

### Overview

The 900 Series LED cartridge lamp mates with 910 Series lampholders. Constructed with an aluminum case, 900 Series LED lamps are noted for high resistance to shock and vibration, long life, and low power requirements. These may be ordered with multiple lens styles and lens colors.

### Approvals

UL Recognized and CSA Certified.

### Specifications

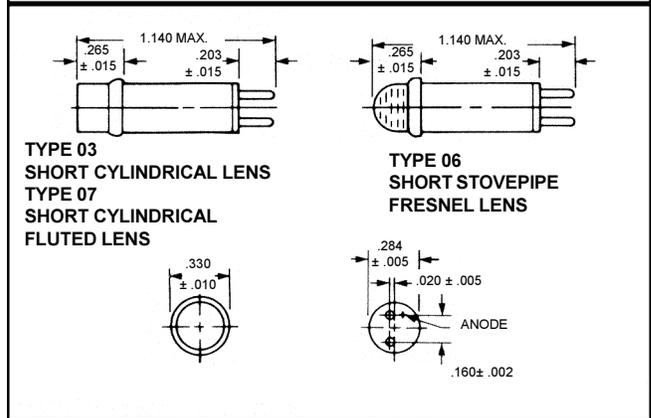
**Sleeve:** Aluminum. Black anodized finish standard; clear anodized finish optional.

**Termination:** .040" diameter stainless steel pins mounted in a nylon header. The anode is identified on the header as the + pin connection.

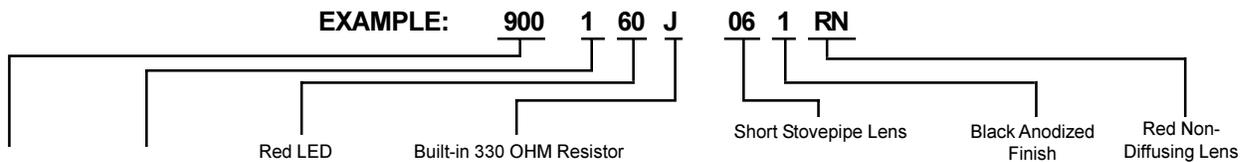
**LED DC Voltage options:** 1.8 to 28 volts.

**Lens:** Heat resistant, high strength polycarbonate.

**Lens Marking:** Cylindrical lenses may be stamped. Contact factory.



### ORDERING INFORMATION:



| Series Number | Termination   | Lamp Code          | Resistor      |         |       | Lens Type   | Sleeve Finish                | Lens Color  |
|---------------|---|--------------------|---------------|---------|-------|---|------------------------------|---|
|               |   |                    | Code          | Current | Volts |   |                              |   |
| 900           | 1<br>Stainless steel pins standard                                      | 60<br>(Red LED)    | Nominal 10 mA |         |       | 03 Short Cylindrical<br>06 <sup>2</sup> Short Stovepipe Fresnel<br>07 <sup>2</sup> Short Cylindrical Fluted | 1<br>Black Anodized-standard | Nondiffusing (Clear)  |
|               |   |                    | X             | NONE    | 1.8   |   |                              |   |
|               |   |                    | U             | 200 OHM | 3.6   |   |                              |   |
|               |   | J                  | 330 OHM       | 5       |       |   |                              |   |
|               |   | W                  | 430 OHM       | 6       |       |   |                              |   |
|               |   | Y                  | 820 OHM       | 10      |       |   |                              |   |
|               | 66<br>(Green LED)   | K                  | 1000 OHM      | 12      |       |   |                              |   |
|               |   | G                  | 1200 OHM      | 14      |       |   |                              |   |
|               |   | L                  | 2700 OHM      | 28      |       |   |                              |   |
|               | A<br>Tin-plated stainless steel pins for printed circuit board mounting | 68<br>(Yellow LED) | Nominal 20 mA |         |       |   | 2<br>Clear (Silver) Anodized | CN Colorless (60,66,68) <sup>3</sup><br>WN White (60,66,68) <sup>3</sup><br>AN Amber (68) <sup>3</sup><br>GN Green (66) <sup>3</sup><br>RN Red (60) <sup>3</sup><br>YN Yellow (68) <sup>3</sup> |
|               |   |                    | V             | 100 OHM | 3.6   |   |                              |   |
|               |   |                    | M             | 180 OHM | 5     |   |                              |   |
|               |   |                    | P             | 220 OHM | 6     |   |                              |   |
|               |   | Z                  | 390 OHM       | 10      |       |   |                              |   |
|               |   | N                  | 620 OHM       | 14      |       |   |                              |   |
|               |   | H                  | 1300 OHM      | 28      |       |   |                              |   |

<sup>2</sup> Recommended for best light distribution.  
<sup>3</sup> Lamp Code Number. When specifying lens color, use only with lamp codes shown.

