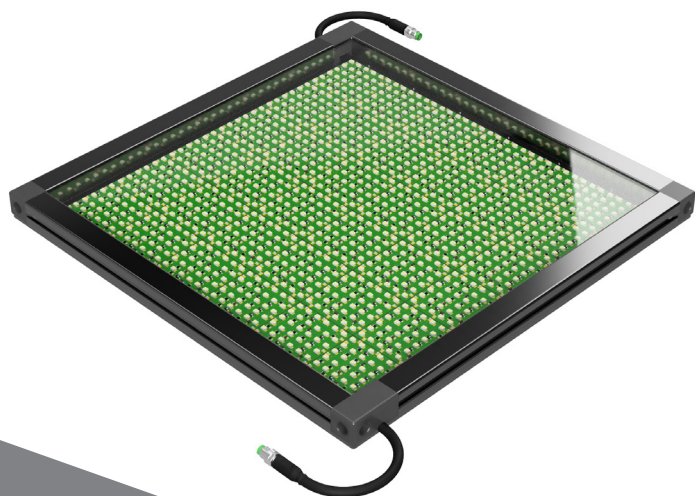


*LED Illuminators
DL6 Series*

Revision IT2602

2026



**INNOVATIVE
SOLUTIONS
PROVIDER**

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.

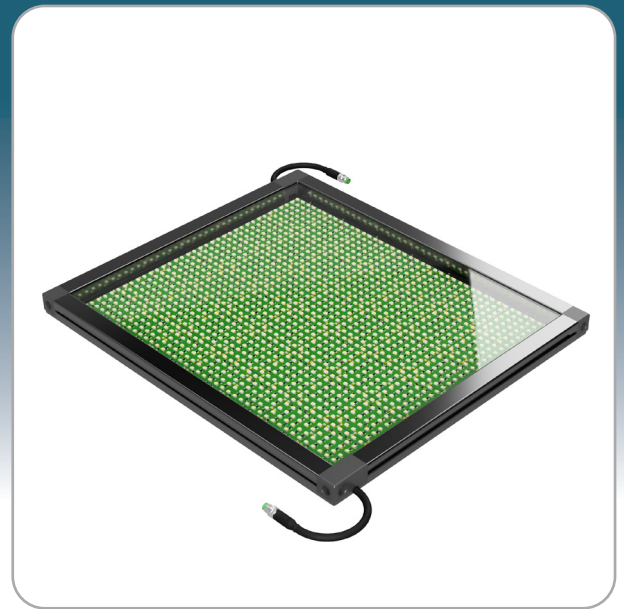
Advanced Thermal Management: THTM materials efficiently transfer heat to the chassis, maintaining LED performance and extending operational life.

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.

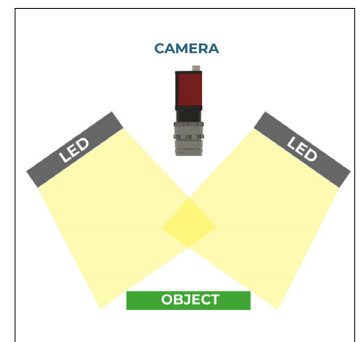
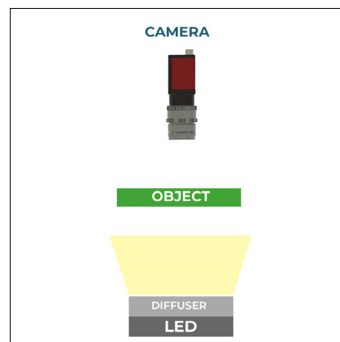
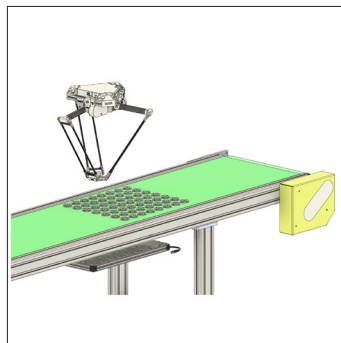
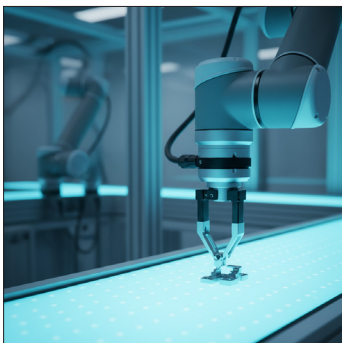
Key Features

- 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.



