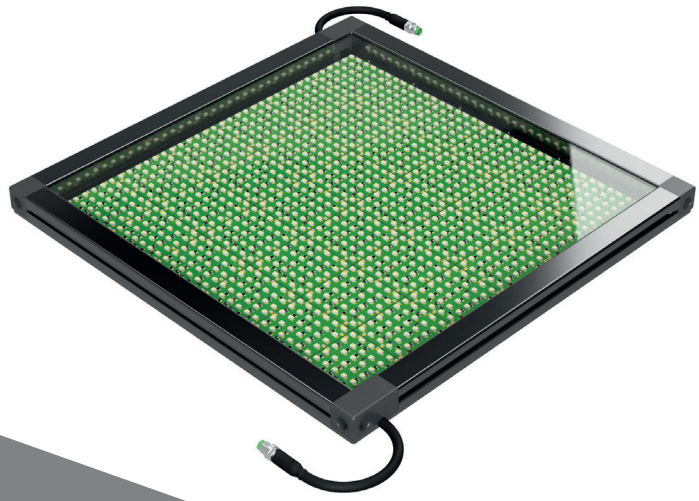
VISIOTRONIX

The neXt Electronics Vision

LED Illuminators
DL6 Series



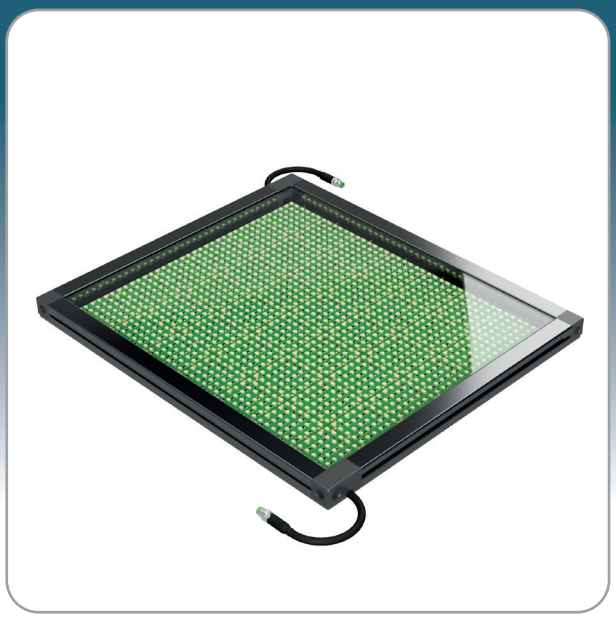
Revision EN2610

2026

www.visiotronix.com

DL6 SERIES

High-Intensity Modular LED Illuminators with Integrated driver



Modular Tile Architecture : Build custom sizes from 100x100mm to 500x500mm using 50mm increments for precise machine integration.

Robust Industrial Housing: Anodized aluminum frame with lateral slots simplifies mounting and protects internal components in harsh environments.

Advanced Thermal Management: HTTM materials efficiently transfer heat to the chassis, maintaining LED performance and extending operational life.

Anti-Scratch Protection Glass: High-quality plastic cover with anti-reflective treatment protects LEDs from dust and particulate without trapping dirt.

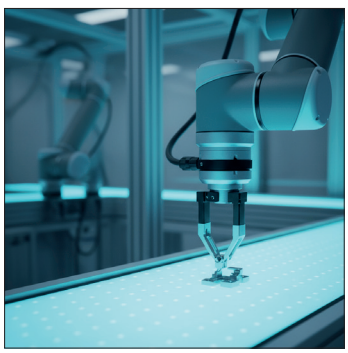
High-Speed Synchronization: Internal drivers allow rapid switching and PWM dimming, ideal for fast production lines and camera triggering.