### Overview

The 900 Series incandescent cartridge lamp mates with 910 Series lampholders. Constructed with an aluminum case, 900 Series incandescent lamps are noted for high brightness. These may be ordered with multiple lens styles and lens colors.

### Approvals

UL Recognized and CSA Certified.

### Specifications

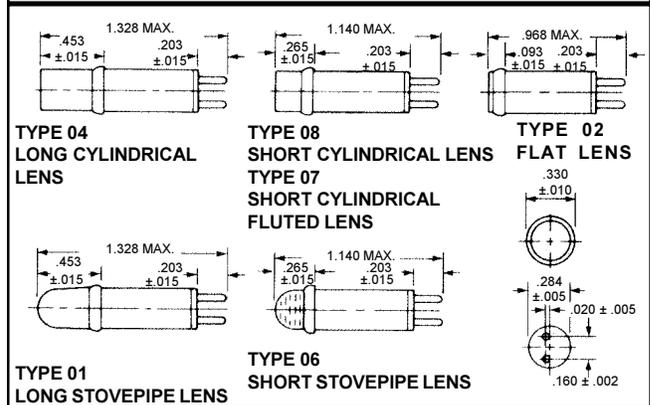
**Sleeve:** Aluminum. Clear anodized finish standard; black anodized finish optional.

**Termination:** .040" diameter stainless steel pins mounted in a nylon header.

**Incandescent AC or DC Voltage options:** 1.35 to 28 volts.

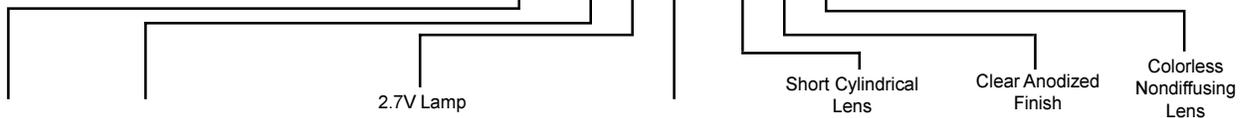
**Lens:** Heat resistant, high strength polycarbonate. Translucent lens colors are normally used for incandescent cartridge lamps as they give an evenly diffused light over the lens surface. When Type 08 (short cylindrical) lens is used in the 910 Series holder with a screw-on lens cap, specify "colorless nondiffusing" for 08 lens color.

