



AvaLight-DHc Compact Deuterium-Halogen Light Source

Safety Instructions

- **Instructions:** All the safety and operating instructions should be read before the unit is operated. Before using the power supply for the first time check for transport damage.
- **Warning:** All warnings on the unit and in the operating instructions should be adhered to.

Unpacking Instructions:

Your package should contain:

- AvaLight-DHc Deuterium-Halogen light source
 - 12V/DC-Poweradapter
 - This manual
1. Unpack your new power supply and AvaLight-DHc carefully. Although the deuterium lamp is rigidly mounted dropping this instrument can cause permanent damage.
 2. Inspect the outside of the instrument and make sure that there is no damage to your unit. In case of damage contact the dealer immediately and **DO NOT USE THE INSTRUMENT!**
 3. Send in the registration card, for your guarantee and support
 4. Use this instrument in a clean laboratory environment

Moisture

The unit is designed for operation in dry rooms only.

Heat

The unit should be situated away from radiators, hot bodies, ovens or other heat sources.

Power Sources

The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the unit.

Object and Liquid Entry

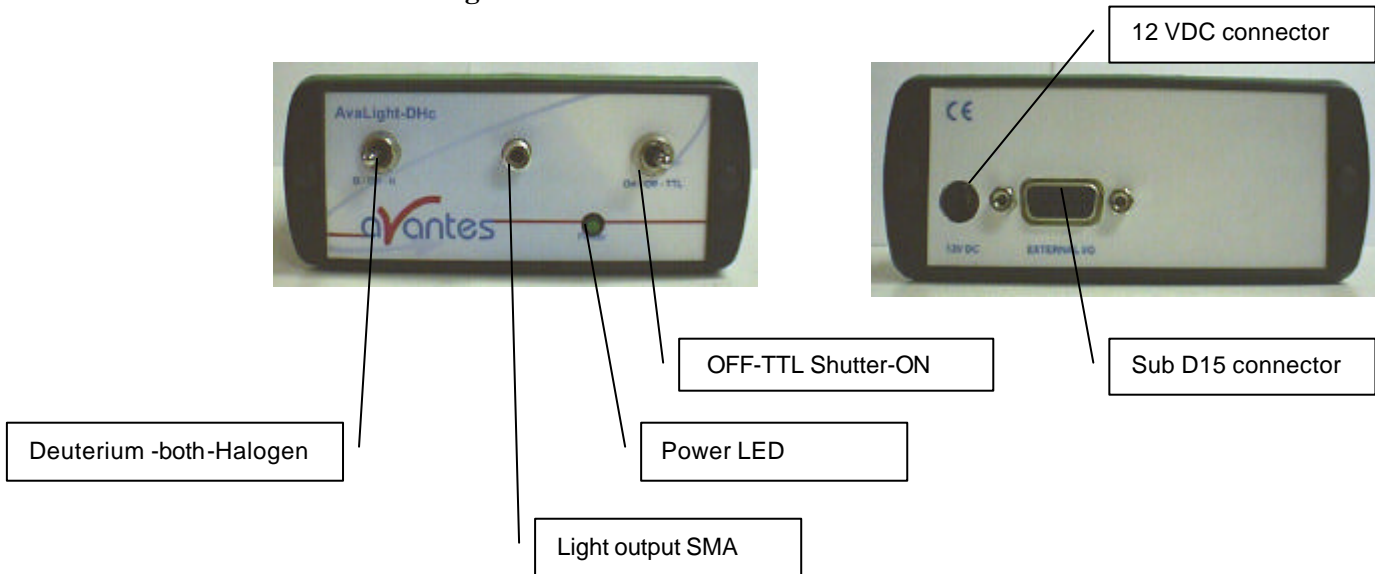
Care should be taken that objects do not fall, or liquids spilled into the enclosure through openings.

Caution:



This lamp produces ultra violet radiation that can be harmful to the eyes. **DO NOT LOOK INTO THE LIGHT BEAM. THIS CAN CAUSE PERMANENT EYE DAMAGE - WEAR PROTECTIVE EYE WEAR - CALL YOUR LOCAL LAB SUPPLY HOUSE FOR GLASSES OR GOGGLES.**

Designations and Functions of Panel Controls



Front Panel

SMA-Connector / Protection Cap

The protection cap is only to avoid that the user could not unintentional look directly into the fiber optic connector. The connector is for use only with SMA-Fiber connectors. **Connect your Fiber optic Cable first before starting the Deuterium Lamp. Please be sure to avoid direct radiation of skin and eyes at the other fiber end.**



Caution: This lamp produces ultra violet radiation, which can be harmful to the eyes. Lamps must not be viewed directly without suitable approved eye protection being used.

