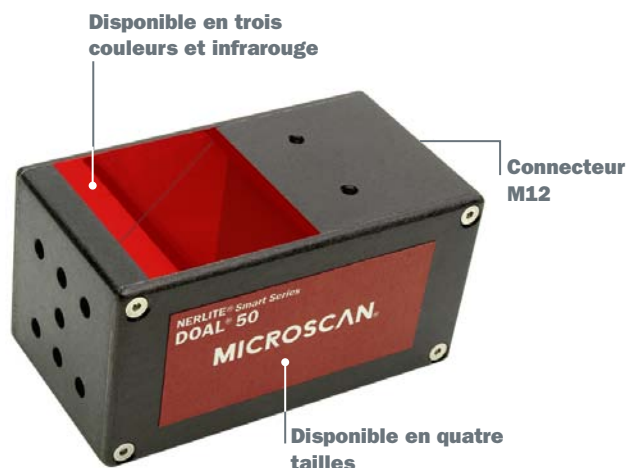


NERLITE® DOAL®



Éclairage sur axe diffus (DOAL, Diffuse On-Axis Lighting)

Les éclairages intelligentes NERLITE de Microscan disposent de contrôleurs intégrés offrant une solution complète et facilement intégrable.

Les éclairages DOAL proposent un contraste optimal pour les images avec des caractéristiques marquées ou gaufrées, sur une surface spéculaire plate, avec éclairage sur axe uniforme et diffus. Grâce à l'approche d'éclairage coaxial, les surfaces spéculaires perpendiculaires à la caméra apparaissent lumineuses tandis que les surfaces marquées ou gaufrées absorbent la lumière et apparaissent foncées.

DOAL : points forts

- Éclairage intelligentes : Contrôleur intégré avec mode continu et mode stroboscopique à sortie élevée
- Modulation de largeur d'impulsion intégrée (PWM) pour modulation de la luminosité et contrôle marche-arrêt
- Offre un éclairage diffus à haute intensité garantissant une uniformité supérieure sur toute l'enveloppe
- Conditionnement compact et léger, qui peut être utilisé sur les modules de caméra mobiles
- Modèle à refroidissement passif assurant un fonctionnement fiable et efficace

Exemple d'éclairage :

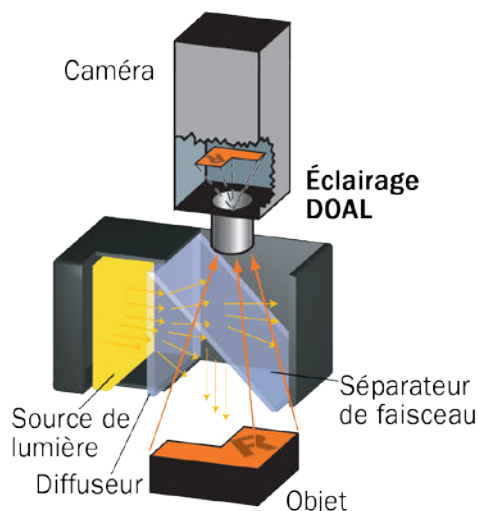
Objet



Image résultante



Caractères gravés sur une plaque de métal : image à contraste élevé qui permet l'inspection ou la lecture.



Exemples d'applications

- Éclairage uniforme des surfaces brillantes plates
- Optimisation des caractéristiques incisées, dentées ou gaufrées
- Création de contraste entre les surfaces spéculaires, diffuses et absorbantes
- Réduction de la visibilité des couches de finition ou revêtements transparents
- Inspection des composants électroniques
- Localisation du fond de chambre

NERLITE® DOAL® SPECIFICATIONS AND OPTIONS

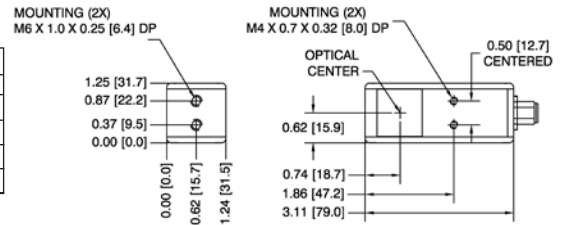
DOAL 25

DESCRIPTION	nm/K	CURRENT		mcd		mw	
		DRAW 24VDC	CONT.	STROBE	CONT.	STROBE	
DOAL-25, Smart Series, Red	628 nm	400 mA	4173	23369			
DOAL-25, Smart Series, Blue	470 nm	200 mA	2522	11096			
DOAL-25, Smart Series, White	5500 K	200 mA	5443	23406			
DOAL-25, Smart Series, Infrared	880 nm	450 mA			15	134	

Light Aperture: 1.00" x 0.95" (25.4 mm x 24.1 mm) **Field of View:** 0.50" (13 mm)

Stand Off: 0.50" (13 mm) **Weight:** 4 oz. (113 g)

Dimensions: H 1.24" (31.5 mm) x W 1.25" (31.8 mm) x D 3.11" (79 mm)



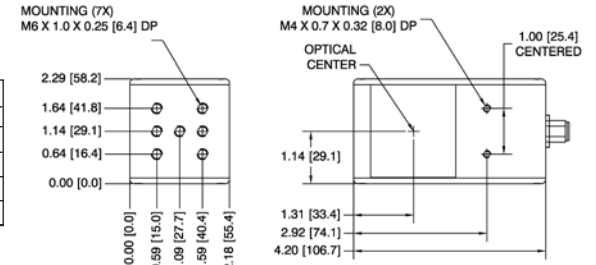
DOAL 50

DESCRIPTION	nm/K	CURRENT		mcd		mw	
		DRAW 24VDC	CONT.	STROBE	CONT.	STROBE	
DOAL-50, Smart Series, Red	628 nm	1.3 A	15967	76640			
DOAL-50, Smart Series, Blue	470 nm	1.0 A	9684	41156			
DOAL-50, Smart Series, White	5500 K	1.0 A	20902	89878			
DOAL-50, Smart Series, Infrared	880 nm	1.7 A			62	444	

