

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

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

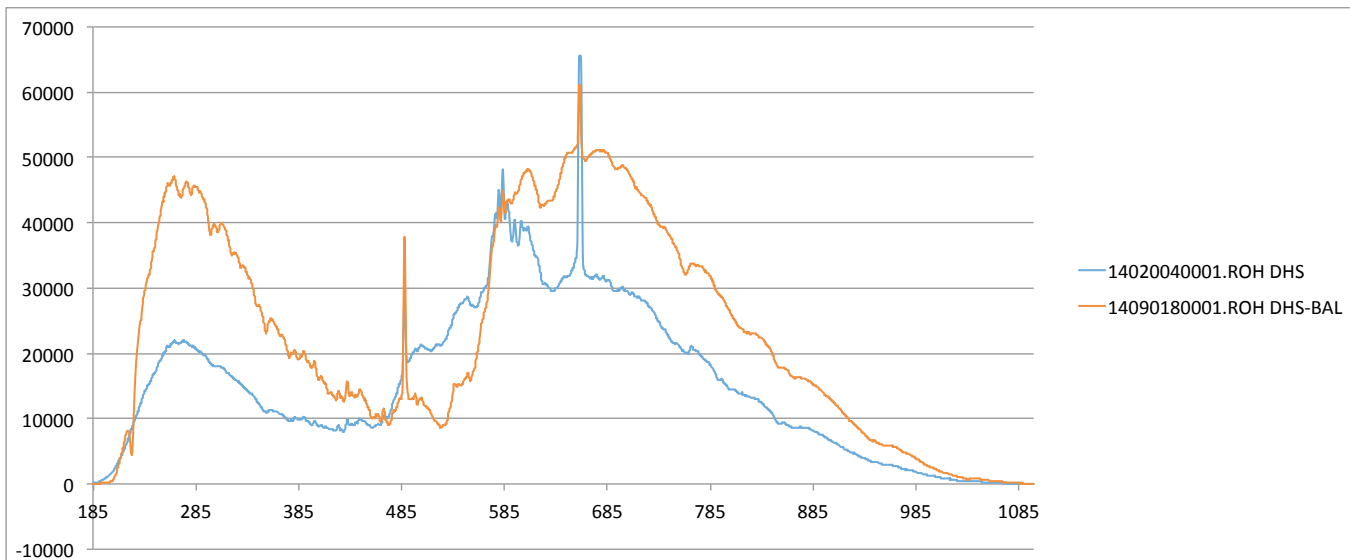


Figure 11 Spectral output AvaLight-DH-S-BAL (red) vs. AvaLight-DH-S (blue). (RAW data)

### Ordering Information

<b>AvaLight-D-S-BAL</b>	• Balanced Deuterium light source, 215-500nm, incl. TTL shutter, -SR fibers needed
<b>AvaLight-DH-S-BAL</b>	• Balanced Deuterium-Halogen light source, 215-2500 nm, incl. TTL shutter, -SR fibers needed
<b>IC-DB26-2</b>	• Interface cable AvaSpec-USB2/EVO platform to AvaLight-D(H)S-BAL
<b>AvaLight-D-B</b>	• Replacement deuterium bulb for AvaLight-D/AvaLight DH-BAL light source
<b>AvaLight-DH-B</b>	• Replacement halogen bulb for AvaLight-DH-BAL light source
<b>CUV-DA-DHS</b>	• Direct-attach cuvette holder for AvaLight-D(H)S-BAL

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