LUMA

Multi-Channel Vacuum
Ultraviolet Detector

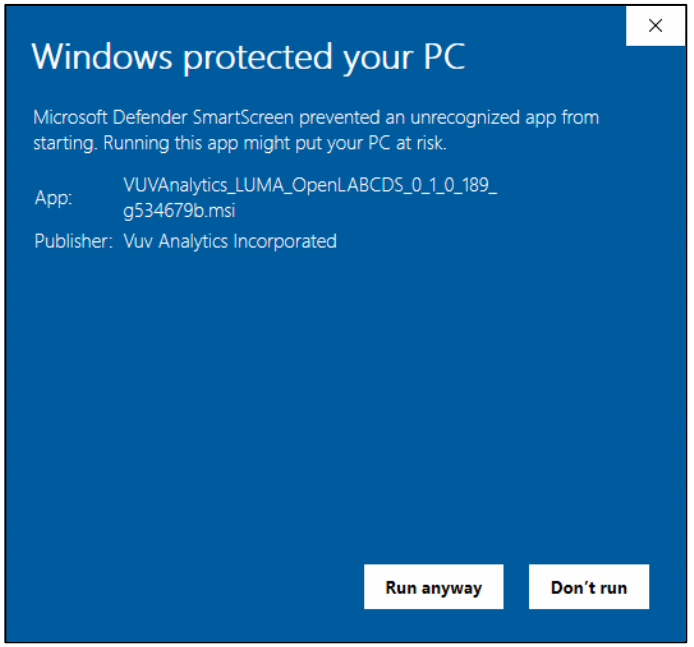
User's Guide for OpenLab CDS

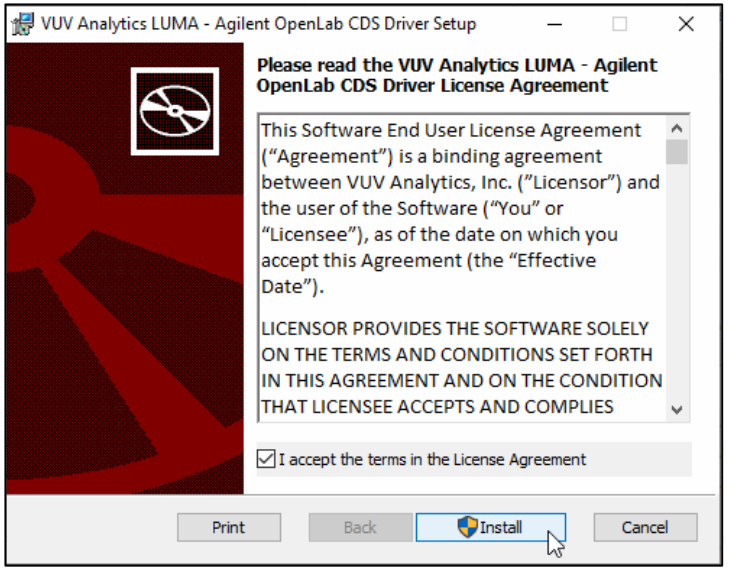
Revision 2

Sensitive. Selective. Simple.

Driver Installation

1. Log on to PC using a local Administrator account.
2. Close OpenLab CDS, if running.
3. Open Windows Explorer to the download location for the LUMA driver.
4. Run the installer labeled *VUVAnalytics_LUMA_OpenLabCDS_rev.msi* , where *rev* will be the driver version.
5. If a User Account Control dialog appears, click **Yes** to continue
6. If a security dialog appears, click **More Info** and then **Run anyway** to continue.
7. Read and accept the License Agreement, then click **Install** to continue the installation.
8. Reboot the computer.



