Lambda 265 8-Position Multi-Cell Holder and Water Jacketed 8-Position Multi-Cell Holder Installation Instructions

This instruction sheet describes the installation of this accessory which is used with the Lambda 265 Spectrophotometer.

NOTE: *Read these instructions before you install this accessory.*

Contacting PerkinElmer

Supplies, replacement parts, and accessories can be ordered directly from PerkinElmer, using the part numbers.

See our website:

http://perkinelmer.com

PerkinElmer's catalog service offers a full selection of high-quality supplies.

To place an order for supplies and many replacement parts, request a free catalog, or ask for information:

If you are located within the U.S., call toll free 1-800-762-4000, 8 a.m. to 8 p.m. EST. Your order will be shipped promptly, usually within 24 hours.

If you are located outside of the U.S., call your local PerkinElmer sales or service office.

Features

- Easy to install
- Suitable size for the standard cells
- Excellent durability

Figure 1 Lambda 265 Water Jacketed 8-position Multi-Cell Holder [P/N: 4103006] / Lambda 265 8-Position Multi-Cell Holder [P/N: 4103007]

PerkinElmer, 710 Bridgeport Avenue,
Shelton, CT 06484-4794, U.S.A

Produced in the USA.

Dimensions and Specifications

Dimensions

Physical Characteristic		Specification	Comment
Outline	Height (mm)	72	
	Width (mm)	343	
	Depth (mm)	56	
Inner	Height (mm)	28.5	Suitable for the Standard Cell
	Width (mm)	134	
	Depth (mm)	24	
Weight (kg)		1.12	

Specification

Physical Characteristic		Specification	Comment
Space between cells	(mm)	3.4	
Moving distance of one cell	(mm)	16	
Moving distance of eight cells	(mm)	112	
Moving time of one cell	(sec)	0.5	
Moving time of eight cells	(sec)	5	

Description

Description
Precision cell, 10 mm light path, Quartz, 3500 µℓ, ea
Flow-through cell, 10 mm light path, Quartz, 420 µℓ, ea
Flow-through cell, 10 mm light path, Quartz, 720 µℓ, ea
Semi-Micro cell, 10 mm light path, Quartz, Self-masking black side walls & base, 1400 µℓ, ea
Micro cell, 10 mm light path, Quartz, Self-masking black side walls & base, 700 µℓ, ea
Ultra-Micro cell, 10 mm light path, Quartz, Self-masking black side walls & base, with stopper, 40 µℓ, ea
Precision cell, 10 mm light path, Quartz with stopper, 3500 µℓ, ea

Other cells are available upon request if what you want is not listed.

