**Custom Lamp Design Requirements**

**Basic Lamp Types for Metal and Ceramic Base Designs**

**Physical Design Requirements**

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**Typical Ceramic Base Design**

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**Design Requirements**

**Electrical:**
- Lamp Voltage = _____ V ± 5% (Standard) = _____ V
- Lamp Current = ______A (nominal)
- Total Wattage = ______ kW
- Max Starting Voltage = _____________V

**Physical Characteristics:**
- Outside Diameter (A) = ______________ mm
- Arc Length (between electrodes) (B) = _______mm
- Overall Length (C) = ______________mm

**Bases:**
- If Metal Base (D) = ____________
- If Ceramic Base (E) = ____________

**Wire:**
- Wire Lengths (D1) = ______________mm
- Wire Lengths (D2) = ______________mm

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**Did you know?.....**

Metal halide lamps require specific ballasts designed to run them. The starting voltage for an additive lamp is higher than for a standard mercury lamp by several hundred volts and can vary with lamp age and number of times the lamp has been ignited.

**Terminations (T1 and T2):**
- [ ] None- Bare wire
- [ ] Lugs (F) :
  - [ ] Ring Lug, #8 screw
  - [ ] Ring Lug, #10 screw
  - [ ] Ring Lug, 1/4” screw
  - [ ] Ring Lug, Metric M5 screw
  - [ ] Spade Lug, #8 screw
  - [ ] Spade Lug, #10 screw
  - [ ] 1/4 Female Quick Disconnect c Wire Pin
- [ ] Other-Specify________

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Not only does Light Sources produce custom lamp designs, but we also work with OEM’s and system designers to produce unique products. By offering different/unique solutions we help keep your systems competitive in global markets and protect your aftermarket replacement lamp business.
Medium Pressure/Metal Halide Lamp Spectra

Did you know?....
Mercury (Hg) content of the lamp varies by lamp type but is typically between 10 and 300 mg on average.

Ink, coating, and adhesive formulations are made with photoinitiators that require the correct UV spectrum to polymerize and harden/cure properly.

Ozone-Free Quartz
Allows transmission of the UV-A, B, & C wavelengths while blocking the wavelengths below 230 nm that create ozone in the air.

Common Lamp Body Diameters:
Most sizes are available in both ozone-free and ozone-producing quartz glass. (ID x OD)

11 x 13 mm
13 x 15 mm
16 x 18 mm
16 x 19 mm
17 x 20 mm
18 x 20.5 mm
20 x 22.5 mm
22 x 25 mm
22 x 26 mm
24 x 28 mm
25 x 28 mm
Commonly used bases for MPUV Lamps

We distinguish ourselves not only by our ability to produce customized lamps, but also by working with OEM’s and designers to produce unique base solutions that keep your systems competitive in global markets.
Metal Halide lamps are high pressure mercury UV lamps for which the spectra are matched with the activation spectrum of photoinitiators by adding metal-halides such as iron or gallium iodide or combinations of such additives. Your ink supplier should be able to provide you with the correct spectrum required to cure the ink you are using. Once you provide us with the correct output spectrum, we can begin to work together to design the correct lamp for your specific application. Since we are a custom lamp manufacturer, we can change the metal halide content and lamp operating parameters to meet your specifications and processes.
High Pressure Metal Halide Lamps with Double- and Single-Ended Connection

Typical lamp configurations - custom designs available

The product range for high pressure MH lamps extends from 200 watts to 2000 watts in various designs.

Available with Hg, Fe, & Ga additives

Industrial Applications:
- Automotive
- Pharmaceutical
- Reprography
- Photochemistry
- Photo Polymerization
- Curing of paints /lacquers
- Curing of adhesives
- Sewer rehabilitation
- Curing coatings on medical equipment
- Ballast water sterilization
- Cosmetic
- Food & beverage

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Note: lamp data is based on measurements performed under laboratory conditions in air at room ambient temperature
In 1990 the EPA developed the TCLP test (Toxicity Characteristic Leaching Procedure) to simulate the effect of disposing waste in conventional landfills under complex environmental conditions. The method is designed to determine the mobility of toxic material in liquid, solid and multiphasic waste. The EPA developed the Toxic Characteristic Leaching Procedure to determine the toxicity of waste. The TCLP test does NOT measure the total mercury content but rather the potential of mercury to leach into groundwater if a waste is disposed of in a landfill. TCLP is designed to simulate the leaching a waste will undergo if disposed in a sanitary landfill. This test includes mercury, lead, cadmium, and other hazardous materials. Passing this test for mercury, for instance, requires a yield of less than 0.2 milligrams per liter upon completion of the test. Lamps that PASS the TCLP are considered as non-hazardous waste by the EPA. We are proud to be among the first to offer the majority of our germicidal lamps as TCLP compliant.

While lamps that pass TCLP may be classified as non-hazardous waste by the EPA, LightSources and LightTech strongly encourage the recycling of spent germicidal lamps. Please contact your local environmental agency for assistance with lamp recycling or visit www.lamprecycle.org.

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