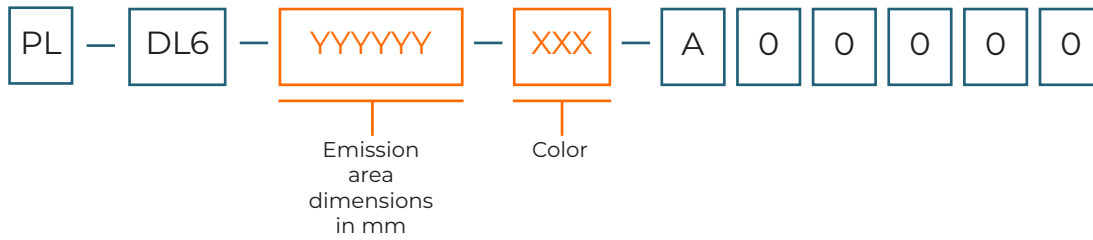
Applications

- 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.



Composition of the product identification code

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



Code size emission area

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

Length emission 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 x 450 (020045)
200 x 500 (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

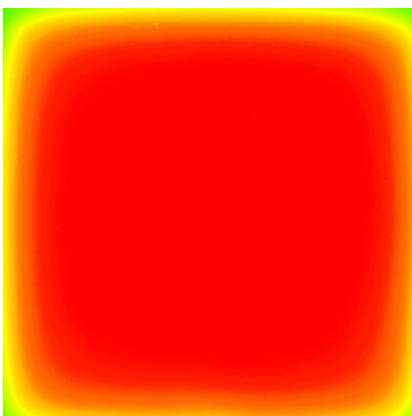
WHI : Neutral White 5000K

BLU : Standard Blue

RED : Red

INF : Infrared

LED emission



Reference 100 x 100 mm

Why choose a RODER DLI 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 DLI 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 aluminium 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 DLI family

Features	Value
Supply voltage	24 Vdc +/- 5%
IP rating	IP40
Temperature range	0° - 50° C
Electrical connection	M8 3-pin connector with threaded ring nut

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.

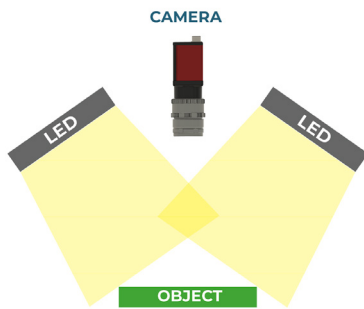
Constructed from anodized aluminum with side-mounting slots, the DL6 series combines structural rigidity with installation ease.

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.

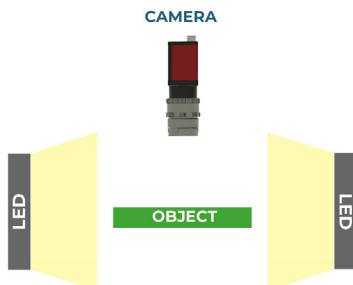


Low cost backlight

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.



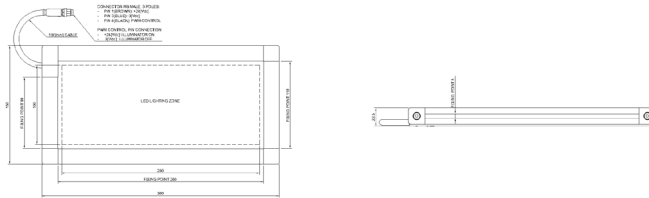
Direct illumination

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

Modelli e accessori



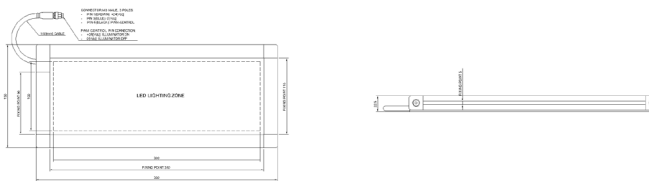
DL6 Series 100 x 250 LED Illuminator



Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-010025-WHI-A00000	100 x 250	WHI	1.2A @24vdc	360	1
00-00-00	PL-DL6-010025-INF-A00000	100 x 250	INF	1.8A @24vdc	360	1



