXCES3001-*	

## Advantages of LED light source

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Changing the microscope light source from a halogen light source to an LED light source will reduce the electricity consumed by the machine. In addition, the LED light source has a longer life, which will improve maintainability.

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# Technical Newsletter

#tn12020-0007e  
# 3 / 5

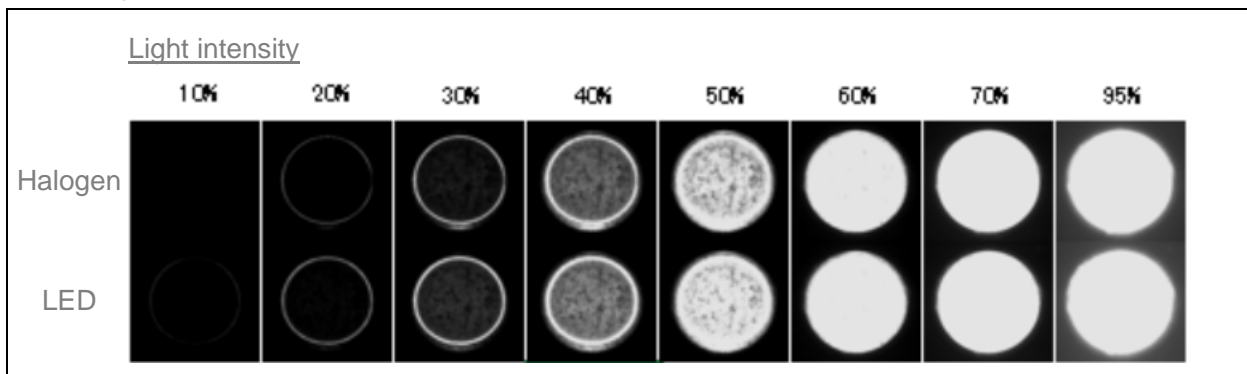


## Comparison of halogen light source and LED light source

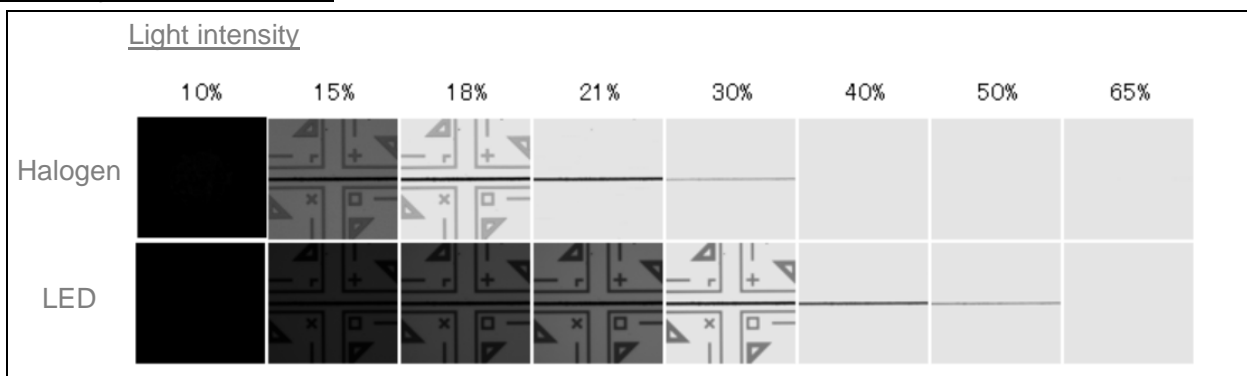
This section shows the results of comparing microscope images taken using a halogen light source and an LED light source, with both oblique and direct light, by light intensity. The comparison is in the case where a new product is used for each light source.

For adjustment of the light intensity when using an LED light source so that it is close to the light intensity when using a halogen light source, see "Addition of function in <Adjustment Light Level>" below.