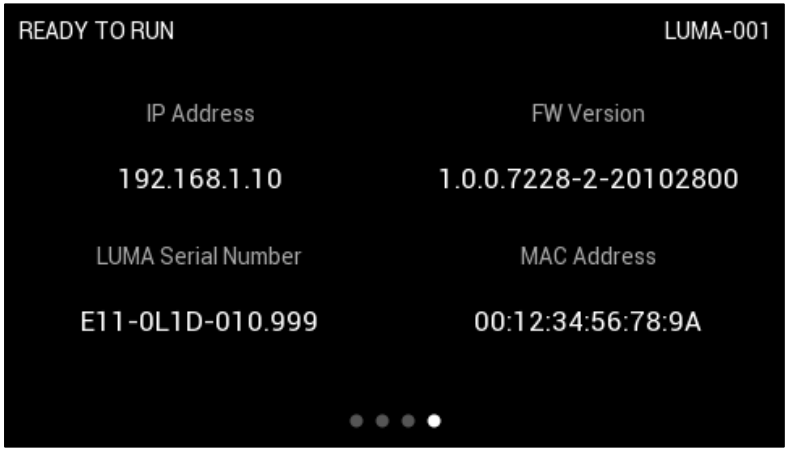


LUMA Detector Installation

Refer to the *LUMA Installation Guide* for instructions on connecting to a gas chromatograph (GC).

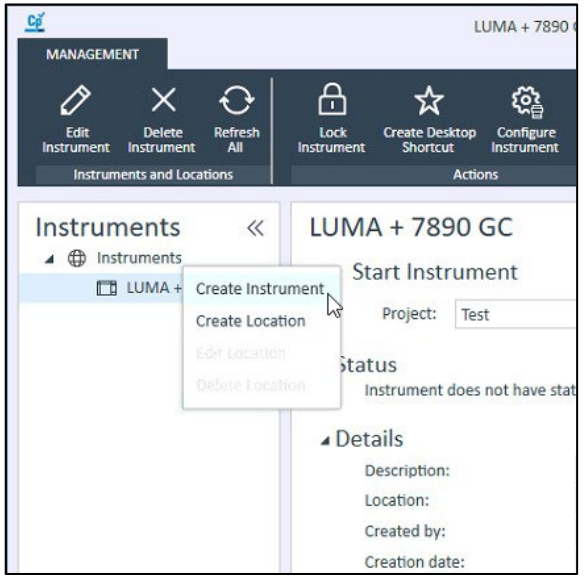
Create and Configure Instrument

1. Capture the IP Address of the LUMA detector from the Info panel.



2. Open the Agilent Control Panel using the desktop shortcut or clicking **Start » All Programs » Agilent Technologies » Control Panel**.