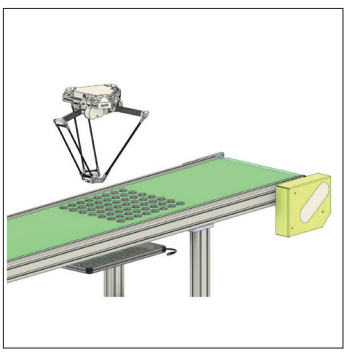
Applications

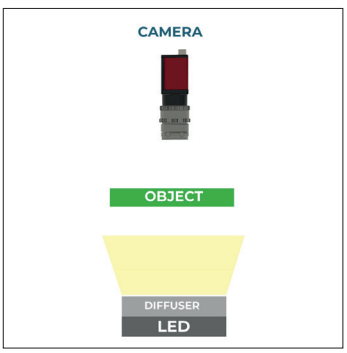
- Automated optical inspection systems.
- Diffuse lighting for robot workzones.
- Dimensional measurement of industrial parts.
- Surface defect detection on metals.
- Quality control in pharmaceutical packaging.
- Label and OCR verification systems.

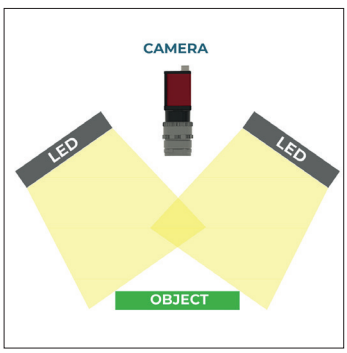
Key Features

- Scalable modular design using 50x50 mm high-intensity LED tiles.
- Integrated MCCD technology for perfectly uniform current distribution.
- Immune to power supply fluctuations for stable light intensity.
- Industrial anodized aluminum housing with flexible side mounting slots.
- Screwless top surface for easy cleaning and dust prevention.
- High-speed PWM and ON/OFF control for synchronized vision tasks.
- Integrated polarity reversal protection for safe electrical installation.
- Advanced HTTM material for superior internal thermal regulation.
- Standard M8 3-pin connector for rapid industrial connectivity.
- Certified 48-hour burn-in test ensures maximum operational reliability.









Composition of the product identification code

The code in orange are to be filled in according to the desired configuration

PL	–	DL6	–	YYYYYY	–	XXX	–	A	0	0	0	0	0
				Emission area dimensions in mm		Color							

Code size emission area

Highlighted models are standard products - Other models are special products and may have longer production times

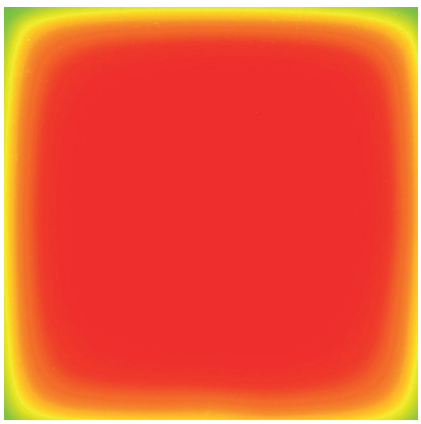
Length emissione area - mm (order code)					
100 x 100 (010010)	100 x 150 (010015)	100 x 200 (010020)	100 x 250 (010025)	100 x 300 (010030)	100 x 350 (010035)
100 x 400 (010040)	100 x 450 (010045)	100 x 500 (010050)			
150 x 150 (015015)	150 x 200 (015020)	150 x 250 (015020)	150 x 300 (015030)	150 x 350 (015035)	150 x 400 (015040)
150 x 450 (015045)	150 x 500 (015050)				
200 x 200 (020020)	200 x 250 (020025)	200 x 300 (020030)	200 x 350 (020035)	200 x 400 (020040)	200 x450 (020045)
200 x500 (020050)					
250 x 250 (025025)	250 x 300 (025030)	250 x 350 (025035)	250 x 400 (025040)	250 x 450 (025045)	250 x 500 (025050)
300 x 300 (030030)	300 x 350 (030035)	300 x 400 (030040)	300 x 450 (030045)	300 x 500 (030050)	
350 x 350 (035035)	350 x 400 (035040)	350 x 450 (035045)	350 x 500 (035050)		
400 x 400 (040040)	400 x 450 (040045)	400 x 500 (040050)			
450 x 450 (045045)	450 x 500 (045050)				
500 x 500 (050050)					

