

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-ULS2048CL, 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 are recommended. The output of the AvaLight-DH-S-BAL is optimized for fibers or bundles up to 600 μm .

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

Technical Data

	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)	

For a table of separate 50x50 mm filters to install in AvaLight-D(H)-S see AvaLight-HAL.

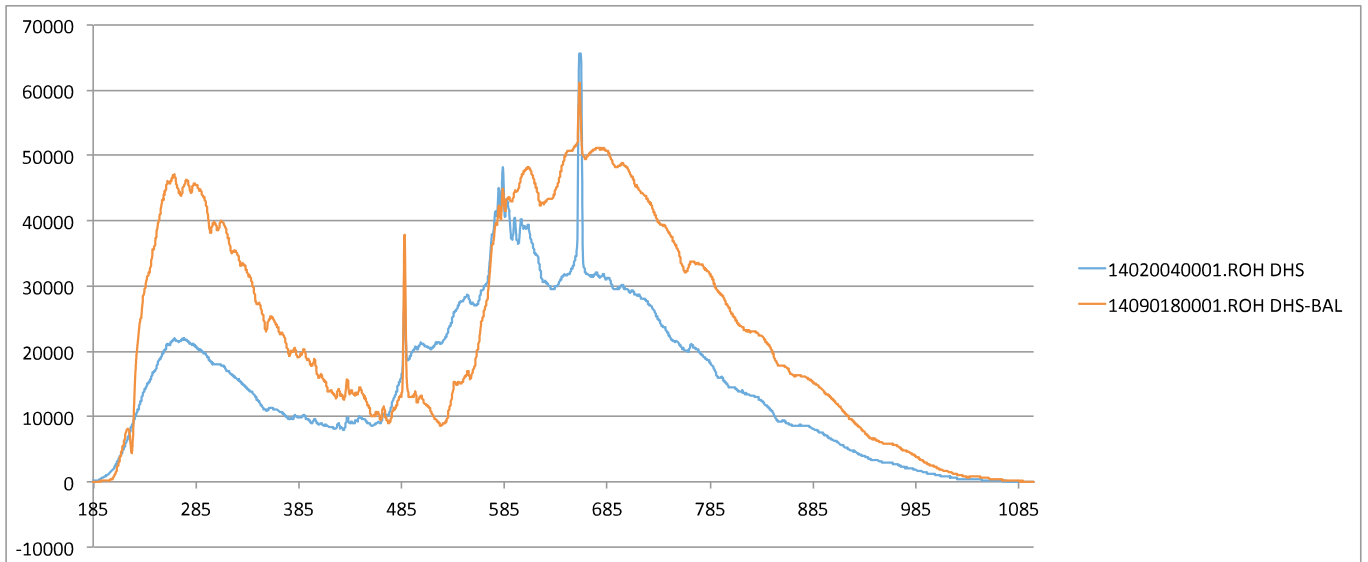


Figure 11 Spectral output AvaLight-DH-S-BAL (red) vs. AvaLight-DH-S (blue). (RAW data)

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/EVO 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