

# NERLITE® SCDI®

## Square Continuous Diffuse Illuminator

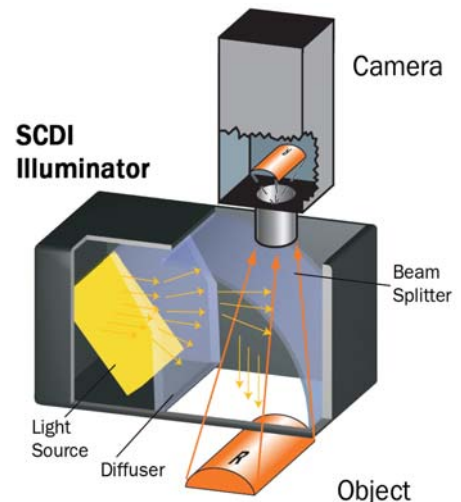


Microscan's wide range of NERLITE products can illuminate any part or mark for successful machine vision and auto ID applications.

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:

Object



Resulting Image



**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

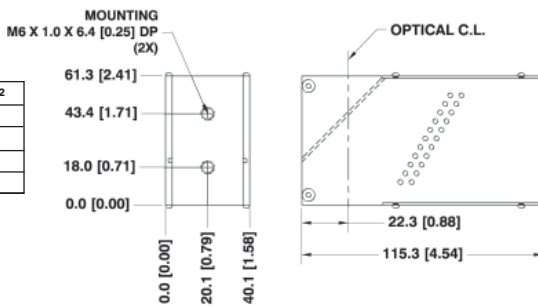
**SCDI 25**

DESCRIPTION	nm/K	CONT. CURRENT		STROBE CURRENT	mcd/cm <sup>2</sup>
		LIGHTING	FAN		
SCDI-25, Red Continuous	636 nm	1.05 mA	80 mA		1400
SCDI-25, Red Strobe	636 nm			1.8 A pk	14000
SCDI-25, White Continuous	6500 K	180 mA	80 mA		2850

**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)



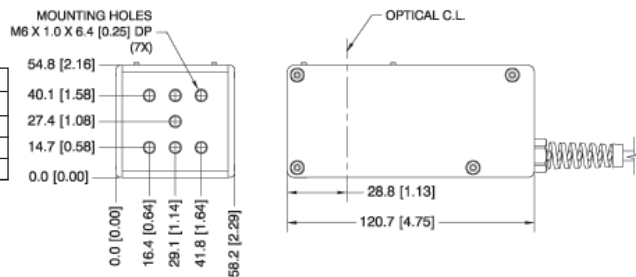
**SCDI 50**

DESCRIPTION	nm/K	CONT. CURRENT		STROBE CURRENT	mcd/cm <sup>2</sup>
		LIGHTING	FAN		
SCDI-50, Red Continuous	640 nm	200 mA			15550
SCDI-50, Red Strobe	640 nm			4.0 A pk	155500
SCDI-50, White Continuous	6500 K	200 mA			2670
SCDI-50, White Strobe	6500 K			4.0 A pk	26700

**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)



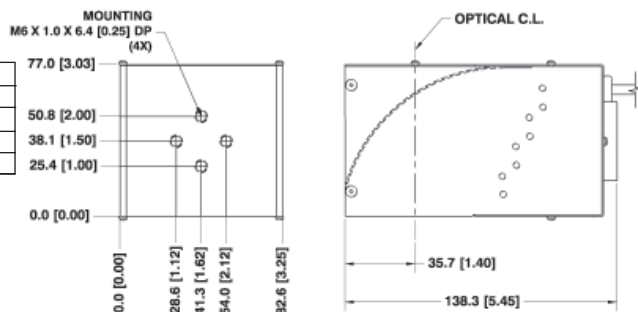
**SCDI 75**

DESCRIPTION	nm/K	CONT. CURRENT		STROBE CURRENT	mcd/cm <sup>2</sup>
		LIGHTING	FAN		
SCDI-75, Red Continuous	636 nm	240 mA	62 mA		1400
SCDI-75, Red Strobe	636 nm			4.8 A pk	14000
SCDI-75, White Continuous	6500 K	480 mA	62 mA		2840

**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:** Millicandelas per square centimeter (mcd/cm<sup>2</sup>)

**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.

**CE COMPLIANT**

**ISO CERTIFICATION**

Certified ISO 9001:2008 Quality Management System

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Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. **Warranty**—One year limited warranty on parts and labor. Free extended three year warranty available with online product registration.

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