Color

Other LED models on request

WHI : Neutral White 5000K
INF : Infrared 850 nm
BLU : Blue 470 nm (on request)
RED : Red 625 nm (on request)

LED emission

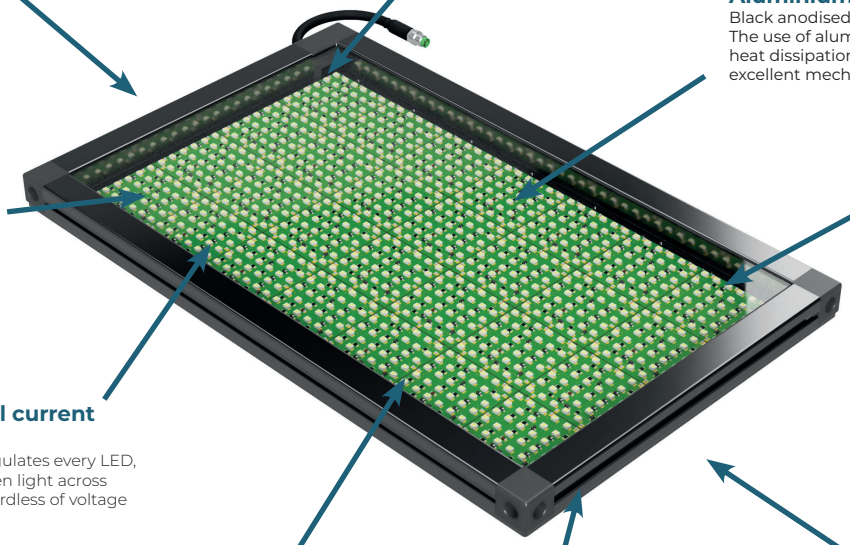


Reference 100 x 100 mm

Why choose a DL6 series illuminator ?

Scalable Modular Geometry
The 50mm module system allows engineers to configure the exact dimensions needed for specific machine architectures.

Industrial connector
Connector with threaded fastening for easy assembly and quick disconnection in case of maintenance. The cable is fixed through a flexible grommet to ensure a small bending radius.



Aluminium enclosure
Black anodised aluminium enclosure. The use of aluminium ensures high heat dissipation from the LEDs and excellent mechanical robustness.

48H-Test certificate
Each illuminator undergoes a 48-hour test cycle and a test certificate is issued with the product. This procedure ensures high quality of the product delivered to the client.

Reverse polarity protection
The internal circuits are protected against reverse polarity of the supply voltage. Protection takes action in case of incorrect connection of power cables.

MCCD© Internal current source driver
MCCD technology regulates every LED, ensuring perfectly even light across the entire matrix regardless of voltage swings.

Industrial design
The entire DL6 family is designed for industrial use on vision systems or optical test benches. The target customer for this product family is either the industrial machine manufacturer or the vision system integrator.

Fast Machine Integration
Unodized aluminum profiles with lateral slots enable quick mounting with standard brackets in industrial setting.

Rugged Industrial Build
High-quality materials and professional-grade PCBs ensure stability in demanding automation and optical testing environments.

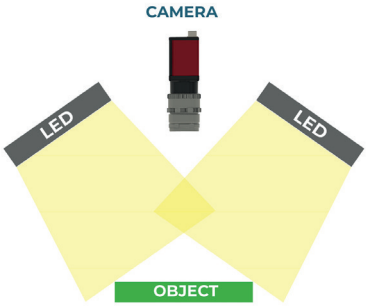
Main features common to the DL6 family

Features	Value
Supply voltage	24 Vdc +/- 5%
IP rating / temperature	IP40; operating temperature 0 - 50 °C
Electrical connection	M8 3-pin connector with threaded ring nut; pig-tail cable approx. 100 mm
Control and driver	MCCD driver; ON/OFF or PWM control up to 100 kHz; reverse polarity protection
Mounting and structure	Side groove profile; AISI 316 brackets and screw kit supplied; 50 x 50 mm tiles
Certifications and testing	CE, RoHS; made by RODER in Italy (ISO 9001); 48-hour test with certificate

The DL6 series is an advanced family of modular LED illuminators engineered for high-precision machine vision and optical testing.
Built on a flexible 50x50 mm tile architecture, these units can be configured in sizes up to 500x500 mm, offering unparalleled adaptability for industrial designers.
At its technical core, the integrated Multi Constant Current Driver (MCCD) technology ensures consistent current across the entire LED matrix.
This provides superior light homogeneity and immunity to input voltage fluctuations, which is critical for stable imaging.

