

Deuterium-Halogen Light Source



The **AvaLight-DH-S** is a combined Deuterium and halogen light source, which can be used for UV/VIS/NIR applications. The **AvaLight-DH-S** has a SMA905 connector to be used with fiber optic cables and bundles. For optimal coupling an adjustable focus lens assembly is included. The light source supplies a continuous spectrum with high efficiency and highest stability in the UV, visible and near-infrared range from 215-2000 nm.

The **Avalight-DH-S** was developed based on the shine-through principle, in which the halogen light is focused through a small diameter aperture in the deuterium bulb.

For UV only applications the **AvaLight-D-S** source (only Deuterium) is available.

The standard **AvaLight-D(H)-S** light sources have a special UV longpass filter (>220nm) implemented to protect the fibers from solarizing. For applications that require a spectral range below 220 nm a Deep UV bulb is available, in which no UV longpass filter is included. For these Deep-UV measurements (from 190nm) the AvaLight-D(H)-S-DUV may be ordered.

For all Deuterium Light Sources solarization resistant fibers (-SR) are recommended, for the DUV lamp special solarization resistant fibers (-SR) are required (see the fiber optic section of this website).

The output of the **AvaLight-DH-S** is optimized for fibers (bundles) with a diameter up to 600 μm , for larger diameter fiber bundles the **AvaLight-DH-S** SMA connector focal point can be manually adapted to uniformly fill a larger core diameter fiber cable or bundles.

In all AvaLight-Deuterium sources an integrated TTL-shutter and filter holder for filters of up to 50x50x6.5 mm are implemented.

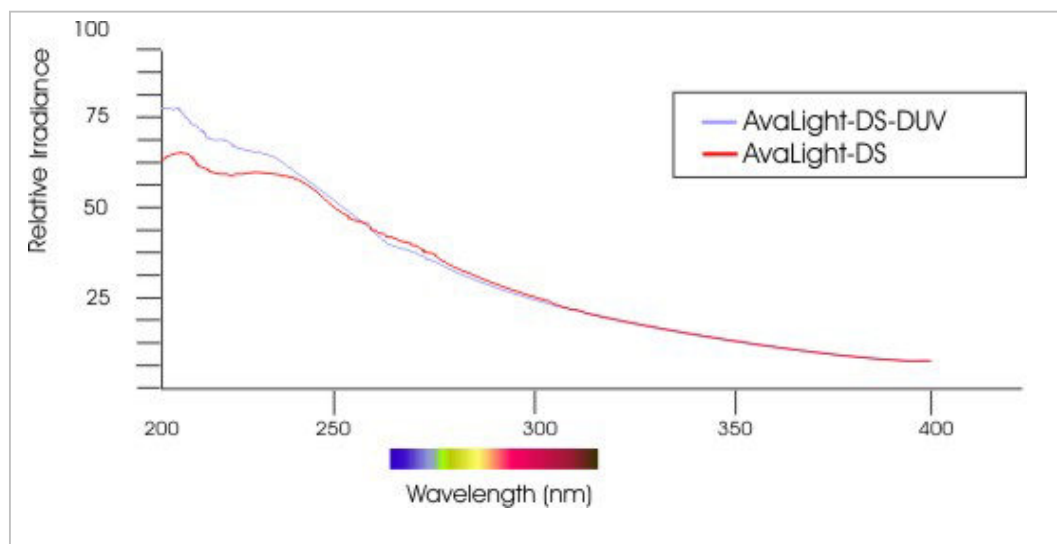
The **Avalight-DH-S** internal TTL shutter can be controlled from the AvaSpec, so the auto-save dark option in the AvaSoft software can be used (extra IC-DB15-2 or IC-DB26-2 needed).

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

Technical Specifications

	Deep UV Deuterium	Deuterium Lamp	Halogen Lamp
Wavelength Range	190-400nm	215-400nm	360-2000nm
Warm-up Time	30 min.	30 min.	20 min.
Lamp Power	78W / 0.75A	78W / 0.75A	5W / 0.5A
Lamp Lifetime	1000 hrs	1000 hrs	1000 hrs
Stability	0,1%	0,1%	0,4%
Color Temperature	-	-	3000 K
Optical Power in 200 μ m fiber	11 μ W	7 μ W	43 μ W
Optical Power in 600 μ m fiber	72 μ W	61 μ W	239 μ W
Optical Power in 1000 μ m fiber	206 μ W	166 μ W	354 μ W
Power consumption	90 Watt (190Watt 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.		

Spectral Output AvaLight-DS



Spectral output AvaLight-DHS