8-Position Multi-Cell Holder

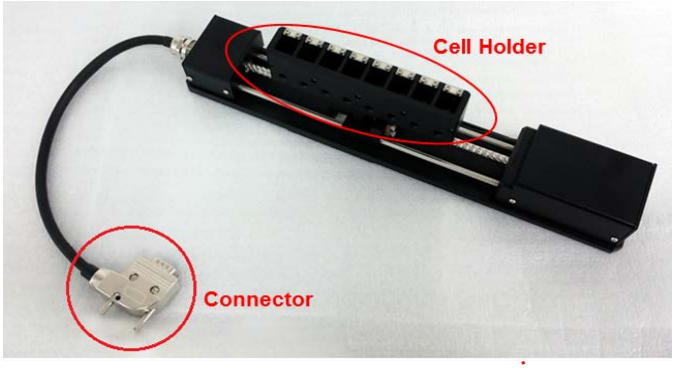


Figure 2 Lambda 265 8-position Multi-Cell Holder

Water Jacketed 8-Position Multi-Cell Holder

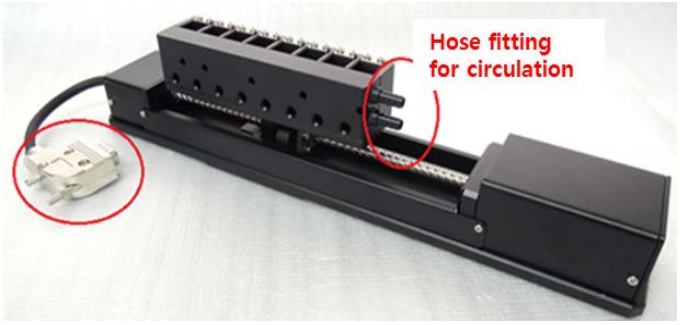
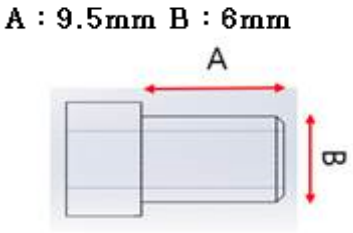


Figure 3 Lambda 265 Water Jacketed 8-position Multi-Cell Holder

Hose Fitting Dimensions



NOTE: The recommended tube size and material are 4 mm-ID and 8 mm-OD silicon tube which has thermal resistance at higher than 100°C

Installation

1. Prepare the Lambda 265 Spectrophotometer to install this accessory.

2. Remove the existing cell holder.

Figure 4 Removing the existing cell holder

3. Install the Water Jacketed 8-Position Multi-Cell Holder (or 8-Position Multi-Cell Holder) in the sample compartment.

Figure 5 Water Jacketed 8-Position Multi-Cell Holder (or 8-Position Multi-Cell Holder)

4. Connect the accessory communication cable to the accessory port and the power code.

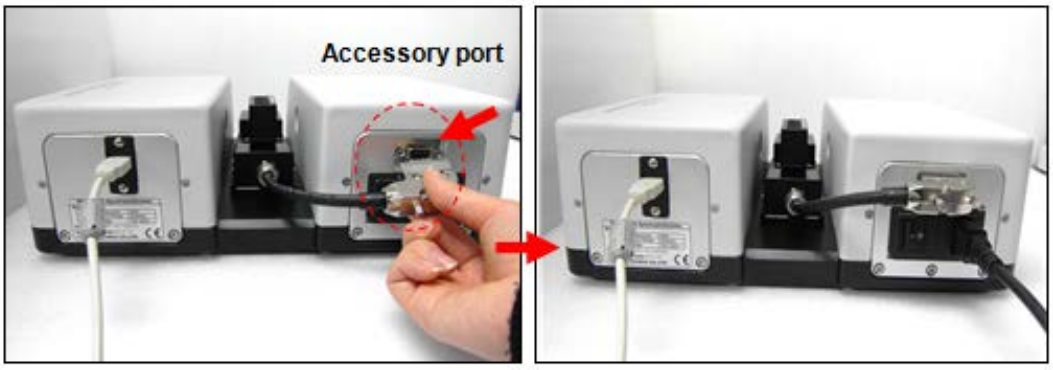
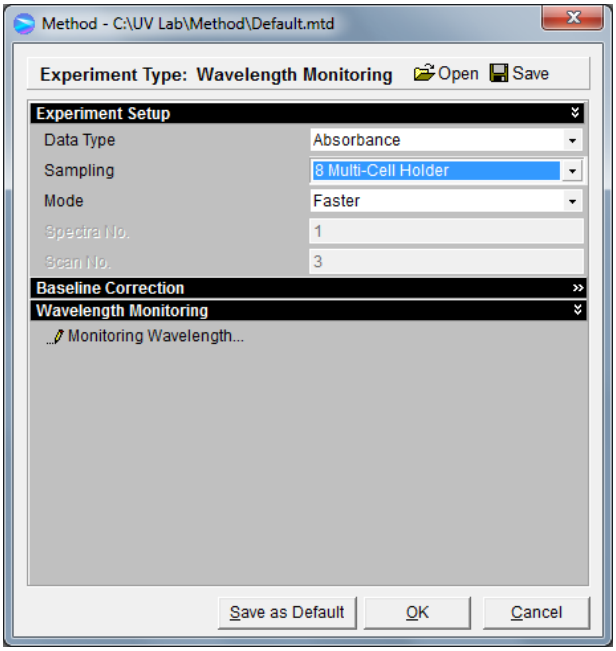


