**Square Continuous Diffuse Illuminator**

Microscan’s wide range of NERLITE products can illuminate any part or mark for successful machine vision and auto ID applications.

SCDI illuminators provide enhanced diffuse lighting performance. The patented design makes it ideal for inspecting moderately faceted and undulating reflective surfaces. SCDI illumination allows products to be inspected in the package and prevents non-uniform light reflections from causing a vision system to see defects where none exist.

**SCDI: At a Glance**
- Excellent uniformity
- Extraordinary diffuse illumination
- Economical and low maintenance
- Reliable, solid state LED illumination

**Illumination Example:**

<table>
<thead>
<tr>
<th>Object</th>
<th>Resulting Image</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Object Image" /></td>
<td><img src="image" alt="Resulting Image" /></td>
</tr>
</tbody>
</table>

**Data Matrix on a gear shaft:** Diffuse illumination allows clear image capture of marked symbol.

**Application Examples**
- Differentiate specular, diffuse, or absorptive features on moderately curved surfaces
- Reduce shadows
- Diminish clear overcoats or coverings
- Packaged product inspection (pharmaceuticals, computer chips)
- Inspect solder patterns on circuit boards

*For more information on this product, visit [www.microscan.com](http://www.microscan.com).*
SCDI 25

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
<th>CONT. CURRENT</th>
<th>STROBE CURRENT</th>
<th>mcd/cm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCDI-25, Red Continuous</td>
<td>636 nm</td>
<td>105 mA</td>
<td>80 mA</td>
<td>1400</td>
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<tr>
<td>SCDI-25, Red Strobe</td>
<td>636 nm</td>
<td>1.8 A pk</td>
<td></td>
<td>14000</td>
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<tr>
<td>SCDI-25, White Continuous</td>
<td>6500 K</td>
<td>180 mA</td>
<td>80 mA</td>
<td>2850</td>
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</tbody>
</table>

Light Aperture: 1.3” x 1.3” (34 mm x 32 mm)  Field of View: 0.50” (13 mm)
Stand Off: 1” (25 mm)  Weight: 9 oz. (255 g)
Dimensions: H 2.41” (61.3 mm) x W 4.54” (115.3 mm) x D 1.58” (40.1 mm)

SCDI 50

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>nm/K</th>
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<tbody>
<tr>
<td>SCDI-50, Red Continuous</td>
<td>640 nm</td>
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<tr>
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</table>

Light Aperture: 2” x 1.5” (52 mm x 39 mm)  Field of View: 1” (25 mm)
Stand Off: 0.50” (13 mm)  Weight: 14 oz. (408 g)
Dimensions: H 2.16” (54.8 mm) x W 4.75” (120.7 mm) x D 2.29” (58.2 mm)

SCDI 75

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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<th>mcd/cm²</th>
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<td>4.8 A pk</td>
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<td>14000</td>
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<tr>
<td>SCDI-75, White Continuous</td>
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<td>480 mA</td>
<td>62 mA</td>
<td>2840</td>
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</tbody>
</table>

Light Aperture: 3” x 2.3” (76 mm x 59 mm)  Field of View: 1.5” (38 mm)
Stand Off: 1” (25 mm)  Weight: 16 oz. (454 g)
Dimensions: H 3.03” (77 mm) x W 5.45” (138.3 mm) x D 3.25” (82.6 mm)

ENVIRONMENTAL
Operating Temperature: 0° to 40° C (32° to 104° F)
Storage Temperature: 0° to 50° C (32° to 122° F)
Humidity: up to 95% (non-condensing)

LIGHTING PARAMETERS
Light Aperture Defined: Area of light output from the coaxial illuminator.
Field of View Defined: Largest recommended evenly illuminated area as seen from the camera (also know as Area of Interest [AOI]).
Stand Off Defined: Recommended distance between the bottom of the light and the surface of the object being illuminated.

LIGHT SOURCE
Type: High output LEDs
Light Output: Milliacandelas per square centimeter (mcd/cm²)
Expected Life: 50,000 hours (Red LEDs)
Expected Life: 10,000 hours (White LEDs)
Eye Safety: EN 60825-1; Class 1

CONNECTOR
Type: 15 ft. (4.5 m) integrated cable with flying leads

ELECTRICAL
Power (Continuous Models): 24 VDC +/- 1%
Power (Strobe Models): 1 ms max, pulse width, 6% max duty cycle, use of NERLITE NL-200 Series Lighting Controller is required.