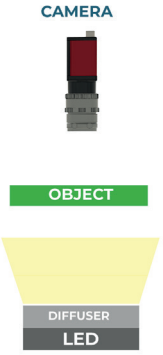
Constructed from anodized aluminum with side-mounting slots, the DL6 series combines structural rigidity with installation ease.
The screwless top surface features anti-scratch and anti-reflective protective glass, making it suitable for clean or dusty environments.
Each unit incorporates High Transmission Thermal Material (HTTM) for optimal heat management and polarity reversal protection for electrical safety. Supporting continuous, ON/OFF, and PWM modes, the DL6 series is optimized for high-speed synchronization.
Every illuminator undergoes a mandatory 48-hour burn-in test in our Italian laboratories, ensuring ISO9001-certified reliability for demanding automation applications..

Typical configuration



Direct illumination

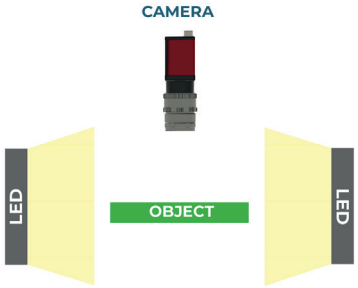
The DL6 series of illuminators can be used for direct illumination of the object to be inspected. The angle of incidence of the light can be chosen according to the characteristics of the object, the degree of detail to be highlighted or the type of inspection to be carried out.



Low cost backlight

The DL6 series of illuminators can be used to make very economical backlights. By placing a diffuser glass, it is possible to realise economical backlights with high luminosity.

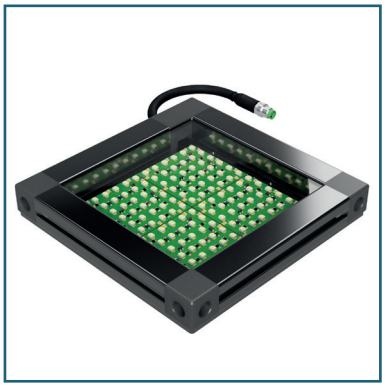
Note:
The diffuser must be positioned at the optimal distance from the illuminator to ensure optimal uniformity. The diffuser is not available as a standard product.



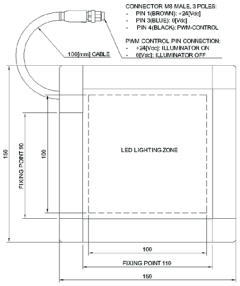
Direct illumination

The DL6 series of illuminators can be used for low-angle lighting systems. Installing the illuminators in low-angle mode makes it possible to highlight defects or features that would not be visible or hardly noticeable in other lighting modes

Models and accessories

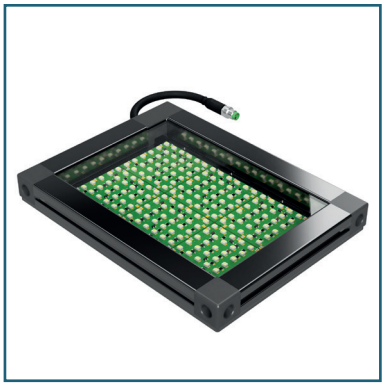


DL6 Series 100 x 100 LED Illuminator

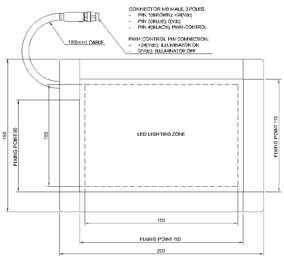




Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-27	PL-DL6-010010-WHI-A00000	100 x 100	WHI	0.48A @24vdc	144	1
10-17-30	PL-DL6-010010-INF-A00000	100 x 100	INF	0.36A @24vdc	144	1



