

AvaLight-DH-S-BAL Balanced Power

AvaLight-DH-S-BAL



The AvaLight-DH-S is a powerful deuterium halogen source, but like any unbalanced deuterium halogen source it does have a very dominant alpha peak at 656 nm. This is why Avantes developed the DH-S-BAL, in which this peak is drastically reduced by a dichroic filter. This means less power, but an increase in the dynamic range of a factor 20. A comparison spectrum, which is taken with a standard AvaSpec-2048, is shown on the next page.

The light source delivers a continuous spectrum with high efficiency. The highest stability is in the ultraviolet, visible and near infrared range, from 215 to 2500 nm. An integrated TTL-shutter and filter holder for filters of up to 50x50x5.0 mm are included. The TTL-shutter can be controlled from any AvaSpec spectrometer, which means the auto-save dark-option in AvaSoft software can be used (please note: IC-DB26-2 cable needed).

Connection to the fiber is done through an SMA-905 connector, which features an adjustable focusing lens assembly. This ensures you getting the maximum possible power into your fiber. For all deuterium light sources solarization resistant fibers (-SR) are recommended (see the fiber-optic section of this catalog). The output of the AvaLight-DH-S-BAL is optimized for fibers or bundles up to 600 μm .

- Balanced light source
- Wide spectrum: 215-2500 nm
- Integrated TTL shutter
- High efficiency
- Increased dynamic range

The filter holder can be easily replaced by a direct-attach cuvette holder CUV-DA-DHS (see section accessories) useful for fluorescence or absorbance measurements.

	Balanced Deuterium (Standard)	Balanced Halogen Lamp
Wavelength Range	215-500 nm	500-2500 nm
Warm-up Time	30 min.	20 min.
Lamp Power	78 W / 0.75 A	5 W / 0.5 A
Lamp Lifetime	2000 hrs	1000 hrs
Noise (AU)	2×10^{-5}	10^{-4}
Max. drift	$\pm 0.5\%/hr$	$\pm 0.1\%/hr$
Color Temperature	-	3000 K
Optical Power in 200 μm fiber	6 μW	17 μW
Optical Power in 600 μm fiber	33 μW	160 μW
Optical Power in 1000 μm fiber	90 μW	448 μW
Power consumption	90 Watt (190 Watt for heating D-Lamp 4-5 sec.)	
Power Requirements	100-240VAC 50/60 Hz	
Dimensions / Weight	315 x 165 x 140 mm / ca 5 kg.	
Lifetime shutter	1,000,000 cycles (typical)	

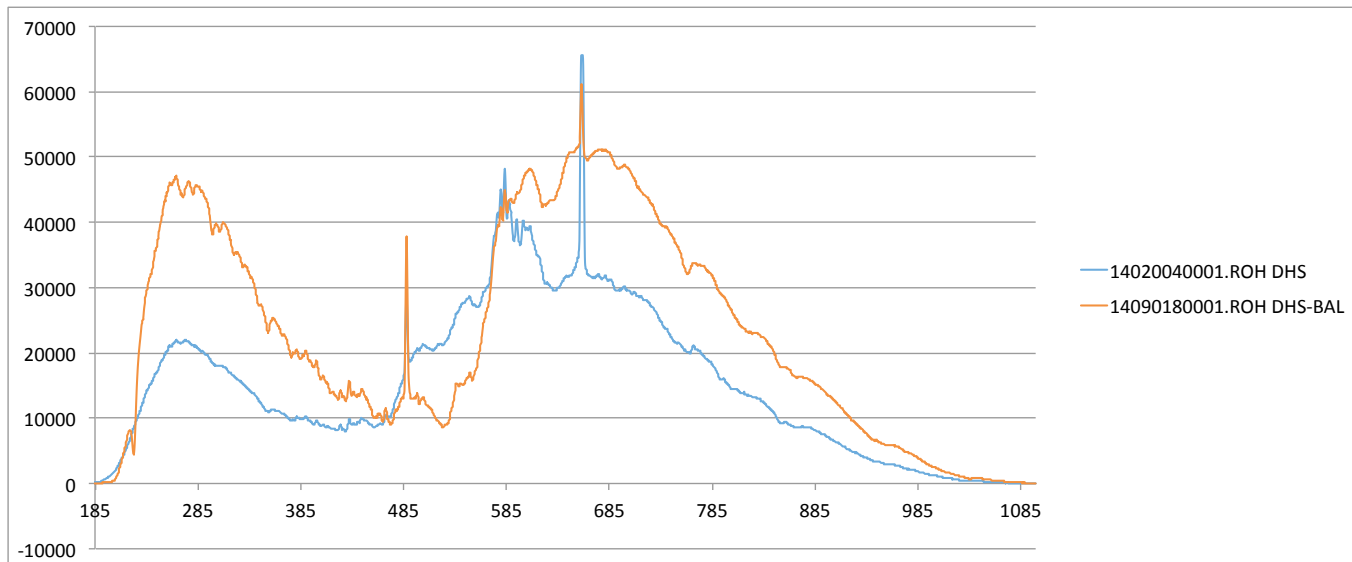


Figure 11 Spectral output AvaLight-DH-S-BAL (red) vs. AvaLight-DH-S (blue)

Ordering Information

AvaLight-D-S-BAL	<ul style="list-style-type: none"> Balanced Deuterium light source, 215-500nm, incl. TTL shutter, -SR fibers needed
AvaLight-DH-S-BAL	<ul style="list-style-type: none"> Balanced Deuterium-Halogen light source, 215-2500 nm, incl. TTL shutter, -SR fibers needed
IC-DB26-2	<ul style="list-style-type: none"> Interface cable AvaSpec-USB2 platform to AvaLight-D(H)S-BAL
AvaLight-D-B	<ul style="list-style-type: none"> Replacement deuterium bulb for AvaLight-D/AvaLight DH-BAL light source
AvaLight-DH-B	<ul style="list-style-type: none"> Replacement halogen bulb for AvaLight-DH-BAL light source
CUV-DA-DHS	<ul style="list-style-type: none"> Direct-attach cuvette holder for AvaLight-D(H)S-BAL

Add flexibility
to your spectrometer with
the Replaceable Slit (-RS) option