

## 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.

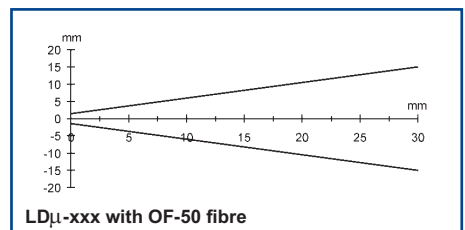
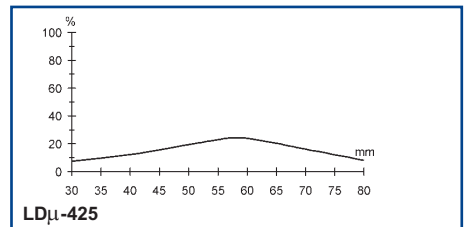
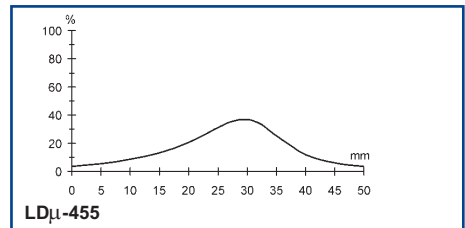
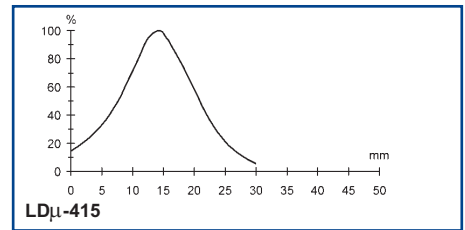
A microprocessor controls and synchronises the emission, reception and output circuits offering a completely automatic setting. The **LDμ** sensors can reach a 75 mm operating distance and a 2 kHz switching frequency, thanks to the UV High-Power emission. Focusing lenses and special fibre-optics able 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.

## TECHNICAL DATA

<b>Power supply:</b> .....	10 ... 30 Vdc, reverse polarity protection
<b>Consumption:</b> .....	80 mA max.
<b>Light emission:</b> .....	LED HP-UV 370 nm
<b>Spot dimension:</b> .....	circular Ø 5 mm max. on focal point
<b>Diffuse proximity operating distance:</b> .....	9 ... 18 mm (LD $\mu$ -415) 20 ... 40 mm (LD $\mu$ -455) 40 ... 75 mm (LD $\mu$ -425)
<b>Operating distance with fibre-optics:</b> .....	0 ... 30 mm
<b>Setting:</b> .....	Teach-in with 2 push-buttons Remote by cable
<b>Indicators:</b> .....	red OUTPUT LED green READY LED
<b>Output type:</b> .....	NPN or PNP, Rpull-down/up 10 k $\Omega$
<b>Saturation voltage:</b> .....	1 V max. with NPN 2 V max. with PNP
<b>Output current:</b> .....	200 mA max., short-circuit protection
<b>Response time:</b> .....	250 $\mu$ s max.
<b>Switching frequency:</b> .....	2 kHz max.
<b>Timing function:</b> .....	20 ms minimum output ON
<b>Analog output range :</b> .....	0 ... 7 Vdc, 2.2 k $\Omega$ output resistance
<b>Auxiliary functions:</b> .....	deviator for setting block
<b>Connection:</b> .....	M12 4-pole connector 3 m Ø 6.1 mm shielded cable
<b>Electrical protection:</b> .....	class 1
<b>Mechanical protection:</b> .....	IP67
<b>Housing material:</b> .....	ZAMA
<b>Lens material:</b> .....	glass
<b>Weight:</b> .....	310 g (connector vers.) 450 g (cable vers.)
<b>Operating temperature:</b> .....	-10 ... +55°C
<b>Storage temperature:</b> .....	-20 ... +70°C
<b>Reference standard:</b> .....	EN 60947-5-2
<b>Certifications:</b> .....	<b>CE</b>
<b>OF-50 fibre-optic data:</b> .....	fibre in saline solution with PET sheath, operating temperature: -5 ... +60°C