OFF-TTL Shutter -Open

This switch is used to switch the lightsource on and operate TTL activated shutter (Normally closed)

| Position switch | Lightsource power | Shutter |
|-----------------|-------------------|--|
| OFF | OFF | Closed |
| TTL | ON | Closed or TTL activated the through backside DB-15 connector TTL signal, Pin 13 (High = Open, Low = Close) |
| ON | ON | Open |

Deuterium –both-Halogen

This switch is used to turn the deuterium and halogen light on.

| Position switch | Deuterium | Halogen |
|-----------------|-----------|---------|
| Left | ON | OFF |
| Middle | ON | ON |
| Right | OFF | ON |

Power LED

When the 12V/DC is connected to the unit and the power switch is ON, the LED indicator is lighted.

Rear Panel

Power Input Connector

Insert the 12VDC-power supply plug of the adapter into the unit.

Table of DB-15 connector

| Pin | Description |
|-----|--|
| 10 | GND |
| 13 | Shutter Open/Close (High = Open, Low = Close) |

Replacement of Lamps

The lamp unit consists of a deuterium lamp and a tungsten lamp, which are both installed in a shell made of polytetrafluoroethylene (PTFE). If the deuterium lamp or the tungsten lamp fails or has reached the end of its service life, the complete lamp unit has to be replaced.

If the lamp fails or has reached the end of its service life, the complete lamp unit can be easily exchanged by the user and replaced by a new one.

For the replacement of the lamp unit (Replacement Lamp) the customer should follow the below listed instructions:

1. Disconnect power supply from the unit
2. Open the housing by unscrewing 2 screws at front panel
3. Take out the lamp unit
4. Unscrew the allen screw (1.5 mm) in lamp box.
5. Pull out the PTFE-housing upwards (do not cant the housing)
6. Remove the black plug from the tungsten lamp.

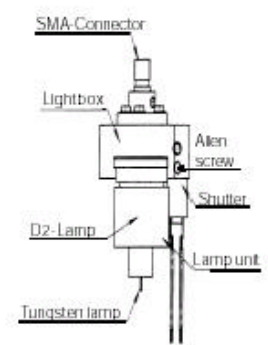
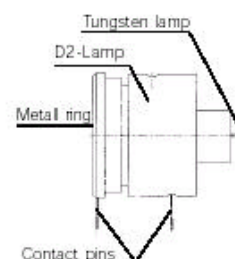


Replacement Lamp build-in

1. Connect black plug onto tungsten lamp.
2. Insert replacement lamp into the lamp box.

Pay attention, that the contact pins on the bottom of the PTFE-body are upright and do glide into the contact sockets on the board.

1. Tighten the allen screw again.
2. Slide lamp back in outer box housing and connect screws at front panel





Technical Data

| | Deuterium Light Source | Halogen Light Source |
|------------------------------|------------------------|----------------------|
| Wavelength Range | 200 - 400 nm | 400 - 1700 nm |
| Stability | < 1 mAU | <1 mAU |
| Warm-up time | 8 min | 1 min |
| Drift | <0.25%/hrs | <0.25%/hrs |
| Optical Power in 600µm fiber | 25 µWatt | 140 µWatt |
| Lamp Lifetime | 1000 hours | 2000 hours |
| Temperature Range | 5°C - 35°C | |
| Power Requirements | 12VDC / 600mA | |
| Dimensions / Weight | 175 x 110 x 44 mm | |

Warranty

Each AvaLight-DHc compact UV-VIS light source has been carefully checked before dispatch and complies with the specifications listed in this manual section. Avantes BV gives a one year (12 months) warranty on all circuit boards, valid from the date of purchase. Such warranty is restricted to the free-of-charge repair or replacement of the AvaLight-DHc compact UV-VIS light source if Avantes BV is clearly responsible for the fault. Faults caused by inappropriate use or changes to the circuit board are not covered by our warranty.

We give a warranty of **1000 operational hours** on the inbuilt **deuterium lamp**.

We give a warranty of **2000 operational hours** on the inbuilt **tungsten lamp**.

The conditions for lamp replacement within the stated warranty time are:

1. Light intensity is less than 50 % of the initial intensity on delivery (250 nm).
2. The deuterium lamp fails to ignite.
3. The factory pre-set voltages and currents on the circuit board have not been changed.
4. The circuit board and the light box show no mechanical damage.

Ordering Information

| | |
|------------------------|---|
| AvaLight-DHc | Compact Deuterium Halogen Light Source with TTL Shutter |
| IC-DB15-2 | Interface cable AvaSpec to AvaLight-DHc-TTL-shutter |
| AvaLight-DHc-RM | Rackmount Compact Deuterium Halogen Light Source with TTL Shutter |
| AvaLight-DHc-B | Compact Deuterium Halogen Replacement Bulb |
| CUV-DHc | Direct attach cuvette holder for AvaLight-DHc |
| PS-12V/1.25A | Power supply 100-240VAC/12VDC, 1.25A for AvaLight-DHc |