DL6 Series 100 x 150 LED Illuminator

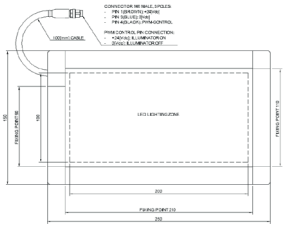




Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-31	PL-DL6-010015-WHI-A00000	100 x 150	WHI	0.72A @24vdc	216	1
10-17-34	PL-DL6-010015-INF-A00000	100 x 150	INF	0.54A @24vdc	216	1



DL6 Series 100 x 200 LED Illuminator



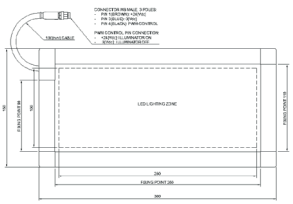


Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-35	PL-DL6-010020-WHI-A00000	100 x 200	WHI	0.96A @24vdc	288	1
10-17-38	PL-DL6-010020-INF-A00000	100 x 200	INF	0.72A @24vdc	288	1

Models and accessories



DL6 Series 100 x 250 LED Illuminator





Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-39	PL-DL6-010025-WHI-A00000	100 x 250	WHI	1.2A @24vdc	360	1
10-17-42	PL-DL6-010025-INF-A00000	100 x 250	INF	0.9A @24vdc	360	1

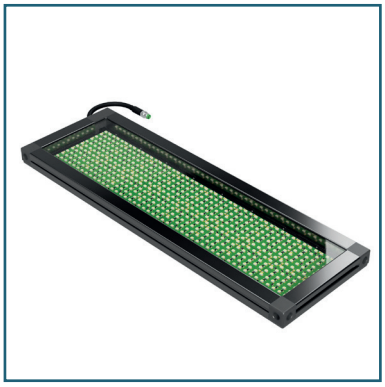


DL6 Series 100 x 300 LED Illuminator





Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-43	PL-DL6-010030-WHI-A00000	100 x 300	WHI	1.44A @24vdc	432	1
10-17-46	PL-DL6-010030-INF-A00000	100 x 300	INF	1.08A @24vdc	432	1



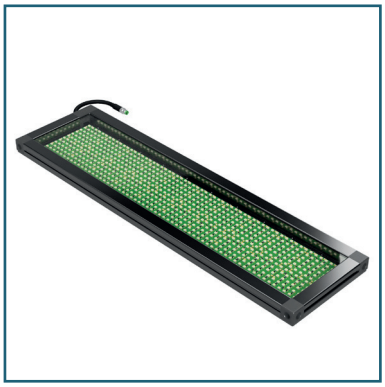
DL6 Series 100 x 400 LED Illuminator





Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-47	PL-DL6-010040-WHI-A00000	100 x 400	WHI	1.92A @24vdc	576	1
10-17-50	PL-DL6-010040-INF-A00000	100 x 400	INF	1.44A @24vdc	576	1

Models and accessories

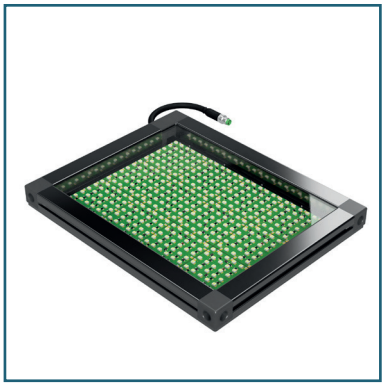


DL6 Series 100 x 500 LED Illuminator

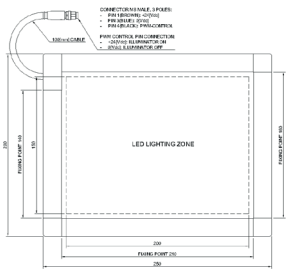


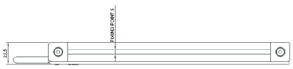


Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-51	PL-DL6-010050-WHI-A00000	100 x 500	WHI	2.4A @24vdc	720	2
10-17-54	PL-DL6-010050-INF-A00000	100 x 500	INF	1.8A @24vdc	720	2

