

LOTF Laser Startup Procedure

S-AB-P-038 Rev B

This Koheras Adjustik Model TAdY10PztMPm is a Class 3B laser that has been pre-configured to operate as the source for the Zygo wavelength shifting interferometer. In use configuration the output fiber cable is directly coupled to the Zygo interferometer and only the 4-inch expanded beam is output. It has a nominal wavelength in vacuum of 1052.9 nm with a narrow linewidth of less than 70 kHz and a maximum power of 67 mW.

Appropriate eye protection MUST be worn by ALL individuals in the Laser Bay prior to turning the laser 'ON'.

Startup Procedure:

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| 1 | Request that the Shot Director enable the LOTF laser in the Facility Interlock Executive and make the appropriate warning announcements in the facility. | <input type="checkbox"/> |
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| 2 | Verify that the output fiber of the laser is connected to the Zygo interferometer. | <input type="checkbox"/> |
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| 3 | Verify that the Zygo interferometer is turned 'ON'.
The switch is located near the beam output. A green LED indicates power is 'ON'. | <input type="checkbox"/> |
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| 4 | Turn the 'Output Power' knob on the left front panel of the laser to its full counter-clockwise position.
Turn key on the rear of the laser to 'ON'. | <input type="checkbox"/> |
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| 5 | Rotate the 'Output Power' knob to the full clockwise high power position. | <input type="checkbox"/> |
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(continues)

Verify that the output power indicated on the left readout display is increasing and let the laser warm-up for two minutes.

- 6 The 'FL TEMP' (fiber laser temperature) should indicate "BELOW SETTING" and be increasing. The maximum power should reach approximately 67 mW.

If the output does not reach at least 50mW after 2 minutes, shut down the unit as described in the shutdown procedure (S-AB-P-039) and contact the manufacturer for assistance.

Verify that the 'FL TEMP' shown on the right readout display is 15.2° C.

If it is not, depress the unlabeled push button switch located at the third position from the left to enable the 'FL SET TEMP' and adjust the 'LASER TEMP' knob located second from the left to 15.2° C.

- 7 Verify the 'PUMP TEMP' is 23.1 +/- 0.1 ° C before returning the push button switch to its normal 'OUT' position.

If not, shut down the unit as described in the shutdown procedure and contact the manufacturer for assistance.

Verify that neither of the two "PUMP CURRENT" or 'PUMP TEMP' warning lights are lit. If one of the lights comes 'ON', reduce the output power slightly.

- 8 If you need to reduce the output power to less than 60 mW, shut down the unit as described in the shutdown procedure and contact the manufacturer for assistance.

(End of Procedure)

Note: There are no user serviceable components on the laser unit. If the power output is not achieved, shut down the unit as described in the shutdown procedure and contact the manufacturer (Koheras) for assistance.

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Document Release:

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