Light Aperture: 2.04" x 1.88" (51.8 mm x 47.8 mm) **Field of View:** 1.00" (25.4 mm)

Stand Off: 1.00" (25.4 mm) **Weight:** 11.2 oz. (318 g)

Dimensions: H 2.18" (55.4 mm) x W 2.29" (58.2 mm) x D 4.20" (106.7 mm)



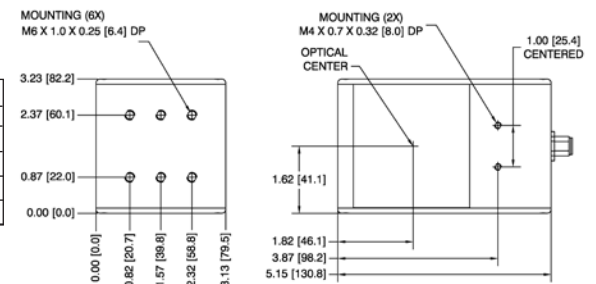
DOAL 75

DESCRIPTION	nm/K	CURRENT		mcd		mw	
		DRAW 24VDC	CONT.	STROBE	CONT.	STROBE	
DOAL-75, Smart Series, Red	628 nm	2.4 A	31026	148926			
DOAL-75, Smart Series, Blue	470 nm	1.5 A	22696	97594			
DOAL-75, Smart Series, White	5500 K	1.5 A	48989	210652			
DOAL-75, Smart Series, Infrared	880 nm	2.0 A			131	810	

Light Aperture: 2.99" x 2.83" (75.8 mm x 71.9 mm) **Field of View:** 1.50" (38.1 mm)

Stand Off: 1.00" (25.4 mm) **Weight:** 22.4 oz. (635 g)

Dimensions: H 3.13" (79.5 mm) x W 3.23" (82.2 mm) x D 5.15" (130.8 mm)



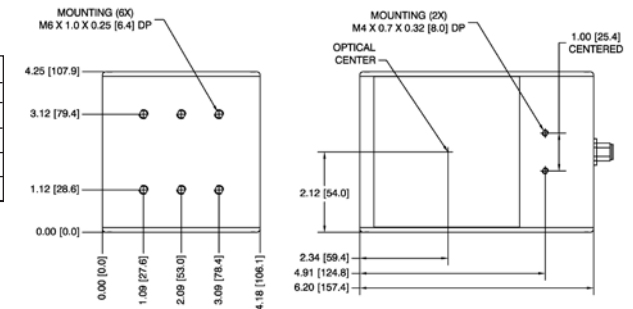
DOAL 100

DESCRIPTION	nm/K	CURRENT		mcd		mw	
		DRAW 24VDC	CONT.	STROBE	CONT.	STROBE	
DOAL-100, Smart Series, Red	628 nm	3.6 A	50803	219470			
DOAL-100, Smart Series, Blue	470 nm	1.6 A	30665	113461			
DOAL-100, Smart Series, White	5500 K	1.6 A	66189	244900			
DOAL-100, Smart Series, Infrared	880 nm	2.3 A			189	1076	

Light Aperture: 4.00" x 3.88" (101.6 mm x 98.5 mm) **Field of View:** 2.00" (50.8 mm)

Stand Off: 1.00" (25.4 mm) **Weight:** 38.4 oz. (1089g)

Dimensions: H 4.18" (106.1 mm) x W 4.25" (107.9 mm) x D 6.20" (157.4 mm)



ENVIRONMENTAL

Enclosure: Black anodized aluminum, IP40 rated; **Operating Temperature:** 0° to 50° C (32° to 122° 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 known 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

Radiant Output: Milliwatts

Expected Life: 50,000 hours (Red, Infrared LEDs)

Expected Life: 10,000 hours (Blue, White LEDs)

Eye Safety: EN 60825-1: Class 1 (Red, White, Infrared LEDs); Class 2 (Blue LEDs)

CONNECTOR

Type: M12 5-pin plug, A-code

ELECTRICAL

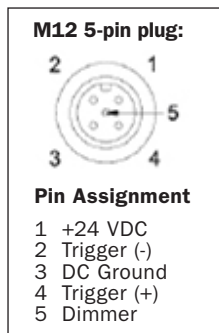
Power: 20.2–28.8 VDC

Continuous Operation: No additional signals required

Continuous Operation with Dimming: 0 VDC (LEDs off) to 3.1–3.5 VDC (LEDs on) PWM signal. < 1 mA, modulation frequency 2 KHz +/- 100 Hz. Note: LED duty cycle will equal duty cycle of dimming signal when using this mode.

Continuous Operation with On/Off Control: 0 VDC (LEDs off) to 3.1–3.5 VDC (LEDs on), < 1 mA

High Output Strobe Operation: Optoisolated. 0 VDC (LEDs off) to 3.1–28.8 VDC (LEDs on). 10 mA max, 5 µs min to 10 mS max pulse width. Note: High Output Strobe internally limits LED frequency and pulse width to maximum of 90 Hz and 1 mS respectively.



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 3 year warranty upon online product registration.

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