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# INTSMA Slit Installation Instructions

## Description

Ocean Optics Jaz, Torus and QE65 Pro Spectrometers offer a special feature that make them even more customizable for your unique application. Part of the versatility of these spectrometers lies in their replaceable laser-cut slit and aperture assemblies (INTSMA). Your spectrometer arrived with the slit size specified in your order. However, if your needs have changed, you can order additional replacement slits (in various widths from 5  $\mu\text{m}$  to 200  $\mu\text{m}$ ) and install the new slit using these instructions. Be sure to use a fiber with a diameter that matches the slit size to optimize throughput.

The INTSMA slit kits offer you the following advantages:

- **Adjustable Throughput**  
The spectrometer throughput can be set for applications such as absorbance and fluorescence. For example, QE65 Pro users who need great sensitivity for low light applications can change slits to avoid saturation in absorbance applications.
- **Adjustable Optical Resolution**  
Optical resolution is a function of grating groove density and slit size. By changing slit size, you can observe different Raman shift resolution with a single QE65Pro spectrometer.
- **Multiple Uses for Your Spectrometer**  
For example, a Jaz spectrometer can be changed from an absorbance spectrophotometer in the lab to a fluorescence unit in the field. Or a Torus configured to resolve closely aligned emission peaks for one application and make low light level measurements for another.
- **Field-Changeable**  
Our laser-cut slit and aperture assemblies can be changed in the field, eliminating the need to send us your spectrometer for rework. Changing slits can be as easy as removing a few screws. You can also send us your spectrometer to change the slit size and take advantage of the opportunity to purchase one of our calibration and maintenance packages.

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### Note

If you are changing to a smaller slit size, you will need to have your spectrometer recalibrated for accurate measurements. Best practice would be to validate the spectrometer calibration using an HG-1 Mercury Argon Calibration Source (or similar light source) whenever the slit size is altered.

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## Additional Resources

For more information on Jaz, see the [Jaz Installation and Operation Manual](#).

For more information on Torus, see the [Torus Installation and Operation Manual](#).

For more information on the QE65 Pro, see the [QE65 Pro Installation and Operation Manual](#).

To speak to a Technical Support representative or an Ocean Optics Applications Scientist, please call (727) 733-2447. Our office hours are 8 a.m. – 8 p.m. (Mon-Thu), 8 a.m.– 6 p.m. (Fri) EST.

## INTSMA Kits Available

The INTSMA kits available include the following:

- INTSMA-000: Interchangeable round SMA with no slit installed
- INTSMA-005: Interchangeable round SMA 5  $\mu\text{m}$
- INTSMA-010: Interchangeable round SMA 10  $\mu\text{m}$
- INTSMA-010S: Interchangeable round SMA 5  $\mu\text{m}$  small aperture
- INTSMA-025: Interchangeable round SMA 25  $\mu\text{m}$
- INTSMA-050: Interchangeable round SMA 50  $\mu\text{m}$
- INTSMA-100: Interchangeable round SMA 100  $\mu\text{m}$
- INTSMA-200: Interchangeable round SMA 200  $\mu\text{m}$

## Package Contents

The INTSMA kit ships with the following components:

- INTSMA slit
- Four (4) 0-80 screws (2 for slit and 2 spares)

## Tools Needed

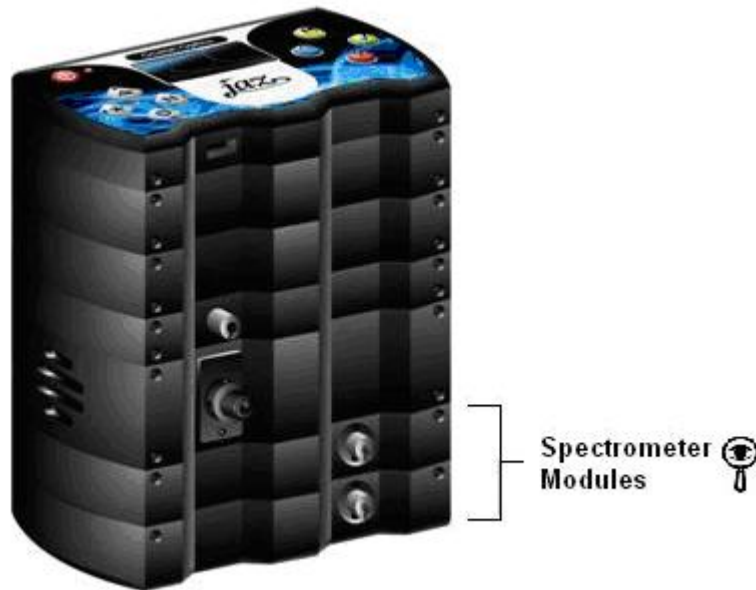
- 0.050 inch hex driver (Allen wrench)

## Installing the Slit

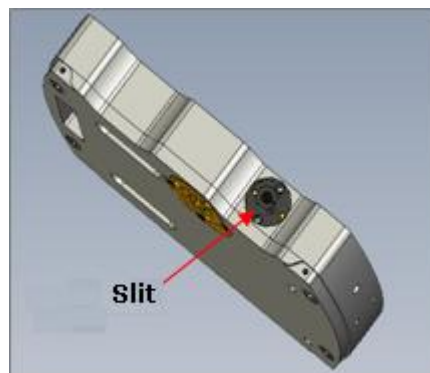
Follow these instructions to install a new slit in your spectrometer. These instructions use the Jaz as an example, but the slit installation is the same for the Torus and QE65 Pro spectrometers.

### ► **Procedure**

1. Locate the Spectrometer module in your Jaz stack (should be located at the bottom of the stack). (This step is not necessary for Torus and QE65 Pro spectrometers.)



2. Locate the SMA connector. Remove the fiber if one is attached.
3. Using the hex driver, remove 2 the screws attaching the slit to the spectrometer. Then, remove the slit from the module by pulling it straight out.



4. Place the new INTSMA slit connector into the spectrometer; the key of the connector goes on the right.



5. Reinstall the 2 screws into the 2 open screw holes. Tighten the screws carefully (do not over-tighten) using the hex driver.
6. Reinstall the fiber, if necessary.