



# Micro Detectors

Italian Sensors Technology



## Cubic Miniaturized Photoelectric Sensor QM



Photoelectric Sensors  
Catalogue

Cod. CAT3EQM1375401

Datasheet - QM - english - Ed.01/2014





Products

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cubic

# Series QM

## Cubic



QM download area

[www.microdetectors.com](http://www.microdetectors.com)<http://www.microdetectors.com/ita/prodotti/dettaglioserie.aspx?idserie=110>

### market sectors and applications

wood industry  
logistics and automated warehouses  
packaging industry  
automotive industry  
industrial automation  
bottling industry



## features

Cubic miniaturized photoelectric high-performance sensors with long sensing distance

2 kHz maximum switching frequency

Available with cable and M8 plug exit or with M8-M12 pig-tail

Wide range of models: diffuse reflection with short, medium and long sensing distance, polarized, reflective for transparent objects, through-beam and background suppression

Selectable LO/DO output state

Complete protection against electrical damages

Completely filled with resin (except background suppression models)

Background suppression with mechanical adjustment

## approvals



## protection degree

IP67





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## Miniature cubic photoelectric sensor QM

A wide range of QM series' sensors is available: direct diffuse, reflective, polarized, for detecting transparent objects, background suppression and through-beam, high-intensity infrared and red light emission for an easy alignment. They can be adjusted with a trimmer for better sensitivity and have a switching frequency up to 2 kHz for a more precise reading.

QM sensors are also available with NPN or PNP, NO/NC selectable output and either cable or M8 plug or M8/M12 pig-tail. QM sensors have an IP67 protection degree and are completely resin-filled, except background suppression models with mechanical adjustment. A wide range of mounting brackets is also available.

### pack content

Installation manual (english + italian) : CAT8BFG1260501 (QM\*S model).

Product packed in bag.

### further commercial and technical documents available

High resolution photos

Data sheet:

- miniature cubic photoelectric sensor QMRG for the detection of transparent objects  
(italian:CAT3EQM1260001, english: CAT3EQM1260001 and spanish:CAT3EQM1260001 )

### customization already tested

QMRG/0\*-\*LP - Model for the detection of transparent objects up to 600 mm

### minimum order quantity

1 piece

	QM	R	8	/	0	P	-	0	A	VE	80
<b>QM</b> Miniaturized cubic photoelectric sensor 12.8x21x31.2 mm											
<b>R</b> RED emission											
<b>I</b> Infrared emission											
<b>B</b> Direct diffuse with sens. adj. 100 mm (R)											
<b>7</b> Direct diffuse with sens. adj. 400 mm (R - IR)											
<b>8</b> Direct diffuse with sens. adj. 1,000 mm (R)											
<b>9</b> Direct diffuse with sens. adj. 1,500 mm (IR)											
<b>N</b> 5 m polarized with sensitive adjustment											
<b>C</b> 7 m reflective with sensitive adjustment											
<b>G</b> 0.05...1.5 m (R) or 0.05...1.0 m (IR) for transparent objects with adjustment											
<b>L</b> 0.4...4 m for transparent objects with adjustment											
<b>HD</b> 20 m (R) or 30 m (IR) emitter + receiver kit with adjustment											
<b>H</b> Emitter with adjustment <sup>(1)</sup>											
<b>D</b> 20 m (R) or 30 m (IR) receiver without adjustment <sup>(1)</sup>											
<b>S</b> 30...200 mm (R) or 30...400 mm (IR) background suppression											
<b>0</b> Emitter without check, LO/DO selectable											
<b>0</b> Emitter											
<b>P</b> PNP output											
<b>N</b> NPN output											
<b>0</b> Plastic housing											
<b>A</b> 2 m cable exit											
<b>F</b> M8 4 pin plug cable exit											
<b>Standard model</b>											
<b>VE</b> M12 pig-tail output <sup>(1)</sup>											
<b>VF</b> M8 3 pin pig tail output <sup>(1)</sup>											
<b>VG</b> M8 4 pin pig tail output <sup>(1)</sup>											
<b>80</b> 20 cm cable length (pig-tail models) <sup>(1)</sup>											
<b>Standard model</b>											

<sup>(1)</sup> These products may have limitations in terms of delivery or on the quantities to be ordered