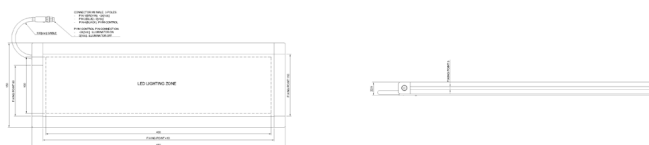
DL6 Series 100 x 300 LED Illuminator



Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-010030-WHI-A00000	100 x 300	WHI	1.44A @24vdc	432	1
00-00-00	PL-DL6-010030-INF-A00000	100 x 300	INF	2.16A @24vdc	432	1



DL6 Series 100 x 400 LED Illuminator

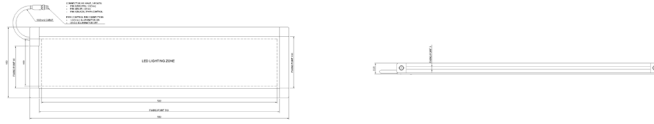


Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-010040-WHI-A00000	100 x 400	WHI	1.92A @24vdc	512	1
00-00-00	PL-DL6-010040-INF-A00000	100 x 400	INF	2.88A @24vdc	512	1

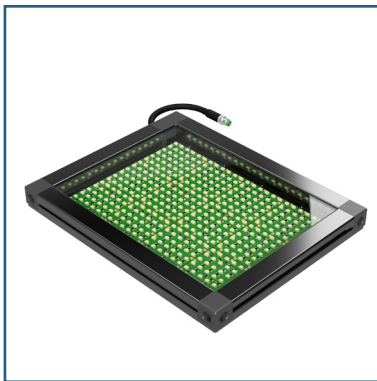
Modelli e accessori



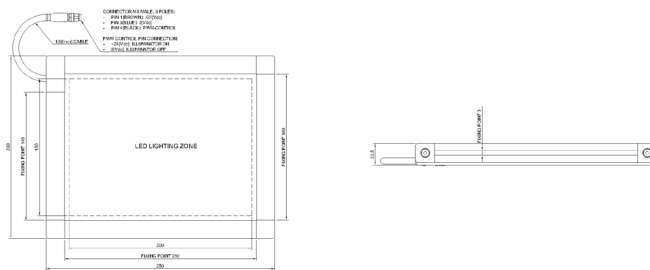
DL6 Series 100 x 500 LED Illuminator



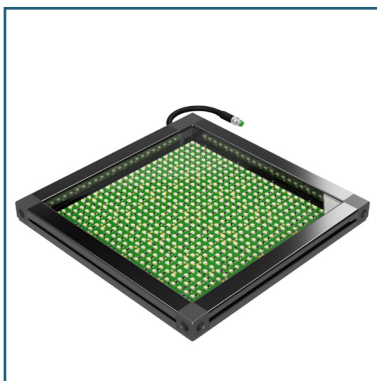
Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-010050-WHI-A00000	100 x 500	WHI	2.40A @24vdc	720	1
00-00-00	PL-DL6-010050-INF-A00000	100 x 500	INF	3.60A @24vdc	720	1



