LL-1100 Laser Alignment System

Product Features

• High stability and low noise
• Collimated or adjustable focus beam
• Laser line, cross line or spot
• Reverse polarity protection
• Custom options available
• Industrial hardened high grade glass optics
• Waterproof, shock proof and dustproof

Applications

• Measurement
• Bioanalytical
• Automation
• Alignment
• Targeting

Red or Green Laser Line Generator, Cross Line or a Laser Spot

The LL-1100 Series Laser Alignment Systems can produce a Laser Line of 4º, 15º, 30º, 45º, 60º, 75º, 90º, or a Laser Cross Line pattern or a collimated Laser Spot with an output power of 1.0mW to 50mW. Operating voltage is from 3 to 5 VDC with an operating current of <60mA, with an operating temperature of -10ºC to 50ºC. The laser line, cross line pattern and the collimated laser spot are factory focused at 1m and can be used up to 6m with the proper optics or they can be set at other distances to order. It’s your choice: a Laser Line, a Cross Line or a Laser Spot.

The LL-1100 Series Laser Alignment Systems have a machined aluminum housing and a very durable hard black anodized finish. Our systems are completely shockproof and dust proof.

The LL-1100 Series Laser Alignment Systems are powered by an AC adaptor with an output of 4.5 volts DC at 700mA.

Pattern Options

<table>
<thead>
<tr>
<th>Line</th>
<th>Cross Line</th>
<th>Spot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Green</td>
<td>Green</td>
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</table>

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**Technical Data - LL-1100**

**Optical**

- **Wavelength:** 635nm/523nm
- **Optical Output Power:** 1mW up to 50mW
- **Stability:** <1%
- **Laser Operation:** Continuous
- **Laser Structure:** Single Mode Laser
- **Fan Angle Line Generator:** 4º, 15º, 35º, 45º, 60º, 75º, 90º
- **Minimum Line Thickness:** <1mm up to 1 meter
- **Fan Angle Cross Line:** 25º full fan angle
- **Minimum Line Thickness:** <1mm up to 1 meter
- **Spot Size:** Adjustable or Collimated
- **Minimum Spot Size:** <60μm at <10" distance
- **Environmental Protection:** Dustproof & Shock Proof

**Electrical**

- **Operating Voltage:** 3 to 5 VDC
- **Operating Current:** <60 mA
- **Control Circuit:** Auto Power Control
- **AC wall transformer adaptor:** DC 4.5 V 700mA

**Mechanical**

- **Dimension:** 4" long x 0.785" diameter
- **Housing:** Hard black anodized finish
- **Operating Temperature:** -10ºC to +50ºC
- **Storage Temperature:** -40ºC to +80ºC

Specifications subject to change without notice.

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**LL-1100-BK Adjustable Bracket Consists of**

- Adjustable angle
- Set Screw Security
- Hard black anodized finish
- Two lock down screws
- Full 360 rotation
- Single fastener

**Fan Angle Selection Guide**

\[ L = a \times D \]

For given fan angle, the line length \( L \) at distance \( D \) is calculated using the equation: \( L = a \times D \)

For example: Using 4º Fan angle at distance of 1.5m, the line length will be \( L = 0.07 \times 1.5m = 0.105m \)

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**Model Numbers**

<table>
<thead>
<tr>
<th>Laser Generator</th>
<th>Fan Angle</th>
<th>Factor A</th>
<th>Laser Cross Line</th>
<th>Full Fan Angle</th>
<th>Laser Spot</th>
<th>Spot Size</th>
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Complies with CDRH 21CFR 1040.10