µP BASED SENSORS WITH UV LED EMISSION

- ***High-Power UV LED emission***
- ***Microprocessor-based Teach-in setting***
- ***High switching frequency at 2 kHz***
- ***Fibre-optic accessories and high-resolution lenses***

LDµ SERIES

The **LDµ** luminescence sensors emit ultraviolet light and detect only visible light converted and reflected from fluorescent objects or marks, independent from the background's colour and surface.
A microprocessor controls and synchronises the emission, reception and output circuits offering a completely automatic setting. The **LDµ** sensors can reach a 75 mm operating distance and a 2 kHz switching frequency, thanks to the UV High-Power emission. Focusing lenses and special fibre-optics able to replace the lens are available as accessories.
The **LDµ** sensors are used in the pharmaceutical and cosmetic industries to identify labels on glass phials or bottles; in the wood and ceramic selection lines; in automatic packaging to detect paper and fluorescent glues; in the textile industry to identify cutting guides; in the mechanical industry to verify the presence of paints or fluorescent lubricants.

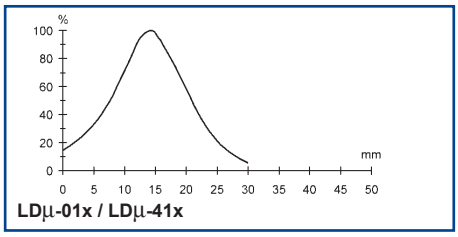
DATASENSOR
value through detection

TECHNICAL DATA

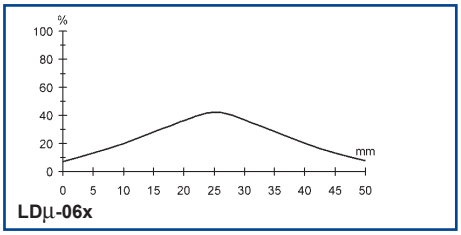
Power supply:	10 **...** 30 Vdc, reverse polarity protection
Consumption:	80 mA max.
Light emission:	LED HP-UV 370 nm
Spot dimension:	circular Ø 5 mm max. on focal point
	Ø 2 mm at 9 mm(LDμ-011 with Hi-Res lens)
Diffuse proximity operating distance:	9 **...** 18 mm (LDμ-01x / LDμ-41x)
	15 **...** 35 mm (LDμ-06x)
	20 **...** 40 mm (LDμ-45x)
	40 **...** 75 mm (LDμ-42x)
Operating distance with fibre-optics:	0 **...** 30 mm
Reference object for proximity:	paper with low grade 5 fluorescence
Setting:	Teach-in with 2 push-buttons
	Remote by cable
Indicators:	red OUTPUT LED
	green READY LED
Output type:	NPN or PNP, Rpull-down/up 10 kΩ
Saturation voltage:	1 V max. with NPN
	2 V max. with PNP
Output current:	200 mA max., short-circuit protection
Response time:	500 μs max. (LDμ-0xx)
	250 μs max. (LDμ-4xx)
Switching frequency:	1 kHz max. (LDμ-0xx)
	2 kHz max. (LDμ-4xx)
Timing function:	20 ms minimum output ON
Analog output range :	0 **...** 7 Vdc, 2.2 kΩ output resistance
Auxiliary functions:	deviator for setting block
Connection:	M12 4-pole connector
	3 m Ø 6.1 mm shielded cable
Electrical protection:	class 1
Mechanical protection:	IP67
Housing material:	ZAMA
Lens material:	glass
Weight:	310 g (connector vers.)
	450 g (cable vers.)
Operating temperature:	-10 **...** +55°C
Storage temperature:	-20 **...** +70°C
Reference standard:	EN 60947-5-2
Certifications:	CE
OF-50 fibre-optic data:	fibre in saline solution with PET sheath,
	operating temperature: -5 **...** +60°C

The operating distances indicate the typical detection distance.

