This IR source is a thermal emitter with emissivity ~0.8. It is appropriate for use in lab or field instrumentation due to its long life and stable properties.

The coiled resistance wire filament IR-12 operates at 825°C (1100K) when powered with 4.5 volts @ 1.8 amps (8 watts). The IR-12K takes higher electrical power and runs hotter. Emissivity is ~80% in the IR. The coil is wound on a cylindrical alumina substrate. Generally the IR-12K is recommended for maximum versatility. Operation in a controlled or sealed atmosphere is not required for either device.

The emitter coil is mounted horizontally on an 8.5 mm dia. base. The emitter support pins also are the power leads and are sealed in glass. Active (coil) area is 3.5 mm dia x 3.5 mm tall.

The Series IR-12 is offered as follows:

<table>
<thead>
<tr>
<th>Part #</th>
<th>Description</th>
<th>For Long Service Life (Temp @ Volts, Amps)</th>
<th>Recommended Upper Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR-12</td>
<td>Standard unit – power approx 8 watts at 825C</td>
<td>825C @ ~4.5V, 1.8 A Lifetime &gt; 3 years</td>
<td>1025C at ~6V, 2.4 A</td>
</tr>
<tr>
<td>IR-12K</td>
<td>Mechanically identical to standard unit but capable of higher temp operation</td>
<td>975C @ ~6.0V, 1.8 A Lifetime &gt; 3 years</td>
<td>1125C at ~7V, 2.2 A</td>
</tr>
</tbody>
</table>

Parabolic and elliptical aluminum reflectors are available to collimate or focus the output of these devices. Boston Electronics can also supply custom designed miniature IR blackbody sources. Please inquire.
IR-12 Steady State Infrared Emitter

ENGINEERING DATA

**Temperature vs Voltage**

![Graph showing temperature vs voltage with 3+ Year Life and Upper Limit markers.]

**Dimensions**

![Dimensions diagram with all dimensions in mm.]

**Current vs Voltage**

![Graph showing current vs voltage with 3+ Year Life marker.]

**Power vs Voltage**

![Graph showing power vs voltage with 3+ Year Life marker.]

HawkEye Technologies LLC is a custom fabricator of IR sources. We will customize our existing products to your design specifications. We would be pleased to quote a new custom IR source, including engineering, that will meet your requirements.
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Parabolic and Elliptical Reflectors
For IR-12 and IR-2x series

p/n MC-233 is Elliptical
p/n MC-234 is Parabolic