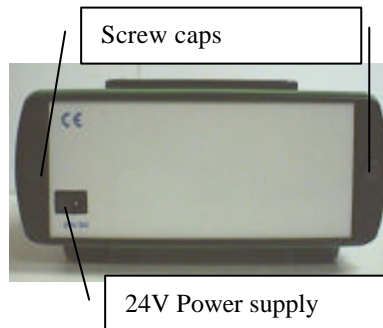
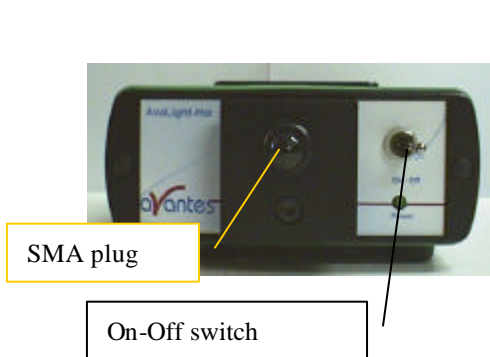


AvaLight-HAL Tungsten Halogen light source Operating Manual



PS-24VDC power supply

Starting up

1. Plug in the PS-24V power supply .
2. Plug in the connector of the power supply into the socket of AvaLight-HAL.
3. Connect the SMA-connectors of your fibers to the SMA-plug
4. Switch on the Halogen lamp with the switch .

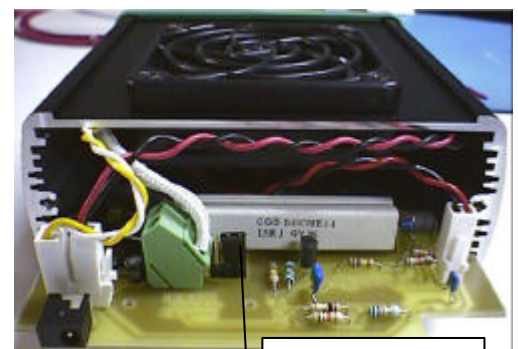
Settings for high power or long lifetime

The AvaLight-HAL is factory set for optimal power output (medium setting), with an internal jumper the optical energy can be controlled (see table).

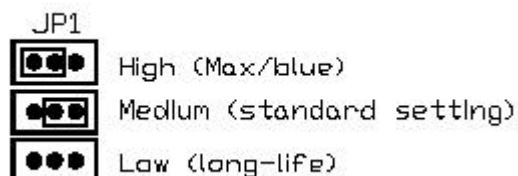
Jumper setting	Optical output	Color temperature	Exp. Lifetime
LOW	70%	Ca. 2.700K	> 2.000 hrs.
MEDIUM (default)	100%	Ca. 2.850K	1.000 hrs
HIGH	150%	Ca. 3.000K	< 1.000 hrs.

The internal jumper settings can be changed, please follow instructions:

1. Remove screw protection caps on the backside
2. Loosen 2 screws with philips screwdriver
3. remove backplane
4. take out electronics board
5. Adjust jumper settings according to scheme below
6. put back electronics board, be carefull not to pinch the electrical wires
7. put back backplane, screws and screw protection caps



Jumper JP1





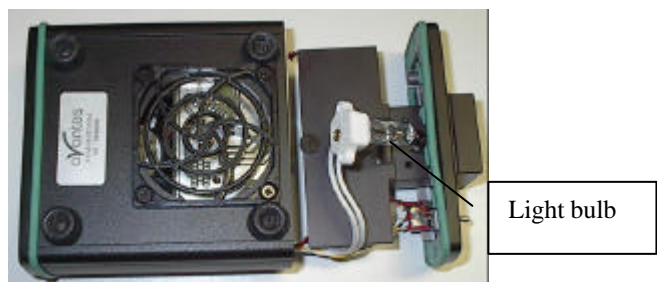
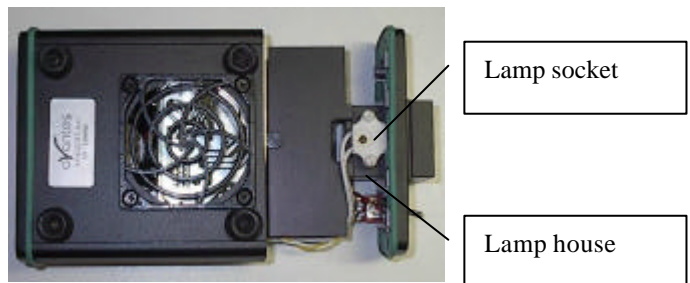
Adjustment of focusing in SMA fiber

The AvaLight is factory adjusted to optimally focus the output into a 200 μ m fiber. If lower optical power is recommended or a different fiber (bundle) diameter is used, the optical power can be adjusted.

1. Connect your fiber optic spectrometer or your optical power meter to a fiber to the AvaLight-HAL SMA socket (4) .
2. Loosen blocking-screw with delivered Allen key (1,3mm).
3. By shifting the SMA socket you can optimize your optical power.
4. Secure position by tightening the blocking screw .

Changing the light source bulb

1. Plug out the power connector from the socket.
2. Remove screw protection caps on the frontside
3. Loosen 2 screws with philips screwdriver
4. turn the lightsource upside down
5. take out the frontplate and lamphouse
6. remove 2 nylon screws from lamp socket
7. take out the lamp socket
8. take out the bulb (carefull, may be hot)
9. replace by new bulb, do not touch glass with your fingers
10. put back lamp socket and nylon screws
11. Slide back front plate and lamp house, be carefull not to pinch the electrical wires
12. put back screws and protection caps





Technical Data

	AvaLight-HAL (standard)	AvaLight-HAL (long life)	AvaLight-HAL (high power)
Wavelength Range	360 - 2000 nm		
Stability	± 0.1%		
Time to stabilize	Ca. 15 min.		
Output to bulb	12.7 VDC/ 0.9A	11.3 VDC/ 0.8A	14.1 VDC/ 1.0A
Bulb Life	1000 hrs	> 2000 hrs	< 1000 hrs
Optical power 200µm fiber	20 mWatt	13 mWatt	27 mWatt
Optical power 400µm fiber	80 mWatt	50 mWatt	100 mWatt
Optical power 600µm fiber	150 mWatt	100 mWatt	200 mWatt
Bulb Color Temperature	2.850 K	2.700 K	3.000 K
DB-15 connector	Pin 10 = GND Pin 13 = TTL input, high – shutter open, low shutter closed		
Power requirement	24 VDC / 1.25A		
Dimensions (mm)	132 x 110 x 44 mm		

Ordering Information

AvaLight-HAL	10W Tungsten Halogen Lamp, fan-cooled, needs extra PS-24V/1.25A power supply
AvaLight-HAL-S	10W Tungsten Halogen Lamp, fan-cooled, incl. TTL shutter, needs extra PS-24V/1.25A power supply
AvaLight-HAL-S-RM	Rack mounted version of the 10W Tungsten Halogen Lamp, fan-cooled, incl. TTL shutter
IC-DB15-2	Interface cable AvaSpec to AvaLight-HAL-S
AvaLight-HAL-B	10W Tungsten Halogen Replacement bulb for AvaLight-HAL, AvaLight-HAL-S
CUV-HAL	Direct attach cuvette holder for AvaLight-HAL
PS-24V/1.25A	Power supply 100-240VAC/24VDC, 1.25A, necessary for AvaLight-HAL