

CTS-10473 Technical Data Sheet

1100 UV Diode Array

Lamp Assembly, Shine-Thru

(Similar to Agilent 2140-0590)



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1.0 Description

The CTS-10473 1100 UV Diode Array Lamp Assembly, Shine-Thru is pictured in Figure 1. This is a pre-aligned direct lamp used in the Agilent 1100 UV Diode Array Detector. This lamp produces light in the ultraviolet region of the spectrum. The 'shine-thru' design allows visible light from a second source, a quartz-halogen lamp, to combine with the light from this lamp to produce light across the UV/Vis spectrum for the detector.

2.0 Specifications

2.1 Operating Specifications

Aperture Size: 0.5mm
Strike Voltage Min.: 50 Vdc
Anode Current: 300 mAdc
Anode Voltage: 85 Vdc
Noise Max.: .005 (%p-p)
Drift Max.: +/-0.5 (%/h)
Heater Warm Up Voltage: 2.5 Vdc
Heater Warm Up Current: 4 Adc
Heater Operating Voltage: 0 Vdc
Heater Operating Current: 0 Adc
Lifetime: 1000 hours

2.2 Lamp Physical Specifications

Materials:

Socket Contacts: Universal Pre-tin Brass
Connector Plug: Universal Nylon, Natural Color
Lamp Envelope: Synthetic Fused Silica
Lamp Base: 6061 Aluminum
Lamp Screws: 302 Stainless Steel

3.0 Operating Suggestions

3.1 Flow Cells

It is important to clean the flow cell regularly. If the flow cell is not clean, the amount of light passing through the flow cell may be insufficient and will affect the light intensity. If after replacing a lamp, the detector performs poorly, it is recommended that you check to make sure that the flow cell is clean, leak free, and the proper type of flowcell per application being used.

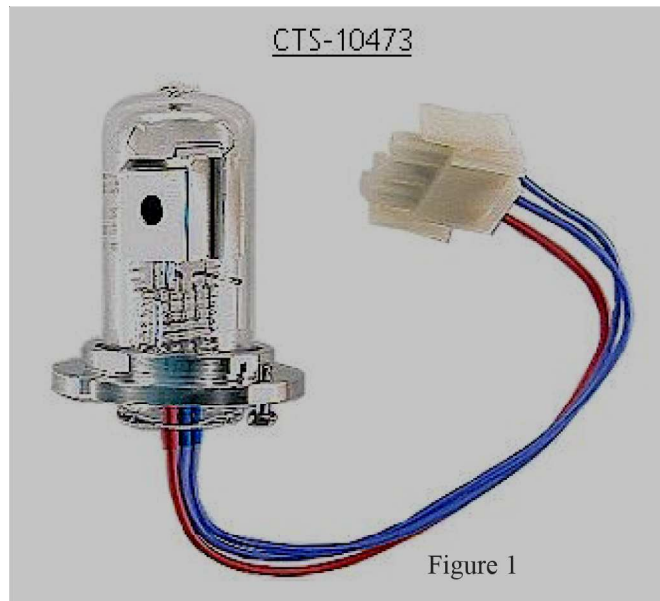


Figure 1

3.2 Fingerprints

Fingerprints on the glass envelope affect the lamp's performance. It is highly recommended that the lamp's envelope not be touched. If there is any chance that there are fingerprints on the lamp's envelope, wipe the envelope with methanol using a lint-free tissue and allow to dry prior to installation.

3.3 Handling and Installation

The lamp is sensitive to physical shock such as being dropped. It is recommended that you avoid shock when installing or handling the lamp. If it is suspected that a lamp has been subjected to excessive shock, it is recommended that a DAD Intensity Test be run to verify that intensity is acceptable. An acceptable DAD Intensity Test will not, however, guarantee that no damage occurred.

3.5 Lamp Intensity

It is known within the industry that deuterium lamps exhibit reduced intensity as they age during their normal service life. It is recommended that a DAD Intensity Test be run on the lamp at installation, then regularly during the lamp's service life. It is also recommended that the lamp be replaced at 50% of original intensity.

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4.0 Lamp Replacement

4.1 General Criteria for Lamp Replacement

- a. Lamp will not ignite.
- b. Noise or drift exceeds application limits.
- c. Dictated by Preventive Maintenance Schedule per end-user company SOP.
- d. Lamp energy is below 50% of original intensity as recorded during initial installation.

4.2 Installation Instructions

- a. Turn the lamp(s) off.

Caution: If the detector has been in use, the lamp may be hot. It is important to wait until the lamp has properly cooled

- b. Press release buttons and remove the front cover to gain access the flow cell area.
- c. Disconnect the plug from the connector and loosen the screws to remove the lamp.
- d. Exchange the lamp.

Note: Fingerprints on the lamp's (glass) envelope affect the lamp's performance. It is highly recommended that the lamp's envelope not be touched. If there is any chance that there are fingerprints on the lamp's envelope, wipe the envelope with methanol using a lint-free tissue and allow to dry prior to installation.

- e. Tighten the screws to install the new lamp and reconnect the plug to the connector.
- f. Replace the front cover.
- g. Reset the lamp counter as described in the user interface documentation.
- h. Power up the lamp allowing ample time to warm up and reach operating temperature.
- i. Perform intensity test per end-user company SOP's.

5.0 Warranty

CTS warrants this product for 1000 hours or one year from purchase whichever comes first. The guaranteed lifetime is defined as the time in which the radiant power of the lamp has dropped to 50% of its initial value measured at 230nm and 300mA operating current. CTS also warrants the product to be free of defects in materials and workmanship and will replace, without cost, the product which carries such defects. Please call 1-800-682-6480 for a **Return Authorization Number** before sending your return to CTS.

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