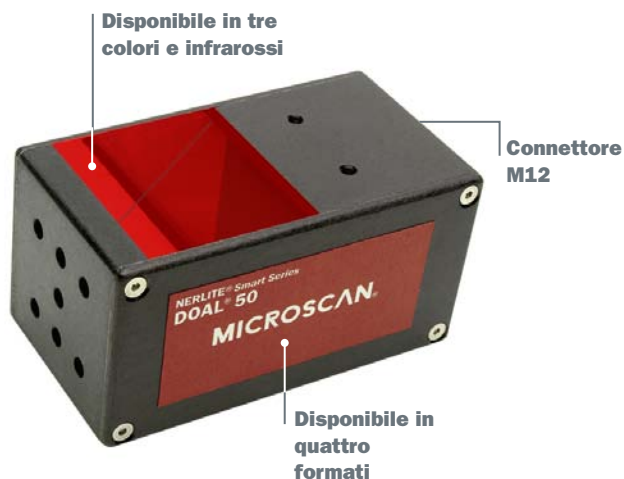


NERLITE® DOAL®



Sistema DOAL (Diffuse On-Axis Lighting)

I prodotti NERLITE Smart Series di Microscan sono dotati di unità di controllo integrate per una soluzione completa e facilmente adattabile.

I sistemi di illuminazione DOAL forniscono il miglior contrasto nelle immagini di simboli incisi o impressi su una superficie speculare piatta grazie all'illuminazione in asse diffusa e uniforme. Con la tecnica di illuminazione coassiale, le superfici speculari perpendicolari alla fotocamera appaiono chiare, mentre le superfici che presentano simboli incisi o impressi assorbono la luce e appaiono scure.

DOAL: panoramica

- Smart Series: Emissioni ad alta intensità grazie alla tecnologia LED all'avanguardia
- Funzione integrata di modulazione della larghezza di impulso (PWM) per il controllo dell'oscuramento e dell'accensione/spegnimento
- Fornisce illuminazione diffusa ad alta intensità con uniformità eccezionale in tutto il campo di illuminazione
- Formato compatto e leggero utilizzabile su moduli per fotocamera mobili
- Design con sistema di raffreddamento passivo per un funzionamento efficiente ed affidabile

Esempio di illuminazione:

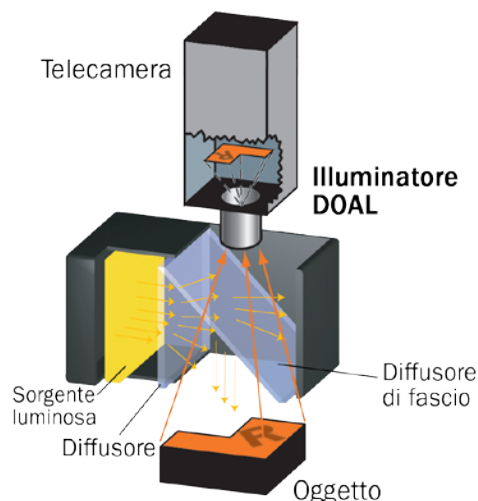
Oggetto



Immagine risultante



Caratteri stampati su piastra metallica: L'immagine ad alto contrasto ne consente la verifica o la lettura.



Esempi di applicazione

- Illuminazione uniforme di superfici piatte brillanti
- Risalto di simboli incisi, intaccati o impressi
- Creazione di contrasto tra superfici speculari, diffuse o assorbenti
- Riduzione della visibilità di rivestimenti o strati superficiali chiari
- Controllo di componenti elettronici
- Individuazione di punti di riferimento

Per ulteriori informazioni su questo prodotto, visitare il sito Web www.microscan.com.

MICROSCAN®

NERLITE® DOAL® SPECIFICATIONS AND OPTIONS

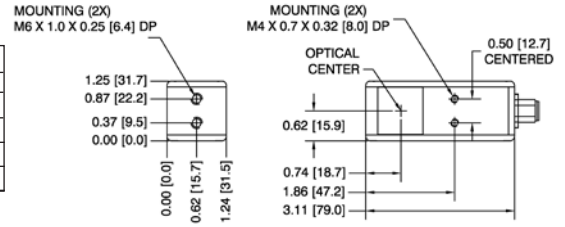
DOAL 25

DESCRIPTION	nm/K	CURRENT DRAW 24VDC	mcd		mw	
			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)



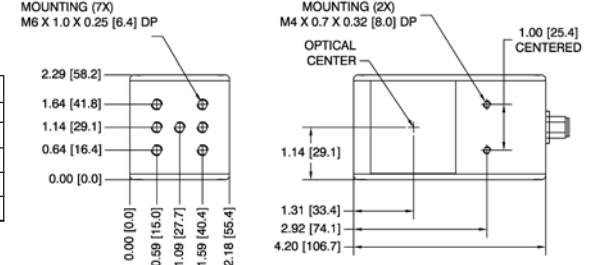
DOAL 50

DESCRIPTION	nm/K	CURRENT DRAW 24VDC	mcd		mw	
			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)



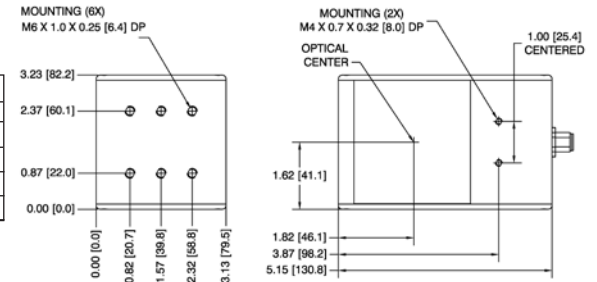
DOAL 75

DESCRIPTION	nm/K	CURRENT DRAW 24VDC	mcd		mw	
			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)



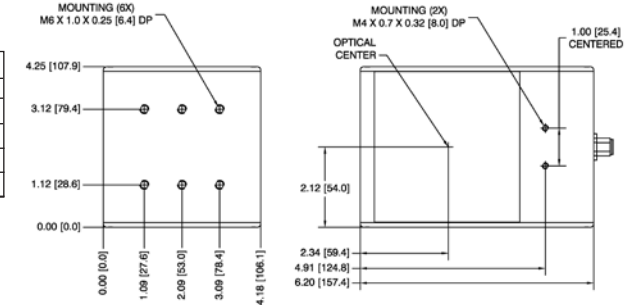
DOAL 100

DESCRIPTION	nm/K	CURRENT DRAW 24VDC	mcd		mw	
			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

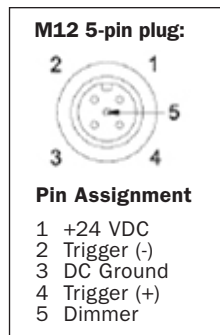
Power: 20.2–28.8 VDC

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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