3. Right-click **Instruments** and select **Create Instrument**.

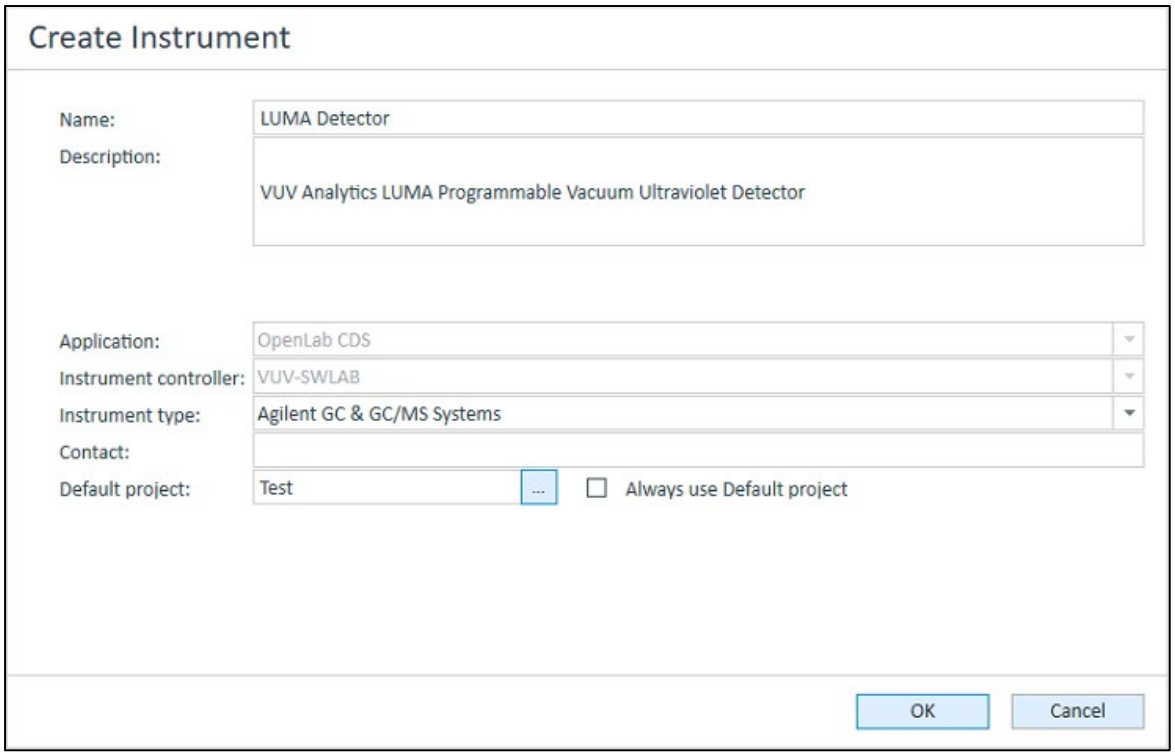


Create and Configure Instrument cont.

4. Enter the following instrument information:

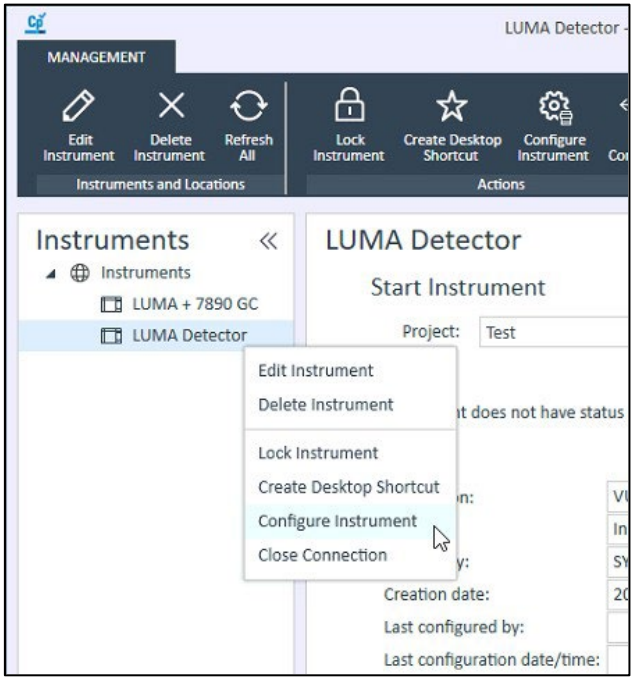
   - **Name**
   - **Description** – (Optional) Any additional information about the instrument
   - **Instrument Type** – Select *Agilent GC & GC/MS Systems*
   - **Contact** – (Optional)
   - **Default Project** – (Optional) The default project location to store methods, sequences, runs, etc.

5. Click **OK** to create the instrument.



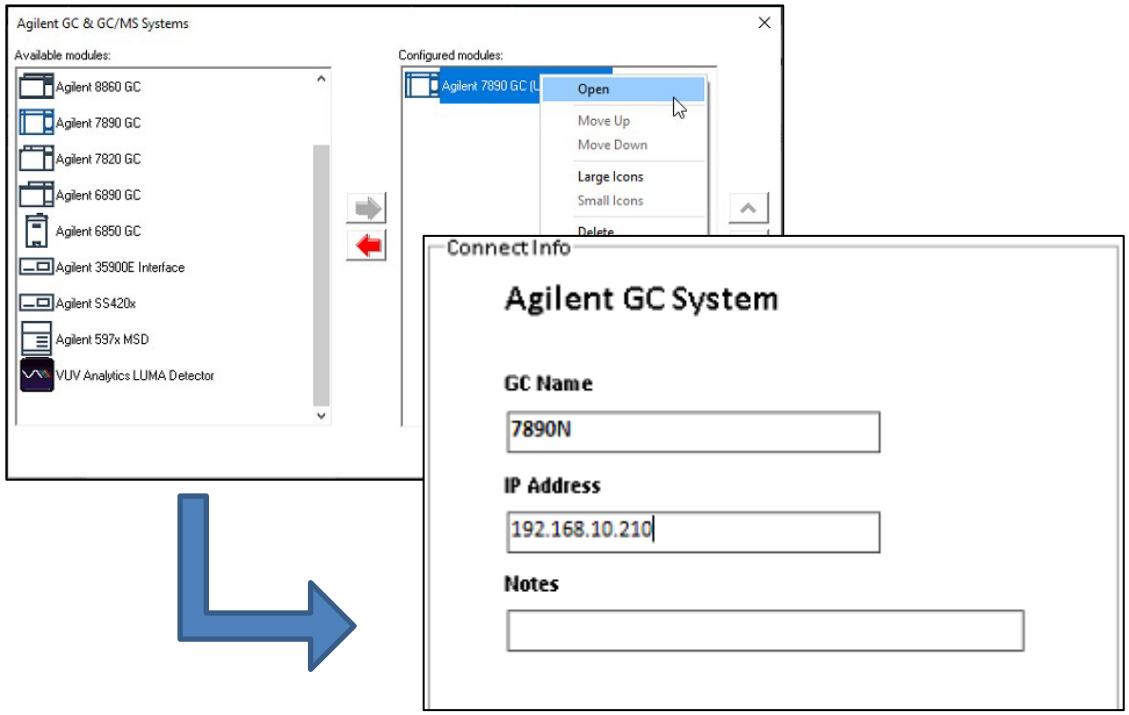
Create and Configure Instrument cont.