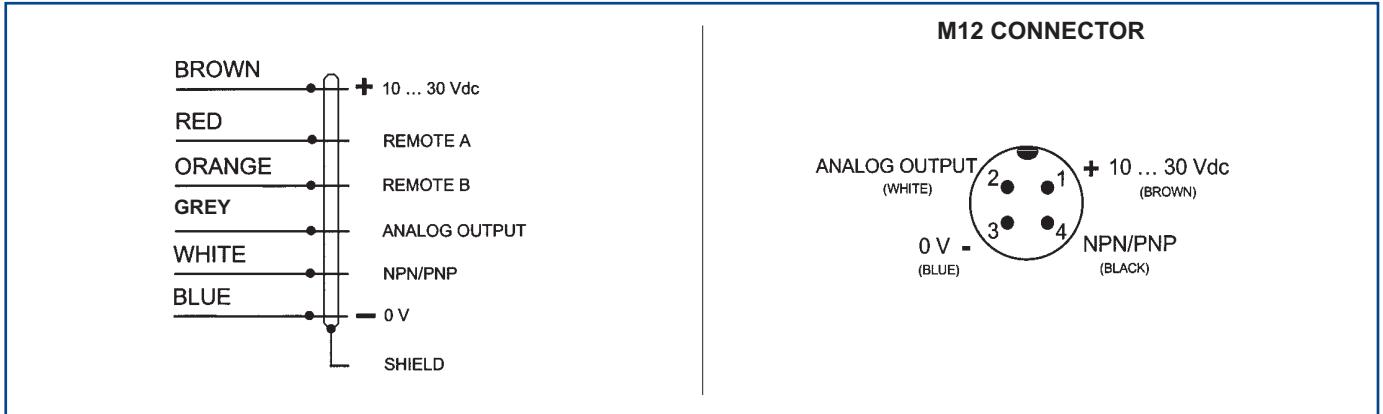
## DETECTION DIAGRAMS



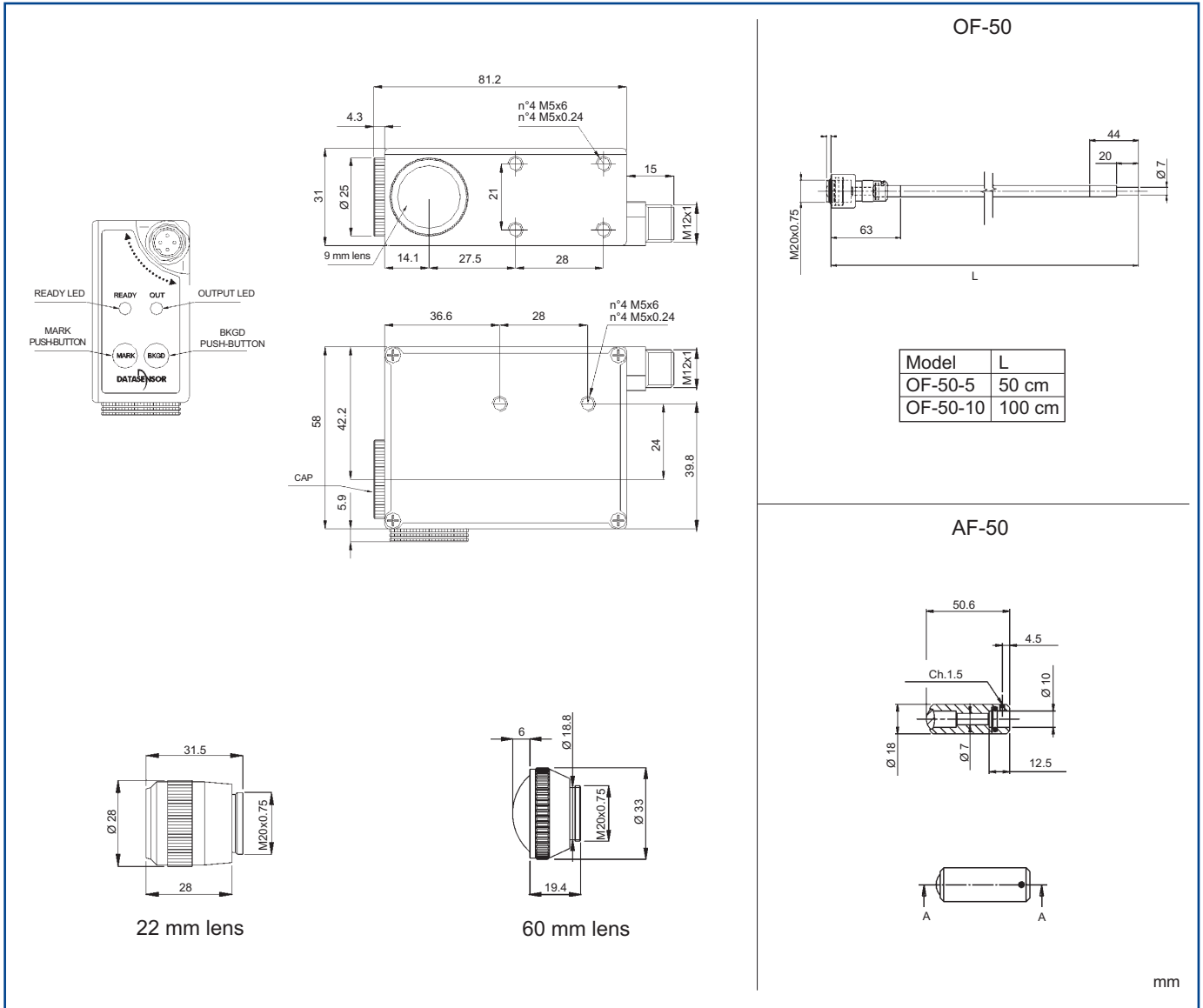
The operating distances indicate the typical detection distance.

The detection diagrams indicate the typical operating distance.

## CONNECTIONS



## DIMENSIONS



## MODELS

MODEL	OPTIC	CONNECTION	CODE N°
LD $\mu$ -415	9 - 18 mm (high sensitivity)	M12 connector	955151120
LD $\mu$ -425	40 - 75 mm (high sensitivity)	M12 connector	955151110
LD $\mu$ -455	20 - 40 mm (high sensitivity)	M12 connector	955151100

## ACCESSORIES

MODEL	DESCRIPTION	CODE N°
AF-50	focusing lens for OF-50 ( $\varnothing$ 5 mm spot at 15 mm)	95ACC1400
Lens No.22	lens with 22 mm focus	95ACC1100
Lens No.60	lens with 60 mm focus	95ACC1220
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

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

**Distributed by:**

### 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

DATASENSOR SpA endeavours to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use DATASENSOR SpA can guarantee only the data indicated in the instruction manual supplied with the products.