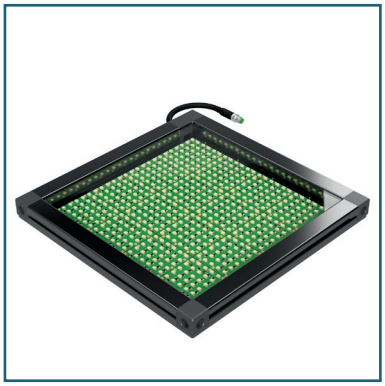


DL6 Series 150 x 200 LED Illuminator

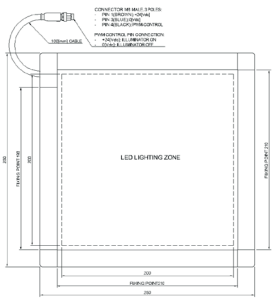




Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-55	PL-DL6-015020-WHI-A00000	150 x 200	WHI	1.44A @24vdc	432	1
10-17-58	PL-DL6-015020-INF-A00000	150 x 200	INF	1.08A @24vdc	432	1



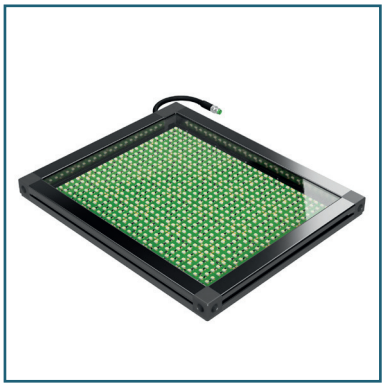
DL6 Series 200 x 200 LED Illuminator



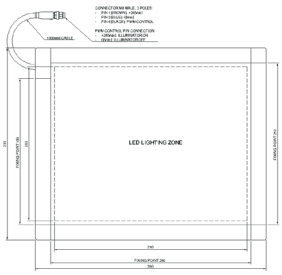


Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-59	PL-DL6-020020-WHI-A00000	200 x 200	WHI	1.92A @24vdc	576	1
10-17-62	PL-DL6-020020-INF-A00000	200 x 200	INF	1.44A @24vdc	576	1

Models and accessories

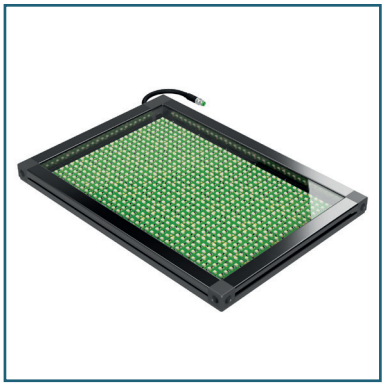


DL6 Series 200 x 250 LED Illuminator

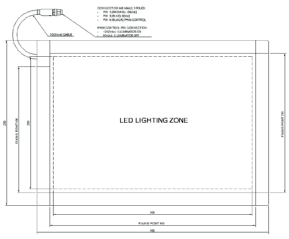




Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-63	PL-DL6-020025-WHI-A00000	200 x 250	WHI	2.4A @24vdc	720	2
10-17-66	PL-DL6-020025-INF-A00000	200 x 250	INF	1.8A @24vdc	720	2