6. Right-click the new instrument and select **Configure Instrument**.



7. In the Available Modules list, select the correct Agilent GC type and click the **green arrow facing right** to add it to the instrument.

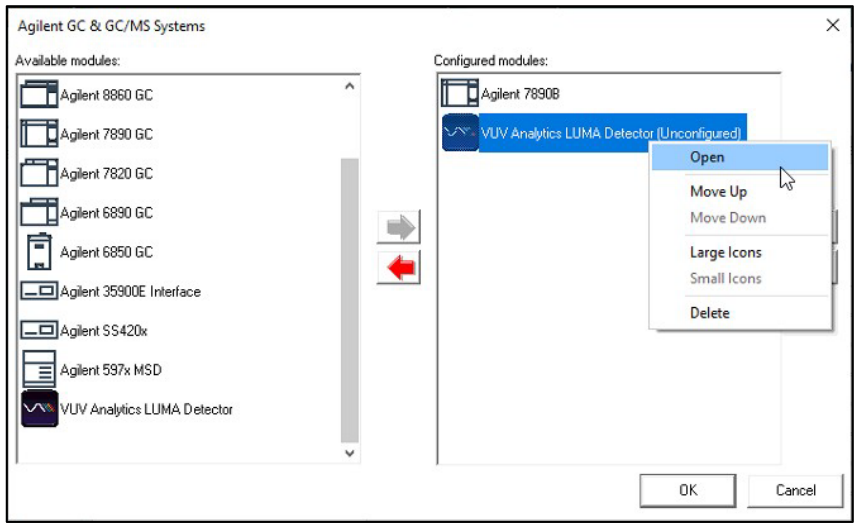
8. Right-click the **unconfigured Agilent GC** on the right and select **Open** to configure the instrument (refer to your GC manual to configure the connection).



Create and Configure Instrument cont.

9. In the Available Modules list, select VUV Analytics LUMA Detector and click the **green arrow** to add it to the instrument.