Figure 6 Connecting the accessory communication cable to the accessory port

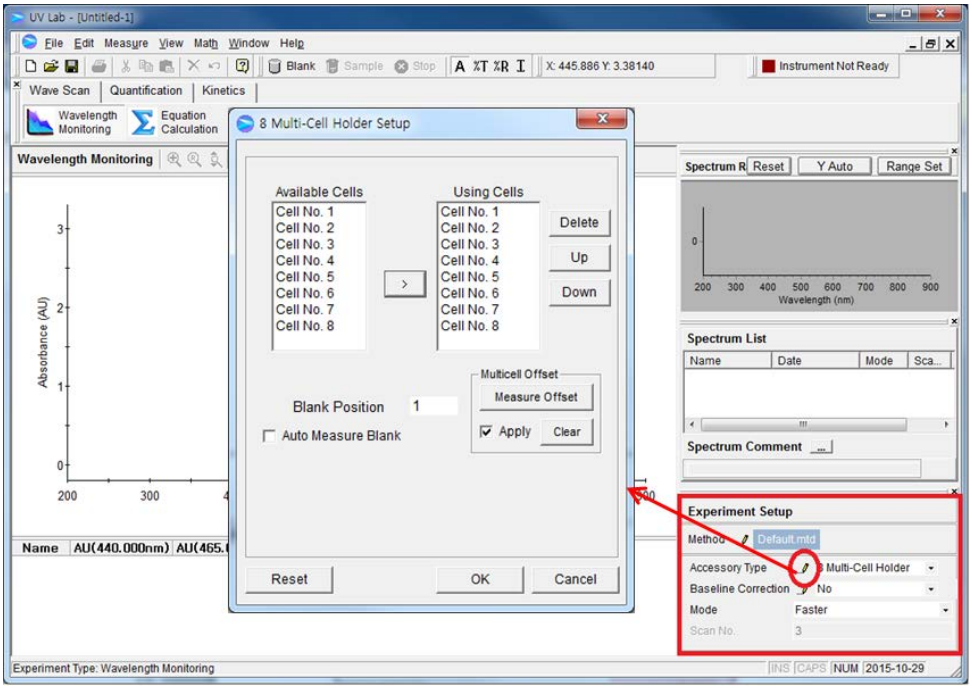
Measurement

1. Launch the **UV Lab** software. Select **Experiment Type** and select **OK**.

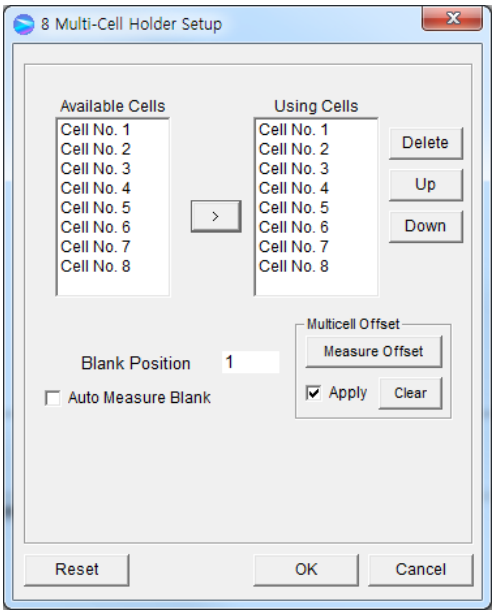
2. The following dialog box will be displayed. Set each parameter and click **OK**.



3. Click the **red-marked icon (pencil icon)** when you want to change the parameters about the 8-Position Multi-Cell Holder**.**



4. The following dialog box will appear. Change the parameters about the 8-Position Multi-Cell Holder. Click **OK.**



▶ Available Cells: Indicate cells that are available for measurement.

▶ Using Cells: Shows the cell position which is selected for measurement.