### Oblique light

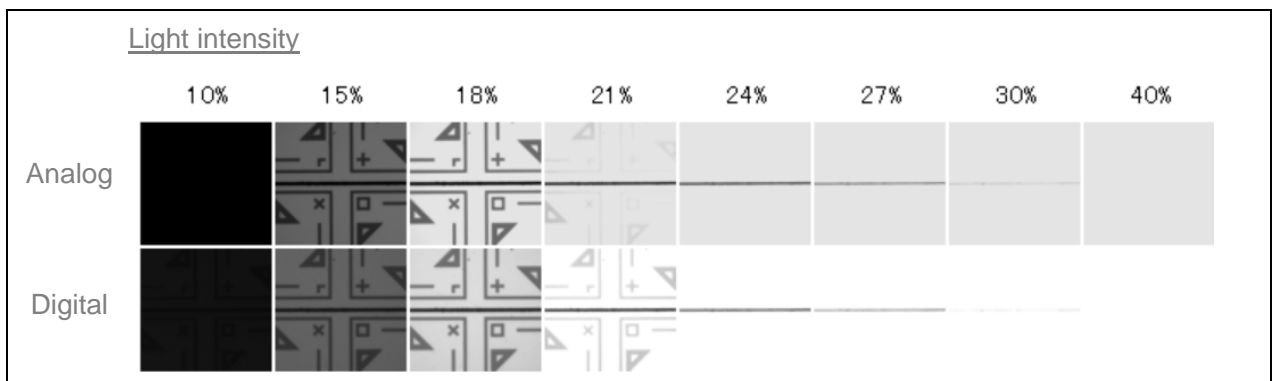


### Direct light (DFL7160 only)



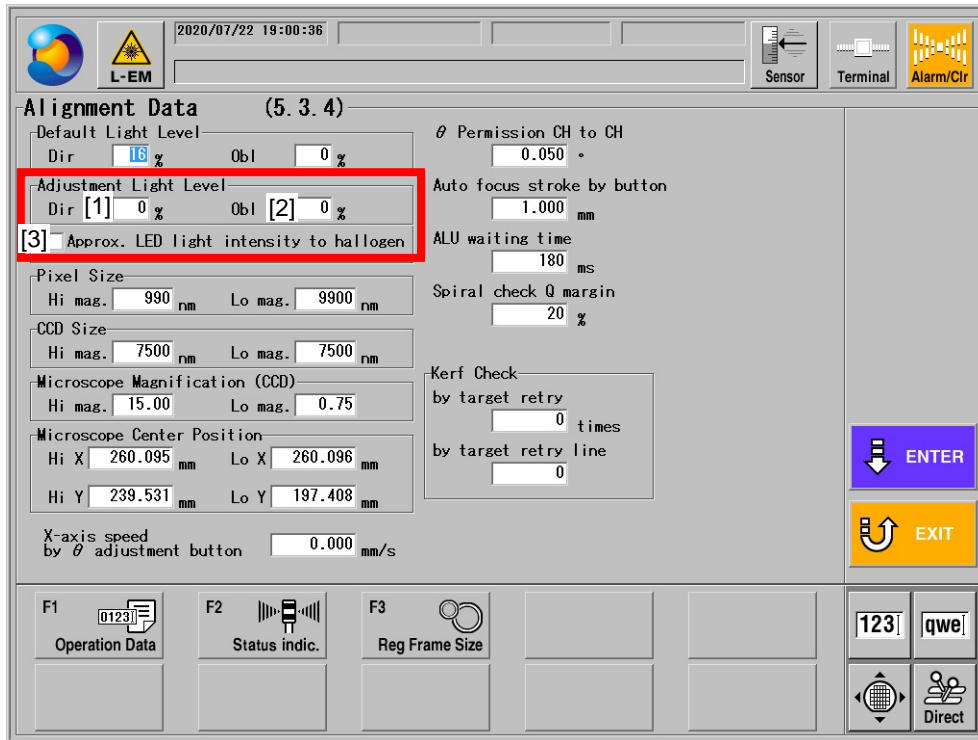
## Comparison of analog camera and digital camera

This section compares microscope images from an analog camera and a digital camera. They are able to obtain almost identical images.



## Addition of function to [Adjustment Light Level]

Due to changing the microscope light source from a halogen light source to an LED light source, the settings for [Adjustment Light Level] on the Alignment Data (5.3.4) screen have been changed.



Item	Description
[1][2]	Specify the light level adjustment value for direct light and oblique light. <ul style="list-style-type: none"> <li>Each light intensity will become brighter or darker by the specified adjustment value (see Figure 1).</li> </ul>
[3]	This function aligns the LED light intensity with the light intensity when using a halogen light source (new part). <ul style="list-style-type: none"> <li>It adjusts the inclination and the adjustment value for light intensity (see Figure 1).</li> <li>After changing the data, verify the alignment operation with an actual workpiece.</li> </ul>
	<input checked="" type="checkbox"/> Aligns the LED light intensity with the light intensity when using a halogen light source. <ul style="list-style-type: none"> <li>If this item is enabled, the setting values for [Adjustment Light Level] specified in [1] and [2] will be disabled.</li> </ul>
	<input type="checkbox"/> Adjusts the LED light intensity based on the setting values for [Adjustment Light Level] specified in [1] and [2]

## Addition of function to [Adjustment Light Level] (Continued)

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An overview diagram when light intensity adjustment is enabled is shown below.

Compared to the light intensity changes with the halogen light source, the inclination of LED light source becomes less steep and the light intensity becomes darker. If a positive value is set as the light intensity adjustment value, the light intensity will become brighter by the specified adjustment value. (It will change as shown in [1] and [2] in the figure.)

If the checkbox of the item [Approx. LED light intensity to halogen] is enabled, the inclination will be adjusted as shown in [3] in the figure, and the light intensity will also approximate the light intensity when using a halogen light source.

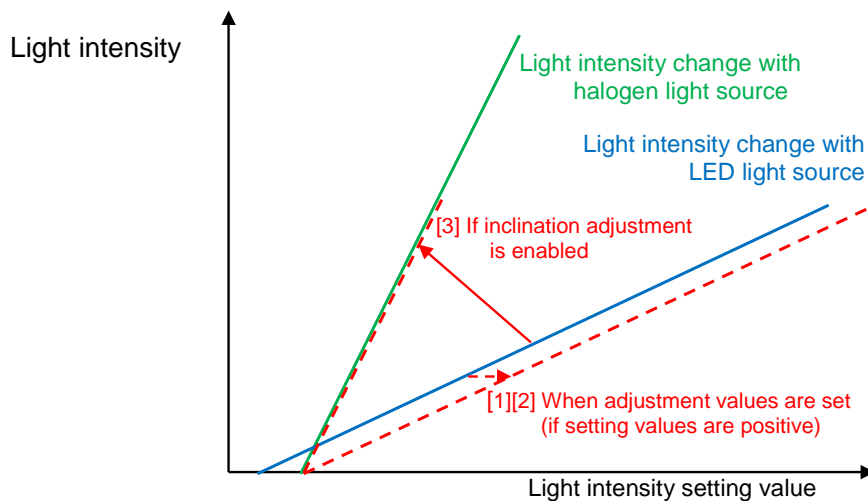


Figure 1: Overview diagram of difference between halogen and LED light intensities

After changing the data, verify the alignment operation using an actual workpiece. If it cannot be aligned, perform teaching again.

## Inquiries

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Please contact a DISCO sales representative or a customer engineer about any inquiries regarding this matter or about the method of adjusting to a light intensity suitable to your devices.

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