**Lens Marking:** Cylindrical lenses may be stamped. Contact factory.



### ORDERING INFORMATION:

EXAMPLE: **900 1 06 X 08 2 CN**



| Series Number | Termination                        | Lamp            |       |       |        |            | Resistor    | Lens Type                                | Sleeve Finish       | Lens Color           |   |   |                                       |             |
|---------------|------------------------------------|-----------------|-------|-------|--------|------------|-------------|--|---------------------|----------------------|---|---|---------------------------------------|-------------|
|               |                                    | Code            | Volts | MA    | MSCP   | Life (Hrs) |             |  |                     |                      |   |   |                                       |             |
| 900           | 1<br>Stainless steel pins standard | 05 <sup>2</sup> | 1.35  | 60    | .01    | 3,000      | X<br>(NONE) | 01 <sup>3</sup> Long Stovepipe           | 1<br>Black Anodized | Nondiffusing (Clear) |   |   |                                       |             |
|               |                                    | 06 <sup>2</sup> | 2.7   | 60    | .04    | 6,000      |             |  |                     |                      | 02 <sup>4</sup> Flat                    | AN Amber<br>BN Blue<br>CN Colorless<br>GN Green<br>RN Red<br>WN White (Cloudy)<br>YN Yellow |                                       |             |
|               |                                    | 07 <sup>2</sup> | 3.0   | 15    | .003   | 10,000     |             | 04 Long Cylindrical                      |                     |                      |   |   | 2<br>Clear (Silver) Anodized standard | Translucent |
|               |                                    | 17              | 5.0   | 60    | .03    | 30,000     |             |  |                     |                      | 06 <sup>5</sup> Short Stovepipe Fresnel |   |                                       |             |
|               |                                    | 10              | 6.0   | 40    | .04    | 10,000     |             | 07 <sup>5</sup> Short Cylindrical Fluted |                     |                      |   |   |                                       |             |
|               |                                    | 16              | 6.0   | 60    | .13    | 3,000      |             |  |                     |                      | 08 <sup>4</sup> Short Cylindrical       |   |                                       |             |
|               |                                    | 11              | 6.0   | 200   | .60    | 1,000      |             |  |                     |                      |   |   |                                       |             |
|               |                                    | 01              | 6.3   | 40    | .03    | 20,000     |             |  |                     |                      |   |   |                                       |             |
|               |                                    | 12              | 6.3   | 200   | .55    | 5,000      |             |  |                     |                      |   |   |                                       |             |
|               |                                    | A               | 02    | 6.3   | 200    | .40        |             | 20,000                                   |                     |                      |   |   |                                       |             |
|               | 08 <sup>2</sup>                    | 10.0            | 14    | .006  | 50,000 |            |             |  |                     |                      |   |   |                                       |             |
|               | 09 <sup>2</sup>                    | 10.0            | 40    | .08   | 5,000  |            |             |  |                     |                      |   |   |                                       |             |
|               | 18                                 | 12.0            | 40    | .10   | 10,000 |            |             |  |                     |                      |   |   |                                       |             |
|               | 13                                 | 14.0            | 80    | .50   | 1,500  |            |             |  |                     |                      |   |   |                                       |             |
|               | 03                                 | 14.0            | 80    | .30   | 15,000 |            |             |  |                     |                      |   |   |                                       |             |
|               | 20 <sup>2</sup>                    | 14.0            | 17    | .03   | 25,000 |            |             |  |                     |                      |   |   |                                       |             |
|               | 21 <sup>2</sup>                    | 18.0            | 20    | .08   | 15,000 |            |             |  |                     |                      |   |   |                                       |             |
|               | 14                                 | 18.0            | 40    | .15   | 10,000 |            |             |  |                     |                      |   |   |                                       |             |
|               | 15                                 | 28.0            | 40    | .34   | 4,000  |            |             |  |                     |                      |   |   |                                       |             |
|               | 19                                 | 28.0            | 40    | .15   | 10,000 |            |             |  |                     |                      |   |   |                                       |             |
| 04            | 28.0                               | 40              | .30   | 7,000 |        |            |             |  |                     |                      |   |   |                                       |             |

<sup>1</sup> MSCP - Mean Spherical Candle Power.

<sup>2</sup> Because of relatively low light output, these lamps should be used with non-diffusing (clear) lens colors only. Lamp ratings are compiled from a leading lamp manufacturer's catalog.

<sup>3</sup> Best suited for wide angle viewing.

<sup>4</sup> For High Temperature application, contact factory.

<sup>5</sup> Nondiffusing lens colors only. Types 06 and 07 are recommended for best light distribution.

### Overview

The 900 Series neon cartridge lamp mates with 910 Series lampholders. Constructed with an aluminum case, the 900/901 series neon lamps are ideally suited for 125 volt applications. The 901 series cartridge lamps are 0.125" longer than the 900 series to accept blue or green neon lamps and mate with the 911 series lampholders. Please consult the table below.

### Approvals

UL Recognized and CSA Certified.