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## available models

function	distance	emission	adjustment	output type	housing	Models	
						PNP + NO/NC	NPN + NO/NC
Direct diffuse	100 mm	Red	yes	cable	plastic	QMRB/0P-0A	QMRB/0N-0A
				M8 connector		QMRB/0P-0F	QMRB/0N-0F
	400 mm	Red		cable		QMR7/0P-0A	QMR7/0N-0A
				M8 connector		QMR7/0P-0F	QMR7/0N-0F
	1,000 mm	IR		cable		QMI7/0P-0A	QMI7/0N-0A
				M8 connector		QMI7/0P-0F	QMI7/0N-0F
	1,500 mm	Red		cable		QMR8/0P-0A	QMR8/0N-0A
				M8 connector		QMR8/0P-0F	QMR8/0N-0F
	5 m	IR		cable		QMI9/0P-0A	QMI9/0N-0A
				M8 connector		QMI9/0P-0F	QMI9/0N-0F
	7 m	Red		cable		QMRN/0P-0A	QMRN/0N-0A
				M8 connector		QMRN/0P-0F	QMRN/0N-0F
0.05 - 1.5 m	IR	cable	QMIG/0P-0A	QMIG/0N-0A			
		M8 connector	QMIG/0P-0F	QMIG/0N-0F			
0.05 - 1.0 m	Red	cable	QMIG/0P-0A	QMIG/0N-0A			
		M8 connector	QMIG/0P-0F	QMIG/0N-0F			
0.4 - 4 m	IR	cable	QMRL/0P-0A	QMRL/0N-0A			
		M8 connector	QMRL/0P-0F	QMRL/0N-0F			
20 m	Red	no	cable	QMRH/00-0A			
			M8 connector	QMRH/00-0F			
30 m	IR	yes	cable	QMRD/0P-0A	QMRD/0N-0A		
			M8 connector	QMRD/0P-0F	QMRD/0N-0F		
30 - 200 mm	Red	yes	cable	QMRHD/0P-0A	QMRHD/0N-0A		
			M8 connector	QMRHD/0P-0F	QMRHD/0N-0F		
30 - 400 mm	IR	no	cable	QMIH/00-0A			
			M8 connector	QMIH/00-0F			
30 - 200 mm	Red	yes	cable	QMID/0P-0A	QMID/0N-0A		
			M8 connector	QMID/0P-0F	QMID/0N-0F		
30 - 400 mm	IR	yes	cable	QMIHD/0P-0A	QMIHD/0N-0A		
			M8 connector	QMIHD/0P-0F	QMIHD/0N-0F		
30 - 200 mm	Red	yes	cable	QMRS/0P-0A	QMRS/0N-0A		
			M8 connector	QMRS/0P-0F	QMRS/0N-0F		
30 - 400 mm	IR	yes	cable	QMIS/0P-0A	QMIS/0N-0A		
			M8 connector	QMIS/0P-0F	QMIS/0N-0F		

## technical specifications (direct diffuse models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

			
models	QMRB/0*-0*	QMR7/0*-0*	QMR8/0*-0*
			
nominal sensing distance $S_n$	100 mm <sup>(1)</sup>	400 mm <sup>(1)</sup>	1,000 mm <sup>(2)</sup>
minimum working distance	-		
sensitivity adjustment	yes		
emission	red (630 nm)		
differential travel	≤ 10%		
repeat accuracy	5%		
light-dark selection	yes		
$U_e$ operating voltage	10 ... 30 Vdc		
ripple	≤ 10%		
no-load supply current	≤ 10 $\mu$ A		
load current	≤ 100 mA		
supply current	≤ 30 mA		
output voltage drop $U_d$	2 V max @ 100 mA		
maximum load current	≤ 100 mA		
output type	PNP or NPN NO or NC		
switching frequency $f$	1 kHz	2 kHz	1 kHz
time delay before availability	≤ 100 ms		
supply electrical protections	polarity reversal, over voltage pulses		
output electrical protection	short circuit (auto reset) , over voltage pulses		
operative temperature range	- 25 ...+ 70° C (without freeze)		
thermal drift	- 30 ...+ 80° C		
LED indicators	yellow (LO/DO output state) green (Excess gain)		
interference external light	10.000 Lux (sunlight) 3.000 Lux (incandescence lamp)		
protection degree	IP67 (EN60529) <sup>(3)</sup>		
housing material	PA66		
optic material	PMMA		
tightening torque	1 Nm <sup>(4)</sup>		
weight (approx)	52 g cable, 10 g M8 plug		

<sup>(1)</sup> White target *Kodak* 90% 200 x 200 mm    <sup>(2)</sup> White target *Kodak* 90% 400 x 400 mm

<sup>(3)</sup> Protection guaranteed only with plug cable well mounted

<sup>(4)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)