10. Right-click the **unconfigured LUMA** on the right and select Open to configure the instrument.

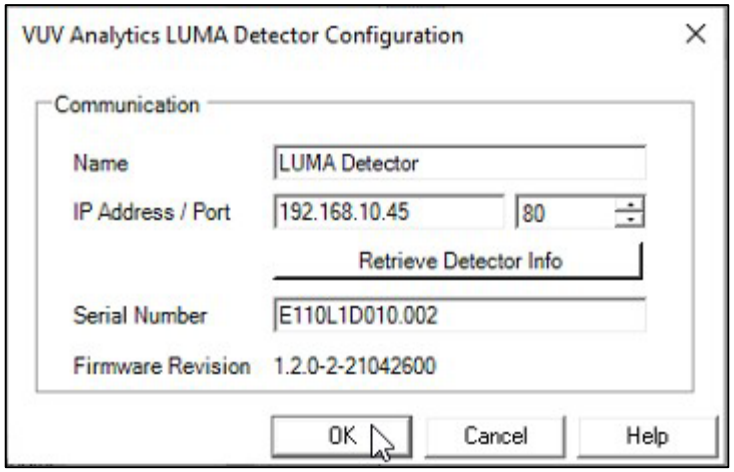


11. Enter the following information:

    - **Name**
    - **IP Address / Port** – 80 is the default port

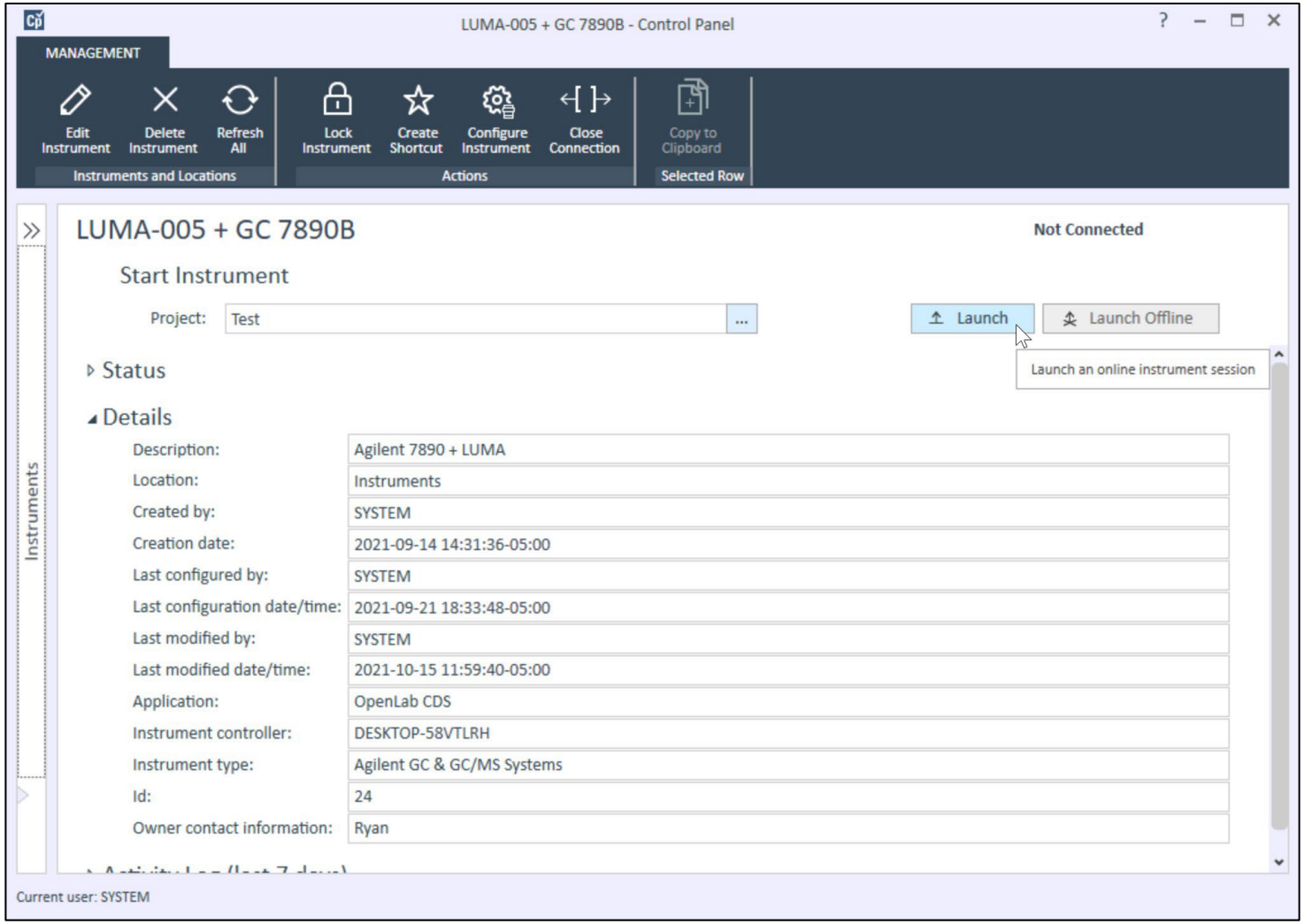
12. (Optional) Click **Retrieve Detector Info** to fetch the Serial Number and Firmware Revision at the specified IP address.