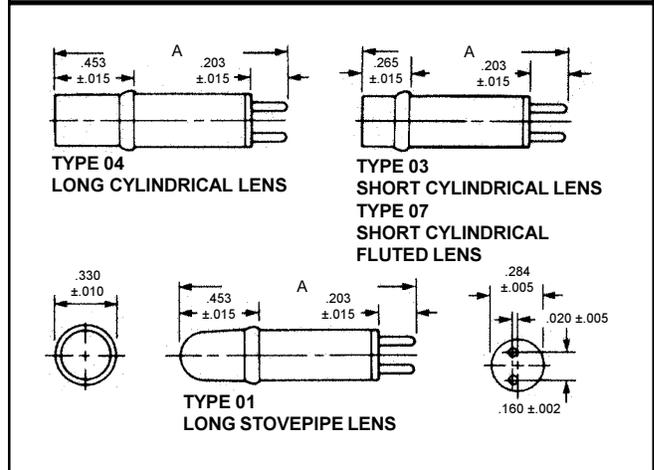
### Specifications

**Sleeve:** Aluminum. Clear anodized finish standard. Black anodized finish optional.

**Termination:** .040" dia. stainless steel pins mounted in nylon header.

**Voltage options:** **Std. Brightness**, 105 to 125 AC or DC volts. **High Brightness**, 110 to 125 AC volts. **Green Neon**, 115 to 125 AC or DC volts. **Blue Neon**, 105 to 125 AC volts or 105 to 150 DC volts.

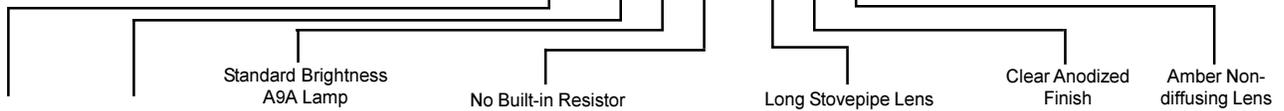
**Lens:** Heat resistant, high strength polycarbonate. When type 03 (short cylindrical) lens is used in a 910 or 911 Series holder with a screw-on lens cap, specify "colorless nondiffusing" for 03 lens color. **Lens Marking:** Cylindrical lenses may be stamped. Contact factory.



| Lens Type | Dimension A in Inches (Max.) |            |
|-----------|------------------------------|------------|
|           | 900 Series                   | 901 Series |
| 01        | 1.328                        | 1.453      |
| 03        | 1.140                        | 1.265      |
| 04        | 1.328                        | 1.453      |
| 07        | 1.140                        | 1.265      |

### ORDERING INFORMATION:

EXAMPLE: 900 1 50 X 01 2 AN



| Series Number | Termination   | Lamp Code  | Resistor       |                         | Lens Type                                | Sleeve Finish       | Lens Color                            |  |
|---------------|---|--|----------------|-------------------------|--|---------------------|---------------------------------------|--|
|               |   |  | Code           | Internal Resistor Value |  |                     |                                       |  |
| 900           | 1<br>Stainless steel pins standard                                      | Note: Reference Lamp Selection Guide.<br>52 <sup>1</sup> Standard Brightness A1B | X <sup>5</sup> | No Built-In Resistor    | 01 <sup>6</sup> Long Stovepipe           | 1<br>Black Anodized | Nondiffusing (Clear)                  |  |
| 901           |   | 53 <sup>1</sup> High Brightness A1C  | X <sup>5</sup> | No Built-In Resistor    | 03 Short Cylindrical                     |                     | 2<br>Clear (Silver) Anodized Standard | AN Amber<br>CN Colorless<br>RN Red<br>WN White<br>YN Yellow<br>BN <sup>8</sup> Blue<br>GN <sup>8</sup> Green |
|               | A<br>Tin-plated stainless steel pins for printed circuit board mounting | 50 <sup>2</sup> Standard Brightness A9A (NE2E)                                   | X <sup>5</sup> | No Built-In Resistor    | 04 Long Cylindrical                      |                     |                                       |  |
|               |   | 51 <sup>2</sup> High Brightness C2A (NE2H)                                       | X <sup>5</sup> | No Built-In Resistor    | 07 <sup>7</sup> Short Cylindrical Fluted |                     |                                       |  |
|               |   | 56 <sup>3</sup> Green Neon   | B              | 30K OHM, 10K Life Hrs.  |  |                     |                                       |  |
|               |   | 57 <sup>4</sup> Blue Neon  | B              | 30K OHM, 10K Life Hrs.  |  |                     |                                       |  |

<sup>1</sup> Use with lens colors AN, CN, RN, WN, or YN.  
<sup>2</sup> For use on 900 series only with type 01 and 04 lenses.  
<sup>3</sup> For use on 901 series only with lens colors GN, CN, or WN.  
<sup>4</sup> For use on 901 series with lens colors BN, CN, or WN.  
<sup>5</sup> External resistor required.  
<sup>6</sup> Best suited for wide angle viewing.  
<sup>7</sup> Recommended for best light distribution.  
<sup>8</sup> For 901 series only when used with blue or green lamp respectively.