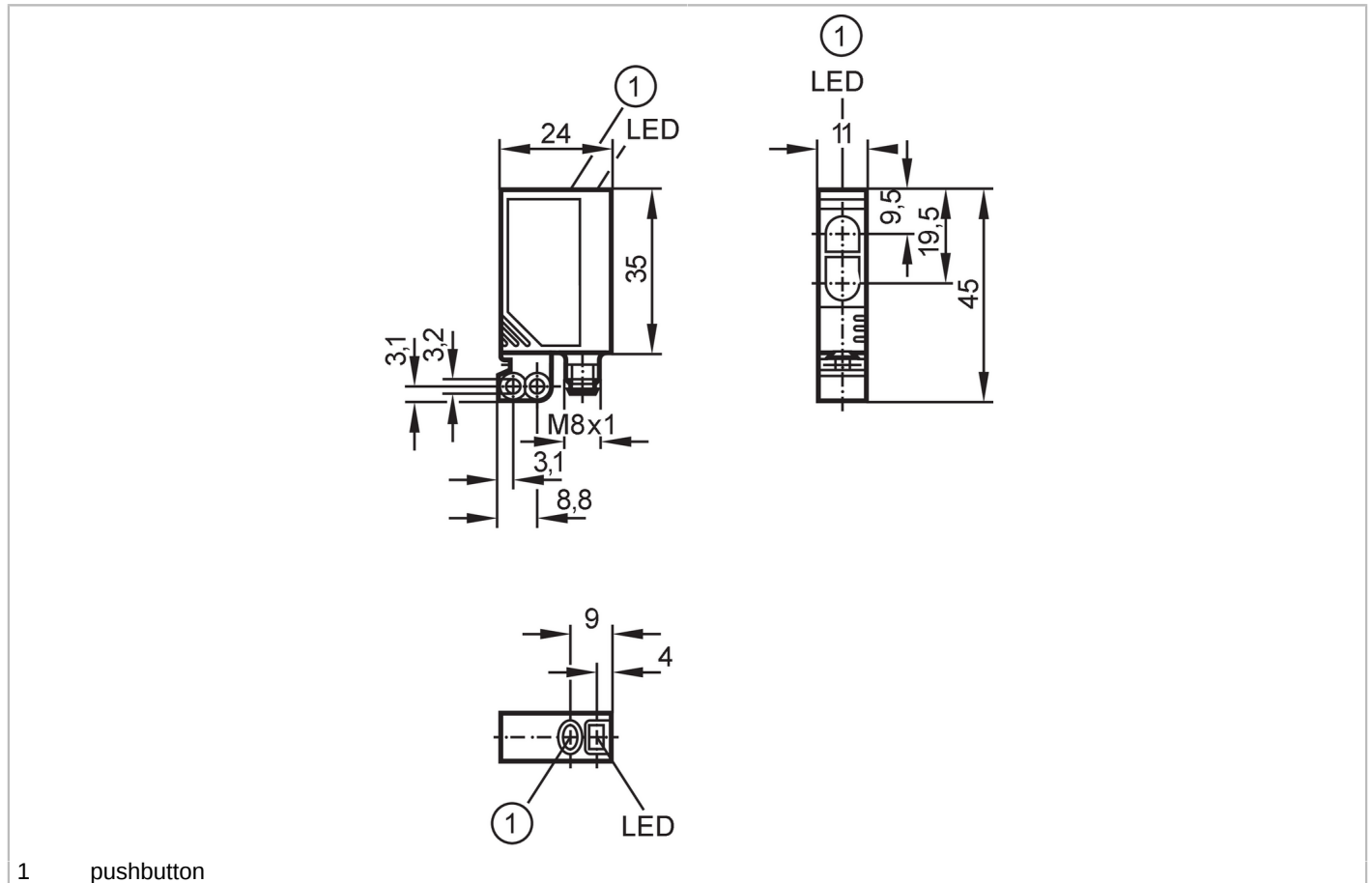


# OJ5054



## LASER diffuse reflection sensor

OJHLFPKG/SO/AS



1 pushbutton



Product characteristics	
Type of light	red light
Laser protection class	1
Housing	rectangular
Application	
Special feature	Background suppression
Function principle	Diffuse reflection sensor
Electrical data	
Operating voltage [V]	10...30 DC
Current consumption [mA]	13
Protection class	III
Reverse polarity protection	yes
Type of light	red light
Wave length [nm]	650
Typ. lifetime [h]	50000
Outputs	
Electrical design	PNP
Output function	light-on/dark-on mode; (programmable)