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## technical specifications (direct diffuse models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

		
models	QMI7/0*-0*	QMI9/0*-0*
		
nominal sensing distance $S_n$	400 mm <sup>(1)</sup>	1,500 mm <sup>(2)</sup>
minimum working distance	-	
sensitivity adjustment	yes	
emission	Infrared (850 nm)	
differential travel	≤ 10%	
repeat accuracy	5%	
light-dark selection	yes	
$U_e$ operating voltage	10 ... 30 Vdc	
ripple	≤ 10%	
no-load supply current	≤ 45 mA	
load current	≤ 100 mA	
leakage current	≤ 10 μA	
output voltage drop $U_d$	2 V max @ 100 mA	
maximum load current	≤ 100 mA	
output type	PNP or NPN NO or NC	
switching frequency $f$	2 kHz	1 kHz
time delay before availability	≤ 100 ms	
supply electrical protections	polarity reversal, over voltage pulses	
output electrical protection	short circuit (auto reset) , over voltage pulses	
operative temperature range	- 25 ... + 70° C (without freeze)	
thermal drift	- 30 ... + 80° C	
LED indicators	yellow (output state LO/DO) green (Excess gain)	
interference external light	10,000 lux sunlight	
protection degree	IP67 (EN60529) <sup>(3)</sup>	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm <sup>(4)</sup>	
weight (approx)	52 g cable, 10 g M8 plug	

<sup>(1)</sup> White target *Kodak* 90% 200 x 200 mm      <sup>(2)</sup> White target *Kodak* 90% 400 x 400 mm

<sup>(3)</sup> Protection guaranteed only with plug cable well mounted

<sup>(4)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)



# technical specifications (background suppression models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

		
models	QMRS/0*-0*	QMIS/0*-0*
		
nominal sensing distance $S_n$	30...200 mm <sup>(1)</sup>	30...400 mm <sup>(1)</sup>
minimum working distance	5 mm	
sensitivity adjustment	yes (4 turns)	
emission	red (630 nm)	infrared (850 nm)
differential travel	≤ 10%	
repeat accuracy	5%	
light-dark selection	yes	
$U_e$ operating voltage	10 ... 30 Vdc	
ripple	≤ 10%	
no-load supply current	≤ 30 mA	≤ 45 mA
load current	≤ 100 mA	
leakage current	≤ 10 μA	
output voltage drop $U_d$	2 V max @ 100 mA	
maximum load current	≤ 100 mA	
output type	PNP or NPN NO or NC	
switching frequency $f$	1 kHz	
time delay before availability	≤ 100 ms	
supply electrical protections	polarity reversal, over voltage pulses	
output electrical protection	short circuit (auto reset) , over voltage pulses	
operative temperature range	- 25 ...+ 70° C (without freeze)	
thermal drift	- 30 ...+ 80° C	
LED indicators	Yellow (output state LO/DO)	
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp	
protection degree	IP67 (EN60529) <sup>(2)</sup>	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm <sup>(3)</sup>	
weight (approx)	52 g cable, 10 g M8 plug	

<sup>(1)</sup> White target *Kodak* 90% 200 x 200 mm      <sup>(2)</sup> White target *Kodak* 90% 400 x 400 mm

<sup>(3)</sup> Protection guaranteed only with plug cable well mounted

<sup>(4)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)



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## technical specifications (models for transparent objects)



according to IEC EN 60947-5-2 and IEC EN 60947-5-7

models	QMRG/0*-0*	QMIG/0*-0*	QMRL/0*-0*
nominal sensing distance $S_n$	1,5 m	1 m	4 m
minimum working distance	0.05 m		0.4 m
sensitivity adjustment	yes		
emission	red (630 nm)	infrared (850 nm)	red (630 nm)
differential travel	$\leq 10\%$		
repeat accuracy	5%		
light-dark selection	yes		
$U_e$ operating voltage	10 ... 30 Vdc		
ripple	$\leq 10\%$		
no-load supply current	$\leq 30$ mA	$\leq 45$ mA	$\leq 30$ mA
load current	$\leq 100$ mA		
leakage current	$\leq 10$ $\mu$ A		
output voltage drop $U_d$	2 V max @ 100 mA		
maximum load current	$\leq 100$ mA		
output type	PNP or NPN NO or NC		
switching frequency $f$	2 kHz		
time delay before availability	$\leq 100$ ms		
supply electrical protections	polarity reversal, over voltage pulses		
output electrical protection	short circuit (auto reset) , over voltage pulses		
operative temperature range	- 25 ...+ 70° C (without freeze)		
thermal drift	- 30 ...+ 80° C		
LED indicators	yellow (output state LO/DO)		
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp		
protection degree	IP67 (EN60529) <sup>(5)</sup>		
housing material	PA66		
optic material	PMMA		
tightening torque	1 Nm <sup>(6)</sup>		
weight (approx)	52 g cable, 10 g M8 plug		