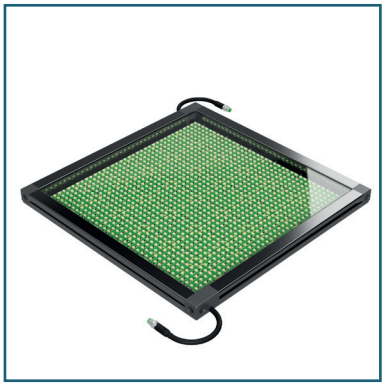


DL6 Series 200 x 300 LED Illuminator

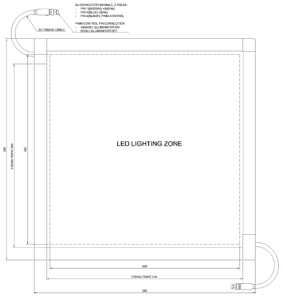




Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-67	PL-DL6-020030-WHI-A00000	200 x 300	WHI	2.88A @24vdc	864	2
10-17-70	PL-DL6-020030-INF-A00000	200 x 300	INF	2.16A @24vdc	864	2



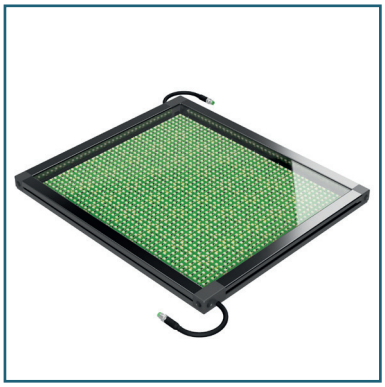
DL6 Series 300 x 300 LED Illuminator



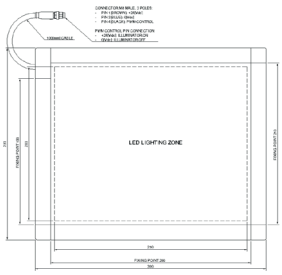


Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-71	PL-DL6-030030-WHI-A00000	300 x 300	WHI	4.32A @24vdc	1296	2
10-17-74	PL-DL6-030030-INF-A00000	300 x 300	INF	3.24A @24vdc	1296	2

Models and accessories

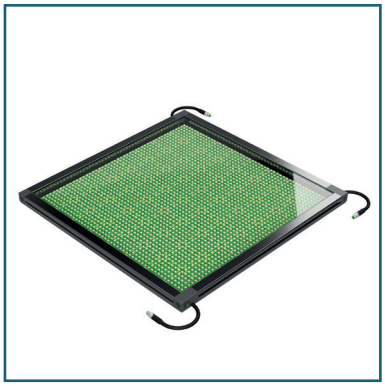


DL6 Series 300 x 400 LED Illuminator

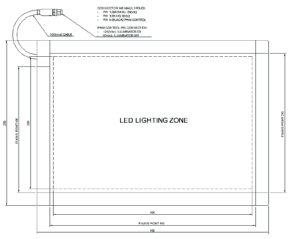




Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-75	PL-DL6-030040-WHI-A00000	300 x 400	WHI	5.76A @24vdc	1728	4
10-17-78	PL-DL6-030040-INF-A00000	300 x 400	INF	4.32A @24vdc	1728	4

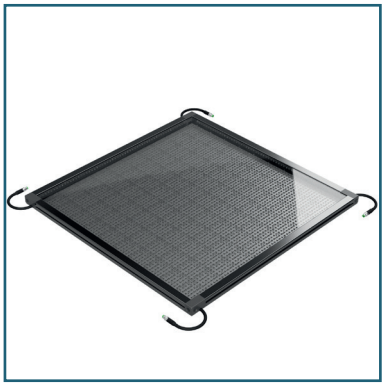


DL6 Series 400 x 400 LED Illuminator





Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-79	PL-DL6-040040-WHI-A00000	400 x 400	WHI	7.68A @24vdc	2304	4
10-17-82	PL-DL6-040040-INF-A00000	400 x 400	INF	5.76A @24vdc	2304	4



DL6 Series 500 x 500 LED Illuminator





Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
10-17-83	PL-DL6-050050-WHI-A00000	500 x 500	WHI	12A @24vdc	3600	4
10-17-86	PL-DL6-050050-INF-A00000	500 x 500	INF	9A @24vdc	3600	4

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CONTACTS

RODER SRL
Via Aldo Moro 15/A
10080 Oglianico (TO) - Italia

+39 0124 34301

info@roder.it

www.visiotronix.com

VISIOTRONIX is the Electronics & Vision division of

RODER