Using the button, [>], select the **Cell No**.

Using [Delete], [Up] and [Down] keys, you set up the order of measurement.

▶ Blank Position: Enter the blank position of Multi-Cell Holder (Generally, place blank in the position No.1.)

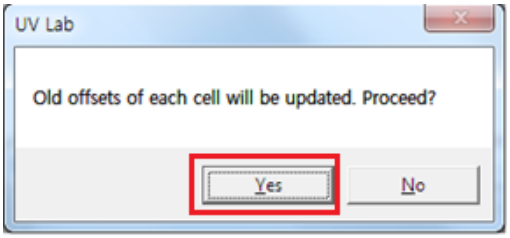
▶ Auto Measure Blank

- Check: Each time for measuring of sample, the blank is measured previously.
  This function is very useful for the long-term kinetic mode.
- No check: Only sample is measured without measurement of the blank.

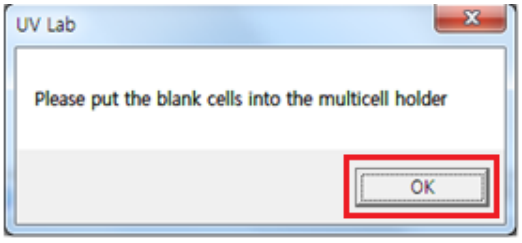
▶ Reset: Use for formatting the 8-Position Multi-cell.

▶ Multicell Offset: Multicell Offset is a function that corrects the transmittance difference between the cells, and it should be performed before starting experiments.

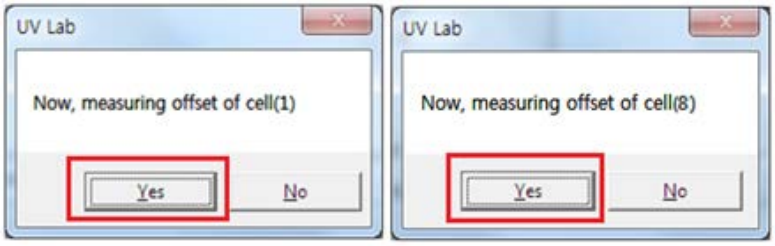
a. Select **Measure Offset**. The following dialog box will appear. Select **Yes**.



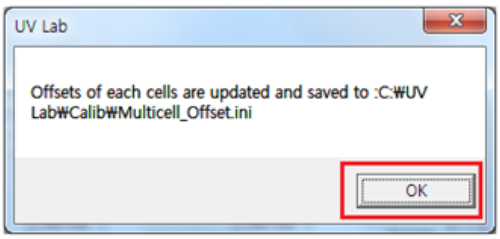
b. This dialog box will be shown. Put blank cells into the 8 Position Multi-Cell Holder or empty the cell holder. Select **OK.**



c. Select **Yes** for each position measurement one by one.



d. The dialog box will be shown when the measuring offset of cell (8) is finished. Select **OK** to save the offset data.



- Apply: Save the Offset values.
- Clear**:** Remove the saved offset data.

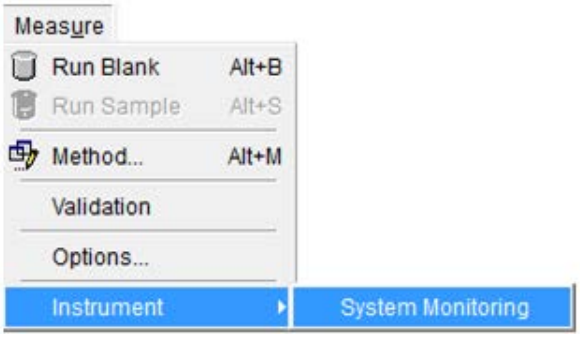
5. Put the cell with blank solution in the position No. 1 and sample in the position No 2-8.