13. Click **OK** on all dialogs to save the configuration.



Open the Acquisition Window

- In the Control Panel, select an Instrument and click the **Launch** button to open the Acquisition window.



LUMA Detector Status

A. OpenLab CDS Driver Run State – valid states include *Offline*, *Idle*, *Not Ready*, *Prerun*, and *Run.*

B. Detector On/Off Control – can be used to place LUMA in a warm-up mode before runs, but not required (detector will automatically warm up, if necessary).

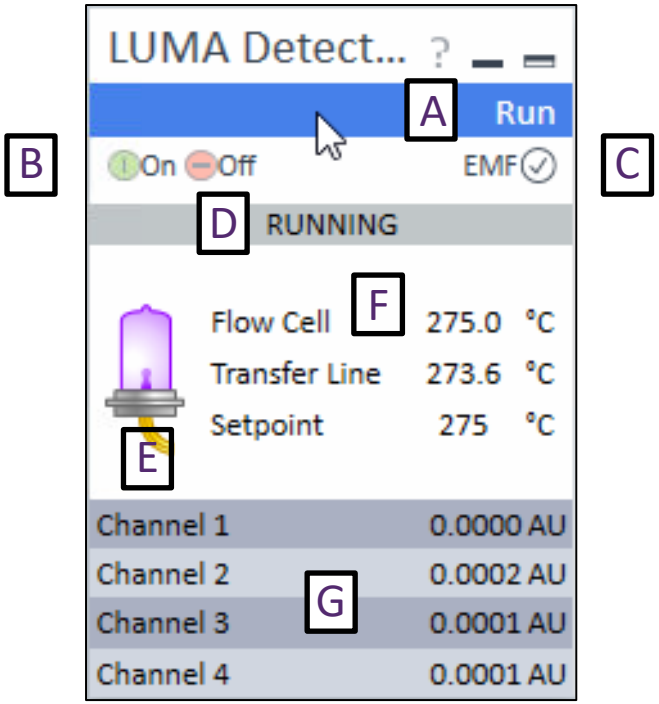
C. Maintenance indicator

D. LUMA detector state – detailed LUMA status; valid states include:
- *IDLE*
- *HEATING FLOW CELL TO TEMP*
- *STARTING LAMP*
- *WARMING UP LAMP*
- *WAITING ON TEMP*
- *READY TO RUN*
- *ADJUSTING GAIN*
- *FETCHING DARKS*
- *FETCHING REFS*
- *RUNNING*

