



## Heraeus Xenon Flash Lamps for Analytical and Medical Applications

Heraeus manufactures a wide range of cool running xenon flash lamps, devices which efficiently convert electrical energy stored in a capacitor into a high intensity light flash.

All the lamps use materials which are specially selected for high performance and long life. They are manufactured using high temperature and high vacuum processing, which ensures a high integrity product. Finally, each lamp is put through rigorous testing schedules to ensure that quality standards are consistently met.

The Heraeus Xenon Flash lamps can be run up to an average power of 16 Watt and they are designed specifically for use in photometric instruments.

### Heraeus Xenon Flash Lamps:

- UV or borosilicate glass window (190 or 300 nm)
- Low noise and excellent flash to flash stability due to precise triggering
- Precise electrode positioning
- Lifetime >  $10^9$  flashes
- EXE Long Life series – improved performance
- For use with external trigger transformer

## Applications for Xenon Flash Lamps

Whilst xenon lamps are suitable for many white light industrial applications the high quality, high performance range of Heraeus xenon lamps is expressly intended for photometric instrumentation applications such as:

- UV / visible spectrophotometry
- Fluorescence spectroscopy
- Liquid chromatography
- Photo-acoustic spectroscopy
- Colour analyzers
- Medical instrumentation

## Spectral Output

Xenon lamps have a spectral distribution which ranges from the ultraviolet through the visible to the infrared, making them one of the few wide band illumination sources available.

The spectral output, especially in the low UV, depends on the window material used. Spectral transmission ranges for available envelope/window materials are:

- UV glass: 190 - 3500 nm
- Borosilicate glass: 300 - 4500 nm

## Arc Lengths

Xenon flash lamps can be manufactured with any arc gap in the range 1.5mm to 10mm. Experimentation on lamps with different arc gaps indicates that optimal arc stability, leading to high signal to noise ratios, is achieved with arc gaps in the 2.0mm to 5.0mm range. Heraeus xenon flash lamps are offered within this range and utilise two or three trigger electrodes to stabilise the arc across the gap, combining high performance with significantly improved lifetime.

## Lamp Selection

Heraeus xenon flash lamps are available in three versions:

- The BX range are 7 W standard output small bulb xenon lamps for use with a separate trigger transformer.
- The AX range are 16 W high output small bulb xenon lamps for use with a separate trigger transformer.
- The EX range are 16 W high output xenon lamps, similar to the AX range, but with an extended lamp envelope for longer lifetime and improved performance.



AXE-5-U + triggerboard



EXE-5-U + triggerboard



EXE-2-U

**Hellma** Scientific Cell Co. (516) 939-0808  
80 Skyline Drive info@ScientificCell.com  
Plainview, NY 11803 www.hellmausa.com

Germany

**Heraeus Noblelight GmbH**  
Heraeusstraße 12-14  
63450 Hanau  
Phone +49 6181 35-5085  
Telefax +49 6181 35-7970  
hng-analyticalamps@heraeus.com  
[www.heraeus-noblelight.com](http://www.heraeus-noblelight.com)

United Kingdom

**Heraeus Noblelight Analytics Ltd.**  
2-4 Nuffield Close  
Cambridge CB4 1SS  
Phone +44 1223 424100  
Telefax: +44 1223 426338  
hna-analytics@heraeus.com

USA

**Heraeus Noblelight LLC**  
1520 C Broadmoor Blvd.  
Buford, GA 30518  
Phone +1 (678) 835 5681  
Telefax +1 (678) 835 5766  
sales.hni@heraeus.com

PR China

**Heraeus Noblelight (Shenyang) Ltd.**  
5F, 16th Building, No. 99 Tianzhou Rd.  
Shanghai, 200233  
Phone +86 (21) 5445 2255  
Telefax +86 (21) 5445 2410  
info.hns@heraeus.com