6. Measure the blank and samples.

Calibration of Multi-Cell Position

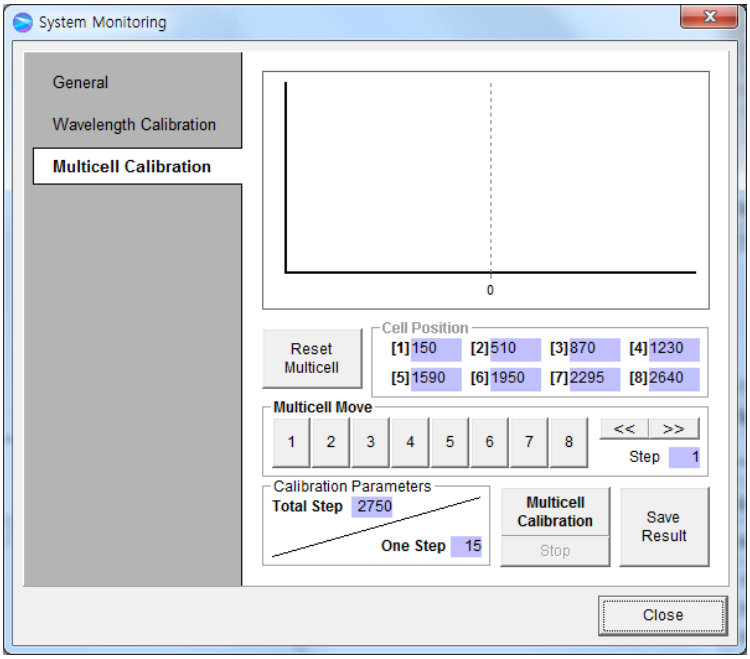
Calibrate the beam position of the 8-Position Multi-Cell Holder (Multi-Cell) when the Multi-Cell is installed at the first time or beam position is incorrect.

1. Launch the UV Lab software and check the 8-Position Multi-Cell Holder in the accessory type. Select **System Monitoring** in the **Measure** menu.



2. Select **Multicell Calibration** in the **System Monitoring**.

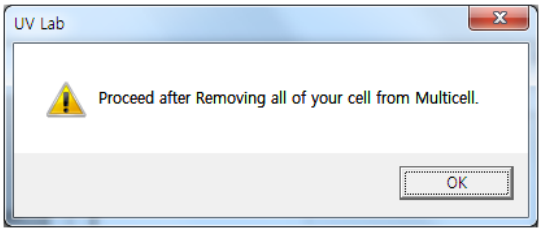
3. The functions of the Multicell Calibration are shown as follows.



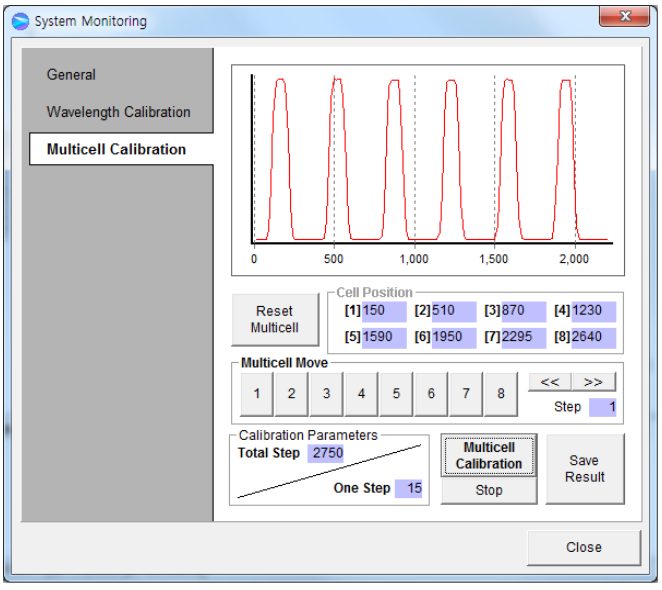
Command	Function
Reset Multicell	Use to move to '0' step of Multi-Cell position.
Cell Position	Show saved steps about each cell position of the Multi-Cell.
Multicell Move	. Used for moving Multi-Cell position as clicking 1 2 3 4 5 6 7 8 buttons. . Used for moving Multi-Cell position using << >> buttons by entered step.
Calibration Parameters	. Total Step: Shows the limitation of operation of the Multi-Cell pulse. Usually you can use the set value as a default. (2750) . One Step: Shows the unit of the operation of the Multi-Cell step. (usually used as 15 value)
Multicell Calibration	Used to perform the Multi-Cell Calibration.
Stop	Used to stop the Multi-Cell Calibration.
Save Result	Use to save the calibrated result.