E. Lamp status

F. Temperature status

G. Output channel absorbances



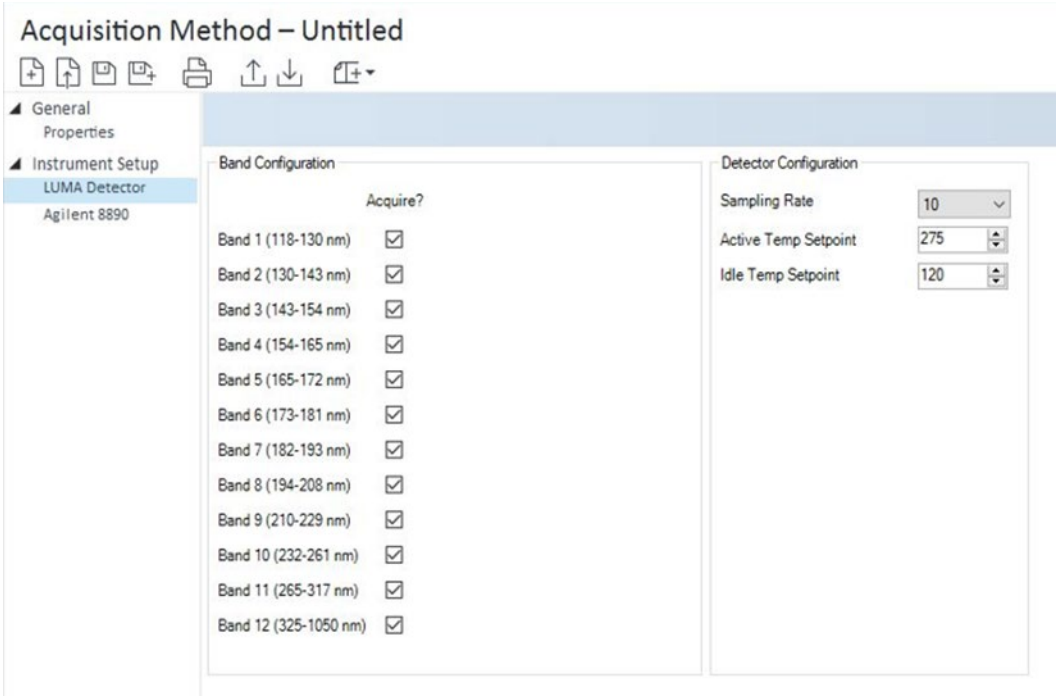
Configuring a Method

1. Click the **Method** button in the **Layout** group at the top of the Acquisition window.

2. Under Instrument Setup, Click the **Agilent GC** and configure the module.

3. Click **LUMA Detector** to set up a method (may have a different name, depending on earlier configuration).

4. After configuring the LUMA, click the Save button to store the method to disk.



Configuring a Method cont.

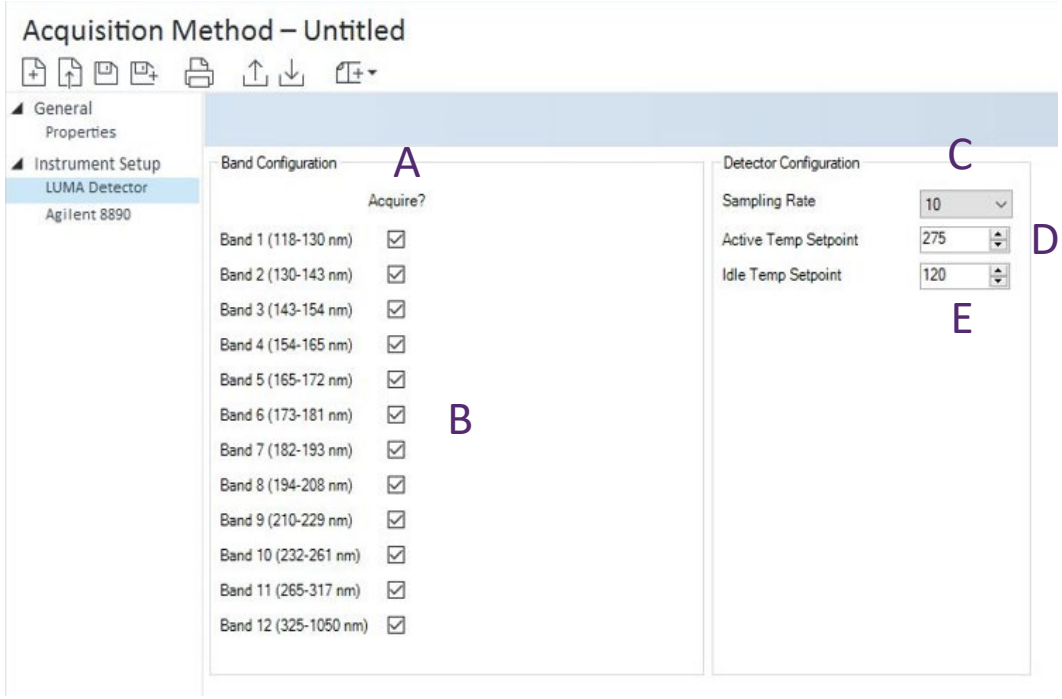
5. Channel Configuration
   A. Output Enable – if checked, channel will be acquired. All channels are enabled by default.

   B. Band selection – select which VUV band to acquire.

6. Detector Configuration
   C. Sampling Rate – The rate at which the driver will acquire data; valid rates range from 1 – 100 Hz (10 Hz default).