# OJ5054



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Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	200
Switching frequency DC	[Hz]	1000
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

### Monitoring range

Range	[mm]	15...200; (white paper 200 x 200 mm 90 % remission)
Range on white object (90 % remission)	[mm]	15...200
Range on grey object (18 % remission)	[mm]	15...70
Range on black object (6 % remission)	[mm]	15...45
Range adjustable		yes
Diameter of the smallest detectable object	[mm]	2
Max. light spot width	[mm]	2
Max. light spot height	[mm]	1
Background suppression available		yes

### Operating conditions

Ambient temperature	[°C]	-10...60
Protection		IP 67

### Tests / approvals

EMC	EN 60947-5-2	
Laser protection class		1
Notes on laser protection	Caution:	Laser light
	laser class:	1
		EN / IEC60825-1:2007
		EN / IEC60825-1:2014
		Complies with 21 CFR 1040.10 except for conformance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56, dated May 8, 2019.
MTTF	[years]	501

### Mechanical data

Weight	[g]	27.75
Housing		rectangular
Dimensions	[mm]	35 x 11 x 24
Material		housing: ABS; fixture: diecast zinc; LED window: SEPS; pushbutton: SEPS
Lens material		front lens:PMMA
Lens alignment		Side sensing

# OJ5054



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### Displays / operating elements

Display	Switching status	1 x LED, yellow
	Power	1 x LED, green
Electronic lock		yes

### Accessories

Items supplied	Basic clip: 1, E20964
	screws: 2 x (M3 x 16 mm)
	spring washers: 2
	Nuts: 2

### Remarks

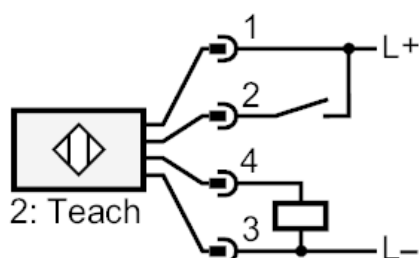
Remarks	cULus - Class 2 source required
Pack quantity	1 pcs.

### Electrical connection

Connector: 1 x M8; coding: A



### Connection



2 Teach



## LASER diffuse reflection sensor

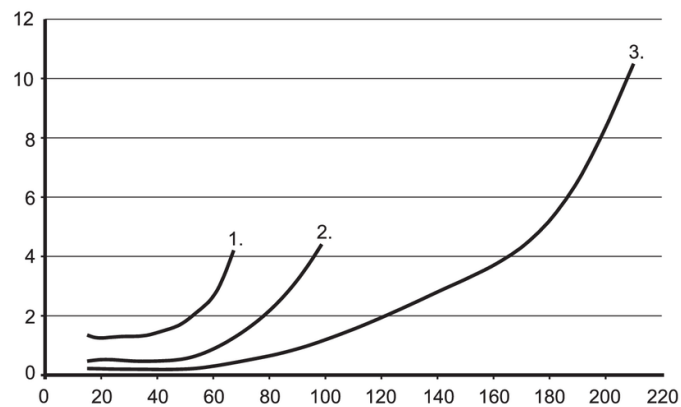
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### Diagrams and graphs



- a: sensor
- b: object
- c: background
- x: distance sensor/object [mm]
- y: min. distance object/background [mm]

### Background suppression chart



- x: distance sensor/object [mm]
- y: min. distance object/background [mm]
- 1 = object black (6 % remission) , Background white (90 % remission)
- 2 = object grey (18 % remission) , Background white (90 % remission)
- 3 = object white (90 % remission) , Background white (90 % remission)