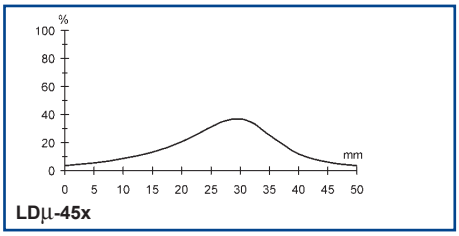
DETECTION DIAGRAMS



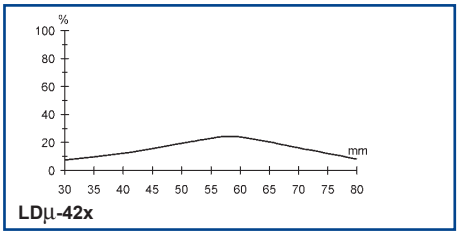
LDμ-01x / LDμ-41x



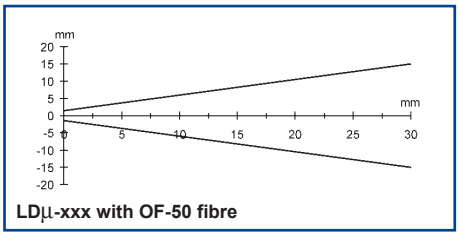
LDμ-06x



LDμ-45x



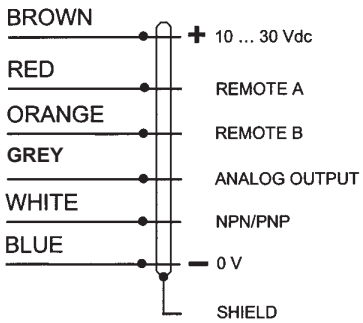
LDμ-42x



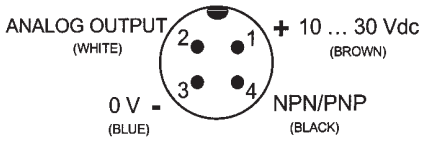
LDμ-xxx with OF-50 fibre

The detection diagrams indicate the typical operating distance.

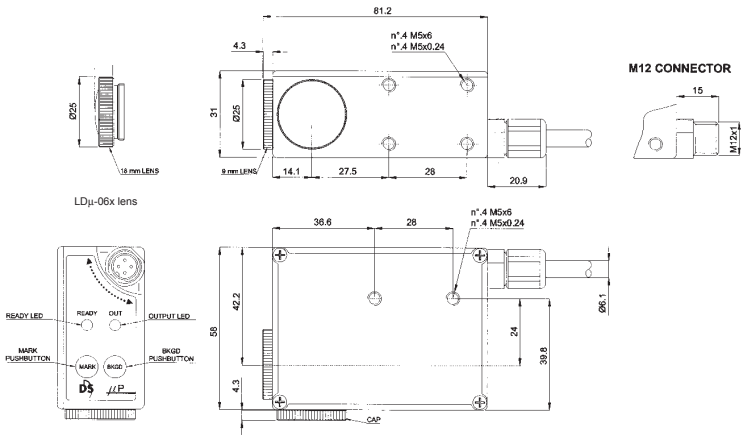
CONNECTIONS



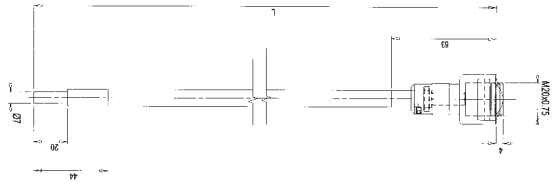
M12 CONNECTOR



DIMENSIONS

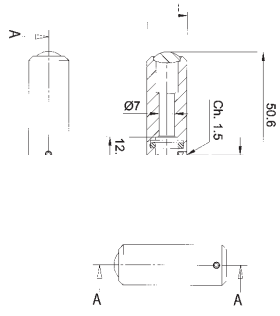


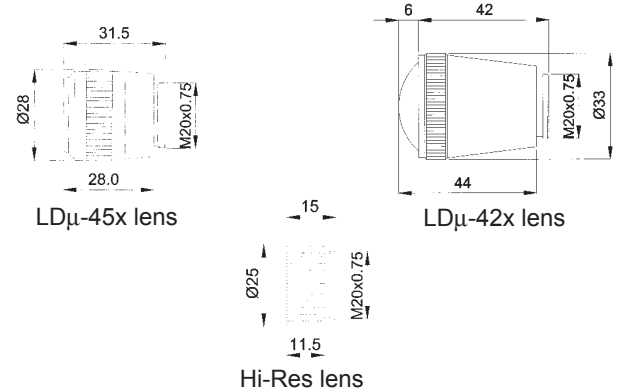
OF-50



Model	L
OF-50-5	50 cm
OF-50-10	100 cm

AF-50





mm

MODELS

MODEL	OPTIC	CONNECTION	CODE N°
LDµ-011	9 - 18 mm (normal)	cable	955151000
LDµ-015	9 - 18 mm (normal)	M12 connector	955151010
LDµ-061	15 - 35 mm (normal)	cable	955151020
LDµ-065	15 - 35 mm (normal)	M12 connector	955151030
LDµ-415	9 - 18 mm (high sensitivity)	M12 connector	955151120
LDµ-455	20 - 40 mm (high sensitivity)	M12 connector	955151100
LDµ-425	40 - 75 mm (high sensitivity)	M12 connector	955151110

ACCESSORIES

MODEL	DESCRIPTION	CODE N°
Hi-Res lens	9 mm high resolution lens (for LDµ-011*)	95ACC1050
OF-50-5	fibre-optic L50 cm - proximity op. distance 30 mm	95A201130
OF-50-10	fibre-optic L100 cm - proximity op. distance 30 mm	95A201370
AF-50	focusing lens for OF-50 (Ø 5 mm spot at 15 mm)	95ACC1400
	** focalising lens to screw between the sensor and the standard 9-18 mm lens*	

*Please refer also to M12 connectors of the **CS** series*

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HEADQUARTERS

DATASENSOR SpA
via Lavino, 265 - 40050 Monte San Pietro, BO - Italy
Tel. +39 051/6765611 • Fax +39 051/6759324
www.datasensor.com • e-mail info@datasensor.com m

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