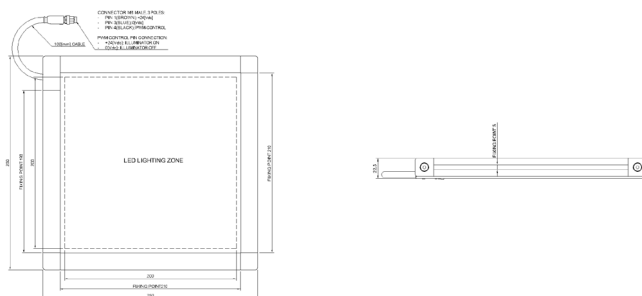
DL6 Series 150 x 200 LED Illuminator



Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-015020-WHI-A00000	150 x 200	WHI	1.44A @24vdc	432	1
00-00-00	PL-DL6-015020-INF-A00000	150 x 200	INF	2.16A @24vdc	432	1

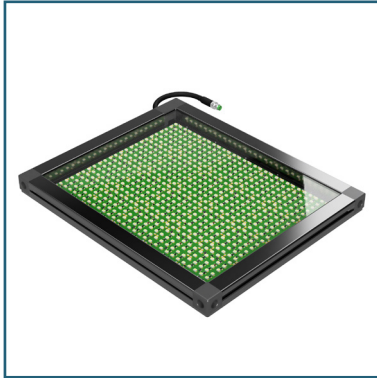


DL6 Series 200 x 200 LED Illuminator

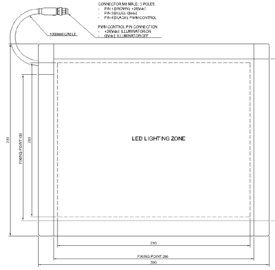


Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-020020-WHI-A00000	200 x 200	WHI	1.92A @24vdc	576	1
00-00-00	PL-DL6-020020-INF-A00000	200 x 200	INF	2.88A @24vdc	576	1

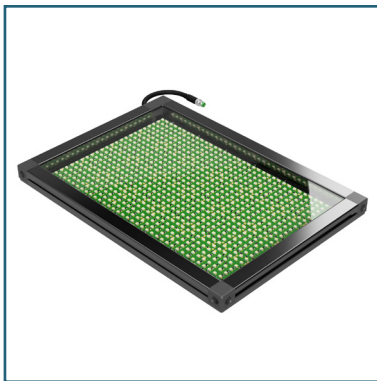
Modelli e accessori



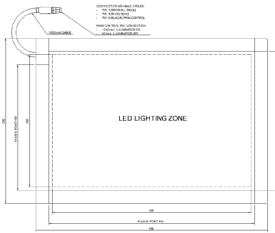
DL6 Series 200 x 250 LED Illuminator



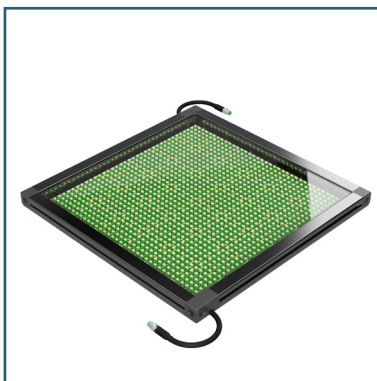
Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-020025-WHI-A00000	200 x 250	WHI	2.40A @24vdc	720	1
00-00-00	PL-DL6-020025-INF-A00000	200 x 250	INF	3.60A @24vdc	720	1



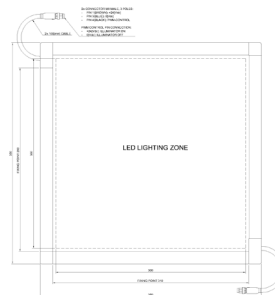
DL6 Series 200 x 300 LED Illuminator



Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-020030-WHI-A00000	200 x 300	WHI	2.88A @24vdc	864	1
00-00-00	PL-DL6-020030-INF-A00000	200 x 300	INF	4.32A @24vdc	864	1