4. Select **Reset Multicell** to format the Multi-Cell steps.

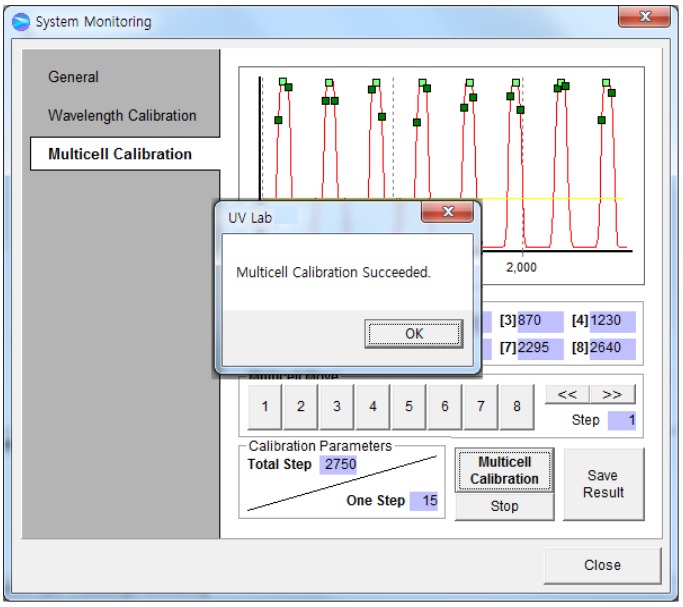
5. Select **Multi-Cell Calibration**. Then this dialog box will appear **Remove all samples from the Multi-Cell**.



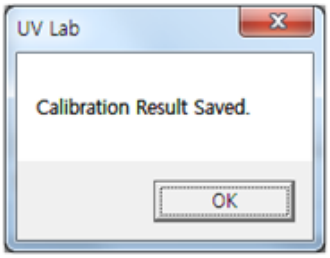
6. Select **OK**. Then the Multi-Cell Calibration will start. The current process of calibration will be shown in the main window.



7. When calibration is finished, the following box appears. Select **OK**.



8. Select **Save Result** to save the result. If the following message box appears, click **OK**.



Troubleshooting

When liquid leakage occurs [Water jacketed 8-Positon Multi-Cell Holder]

1. When liquid is leaking between the hose fitting and the tube.
   - Replace the tube.
   - The replaced tube should be able to withstand a temperature at least 10 ℃ higher than the experimental temperature.

2. When liquid is leaking from the Water Jacketed 8-Position Multi-Cell Holder.
   - Contact PerkinElmer since the Water Jacketed 8-Position Multi-Cell Holder needs to be replaced.

When constant temperature is not maintained [Water jacketed 8-Positon Multi-Cell Holder]

1. Check if the circulator is working normally.
   - Check if the temperature is maintained normally in the circulator.

- Check if liquid is transferred normally to the Water Jacketed Multi-Cell Holder through the tube.

2. Check the tube connection.

- Check if the tube is connected tightly.

When the tube frequently becomes detached [Water jacketed 8-Positon Multi-Cell Holder]

1. Replace the tube.

- You should replace the tube as it is aged.
- The replaced tube should be able to withstand a temperature at least 10℃ higher than the experimental temperature.

When the Multi-Cell does not move

1. Check the accessory part.

- Check if the accessory port and Multi-Cell accessory connector are connected.

When the Multi-Cell does not reset

If resetting fails, the photo interrupter switch inside the Multi-Cell will need replacing. Contact PerkinElmer for replacing the photo interrupter.