   D. Active Temp Setpoint – The flow cell and transfer line setpoint to use for runs (275 deg C default).

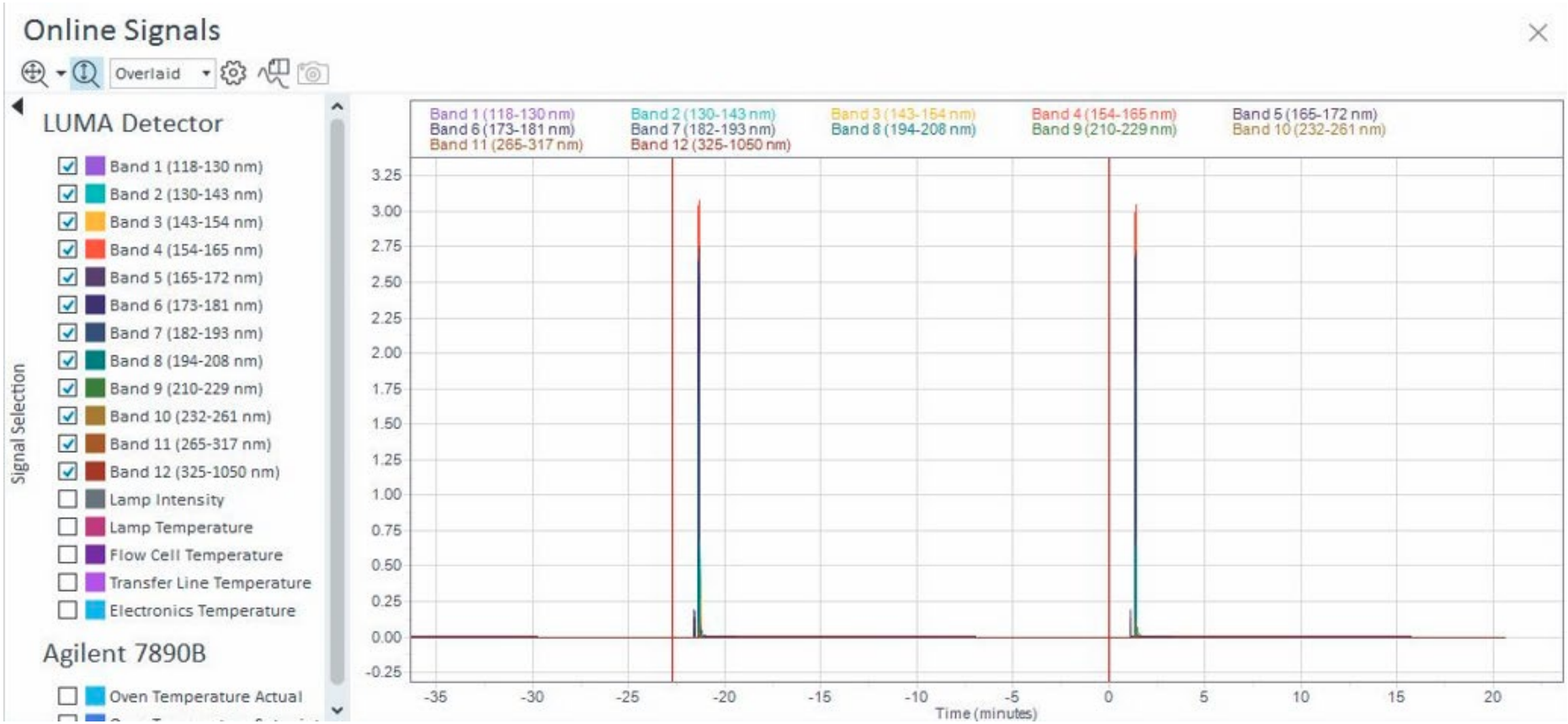
   E. Idle Temp Setpoint – The flow cell and transfer line setpoint when the detailed LUMA state is *IDLE* (120 deg C default).



Available Channels

The following channels are captured during a run:

- Output 1-12 – Output absorbance channels
- Lamp Intensity – Lamp absorbance channel
- Lamp Temperature
- Flow Cell Temperature
- Transfer Line Temperature
- Electronics Temperature



Troubleshooting

Click the Activity Log button to check for error messages

Error Message	Solution
Connection timeout. Please check the device connectivity!	• Check that the LUMA OS interface is accessible by typing http://<IP Address> into a web browser. • Verify the IP address listed on the detector and update the configuration, if changed. • Check the ethernet connection to the detector. Power cycle the detector.
Aborted injection – Aborted by: Hardware error	• A fault caused by either the flow cell, transfer line, or lamp. • Check the detector screen to determine which fault has occurred.
External component has thrown an exception.	• An internal error in the driver has occurred. • Contact VUV Analytics for support.

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