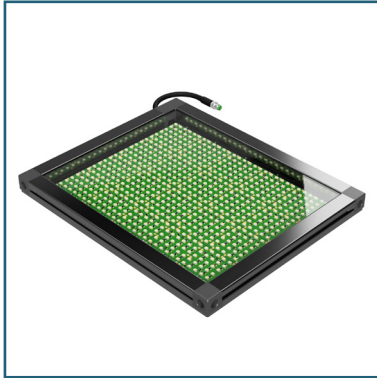


DL6 Series 300 x 300 LED Illuminator

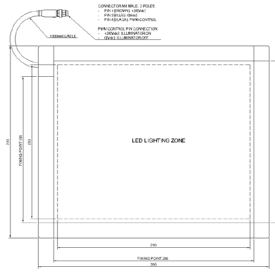


Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-030030-WHI-A00000	300 x 300	WHI	4.32A @24vdc	1296	2
00-00-00	PL-DL6-030030-INF-A00000	300 x 300	INF	6.48A @24vdc	1296	2

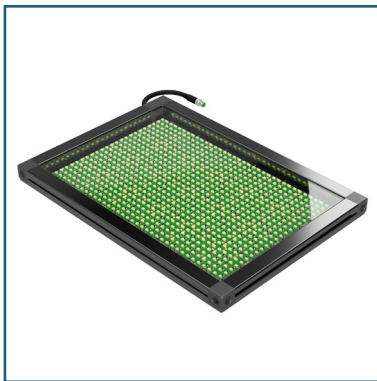
Modelli e accessori



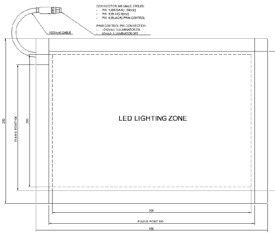
DL6 Series 200 x 250 LED Illuminator



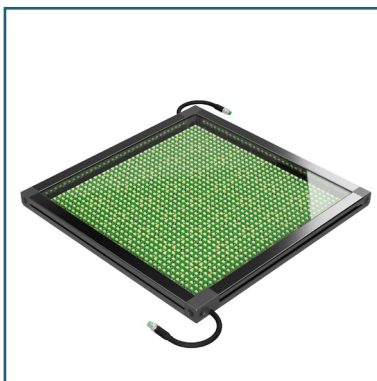
Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-020025-WHI-A00000	200 x 250	WHI	2.40A @24vdc	720	1
00-00-00	PL-DL6-020025-INF-A00000	200 x 250	INF	3.60A @24vdc	720	1



DL6 Series 200 x 300 LED Illuminator



Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-020030-WHI-A00000	200 x 300	WHI	2.88A @24vdc	864	1
00-00-00	PL-DL6-020030-INF-A00000	200 x 300	INF	4.32A @24vdc	864	1



DL6 Series 300 x 300 LED Illuminator



Item Code	Product Code	Light emitting area	Color	Consumption	N. LEDs	N. Cables
00-00-00	PL-DL6-030030-WHI-A00000	300 x 300	WHI	4.32A @24vdc	1296	2
00-00-00	PL-DL6-030030-INF-A00000	300 x 300	INF	6.48A @24vdc	1296	2

Important notes and copyright

The technical data contained in this catalogue are not binding for Roder SRL and may be modified without prior notice due to production requirements or improvements.

The information contained herein is provided "as is" and Roder SRL makes no warranties, representations or guarantees as to the accuracy of the same information, product features, availability, functionality or suitability of its products for a particular purpose, nor does Roder SRL assume any liability arising from the application or use of any product or device, and specifically disclaims any and all liability, including, without limitation, special, consequential or incidental damages.

The purchaser is responsible for the use of Roder SRL products including compliance with all laws, regulations and safety requirements or standards, regardless of any support or application information provided by Roder SRL.

The "characteristic" parameters that may be provided in data sheets and/or specifications may vary, and vary according to different applications. The actual performance of the products in the Roder SRL documentation may vary over time. All operating parameters must be analysed and validated for each application by the customer's technical experts.

Roder SRL products are not designed, intended or authorised for use as critical components in life support systems.

This literature is subject to all applicable copyright laws and is in no way reproducible or resalable. Any reproduction of this document without prior permission is prohibited.

Images, photos, references and trademarks contained in this document, if not the property of Roder SRL, are the legitimate owners.

Last Update : 05 September 2025

CONTATTI



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



+39 0124 34301



info@roder.it
info@innovacheck.com

www.roder.it

INNOVACHECK è una divisione di

 **RODER**