

# Hollow Cathode Lamps

www.varsal.com

Varsal designs and manufactures a complete line of hollow cathode lamps to meet the strictest standards of all atomic absorption spectrometer instruments. We manufacture lamps of different sizes and gas fills to assure optimum results on a wide variety of instruments. Our technical ability to produce hollow cathode lamps that meet the demanding specifications of instrument manufacturers is only surpassed by the company's customer service and on-time delivery responsiveness.







Varsal Benefit



#### Your Advantage

Long Life Varsal lamps operate at one half of the instrument manufacturer's recommended current.	Cost Savings & Fewer Lamp Changes  Excellent Performance  Great Results even with Difficult Samples	
High Intensity Our lamps emit high intensity light at the recommended operating current with a low signal- to-noise ratio resulting in stable light output.		
Enhanced Sensitivity High spectral response for low detection limits.		
Wide Selection  We produce 2" coded and uncoded lamps for all Perkin Elmer atomic absorption spectrometers. Regular 1.5" lamps are available for Varian systems. For Shimadzu, Thermal instruments, 1.5" lamps with self-reversal background correction are available. Finally, single or multi-element lamps can be filled with argon and/or neon gas.	One Source for all Your AAS Lamps	
Reliable Quality All components, production processes and finished lamps are carefully selected, monitored, and inspected to avoid spectral interference from gas fill or cathode impurities. And, our customer service is available to provide you the best service – always!	Your Expectations are Always Met	



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#### The Total Varsal Advantage

We know the critical importance of a quality light source as Varsal designs and manufactures a complete line of HPLC, AAS instruments and spectroscopy consumables. Our engineers' knowledge of the optical, electrical and mechanical systems of spectrophotometers assures superb performance, stable operation and operator convenience. Let us be your source for hollow cathode lamps!

#### Specifications

Lamp Type	Glowing Starting Voltage	Radiation Stability	Diameter	Length
2" PE type	300V	1% over 30 min.	50mm	180mm
1.5"			38mm	160mm

### Wide Selection of Hollow Cathode Lamps

Varsal offers a complete listing of various HCL's by lamp size and element type. Visit our website at www.varsal.com to see the full selection of available lamps.

### Warranty

All hollow cathode lamps are warranted for a standard 2-year limited warranty. Each regular element lamp carries a 5000 mA-Hour warranty (such as Cu, Ni, Ca, Mg, etc). Each volatile element lamp carries a 3000 mA-Hour warranty (such as As, Se, Sb, Bi, Pb, Cd, etc). Varsal will replace any lamp that does not perform to its specification during this period assuming the lamp was properly used.

#### Want to Extend the Life of Your Lamps?

The JH-B HCL Activator is a power supply designed to pre-warm a HCL prior to use, enhance the durability of the lamp and improve signal emission. Use the JH-B HCL Activator to "supercharge" your lamps.



## Disposal of Lamps

When disposing a used lamp, be sure to comply with all state, province and country regulations to ensure the disposal is legal and environmentally proper.