<sup>(3)</sup> With RL 110 reflector EG = 2<sup>(4)</sup> With RL 110 reflector EG = 2, use RL113G and RL116<sup>(6)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)<sup>(5)</sup> Protection guaranteed only with plug cable well mounted<sup>(7)</sup> Not included in model QMRG/\*\*-\*\*

## technical specifications (polarized models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

	
<b>models</b>	<b>QMRN/0*-0*</b>
	
nominal sensing distance $S_n$	5 m <sup>(1)</sup>
minimum working distance	0.02 m @ RL 110
sensitivity adjustment	yes
emission	red (630 nm)
differential travel	≤ 10%
repeat accuracy	5%
light-dark selection	yes
$U_e$ operating voltage	10 ... 30 Vdc
ripple	≤ 10%
no-load supply current	≤ 30 mA
load current	≤ 100 mA
leakage current	≤ 10 μA
output voltage drop $U_d$	2 V max @ 100 mA
maximum load current	≤ 100 mA
output type	PNP or NPN NO or NC
switching frequency $f$	2 kHz
time delay before availability	≤ 100 ms
supply electrical protections	polarity reversal, over voltage pulses
output electrical protection	short circuit (auto reset), over voltage pulses
operative temperature range	- 25 ...+ 70° C (without freeze)
thermal drift	- 30 ...+ 80° C
LED indicators	yellow (output state LO/DO) green (Excess gain)
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp
protection degree	IP67 (EN60529) <sup>(5)</sup>
housing material	PA66
optic material	PMMA
tightening torque	1 Nm <sup>(6)</sup>
weight (approx)	52 g cable, 10 g M8 plug

<sup>(3)</sup> With RL 110 reflector EG = 2

<sup>(5)</sup> Protection guaranteed only with plug cable well mounted

<sup>(6)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)

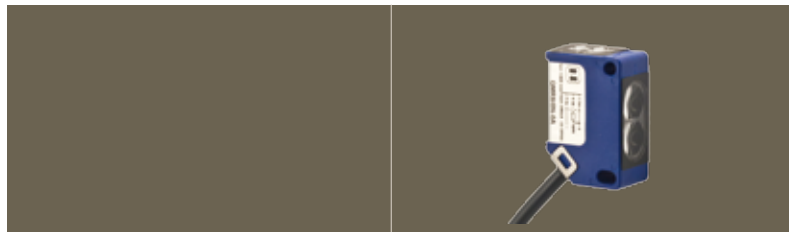


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## technical specifications (retroreflection models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7



models

QMIC/0\*-0\*







nominal sensing distance $S_n$	7 m <sup>(1)</sup>
minimum working distance	0.02 m @ RL 110
sensitivity adjustment	yes
emission	infrared (850 nm)
differential travel	≤ 10%
repeat accuracy	5%
light-dark selection	yes
$U_e$ operating voltage	10 ... 30 Vdc
ripple	≤ 10%
no-load supply current	≤ 45 mA
load current	≤ 100 mA
leakage current	≤ 10 μA
output voltage drop $U_d$	2 V max @ 100 mA
maximum load current	≤ 100 mA
output type	PNP or NPN NO or NC
switching frequency $f$	2 kHz
time delay before availability	≤ 100 ms
supply electrical protections	polarity reversal, over voltage pulses
output electrical protection	short circuit (auto reset) , over voltage pulses
operative temperature range	- 25 ...+ 70° C (without freeze)
thermal drift	- 30 ...+ 80° C
LED indicators	yellow (output state LO/DO) green (Excess gain)
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp
protection degree	IP67 (EN60529) <sup>(5)</sup>
housing material	PA66
optic material	PMMA
tightening torque	1 Nm <sup>(6)</sup>
weight (approx)	52 g cable, 10 g M8 plug

<sup>(5)</sup> Protection guaranteed only with plug cable well mounted

<sup>(6)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)

## technical specifications (through beam models)

according to IEC EN 60947-5-2 and IEC EN 60947-5-7

		
models	QMRH/0*-0*	QMRD/0*-0*
		
nominal sensing distance $S_n$	20 m <sup>(1)</sup>	
minimum working distance	-	
sensitivity adjustment	yes	-
emission	red (630 nm)	
differential travel	$\leq 10\%$	
repeat accuracy	5%	
light-dark selection	yes	
$U_e$ operating voltage	10 ... 30 Vdc	
ripple	$\leq 10\%$	
no-load supply current	$\leq 30$ mA	
load current		$\leq 100$ mA
leakage current		$\leq 10$ $\mu$ A
output voltage drop $U_d$		2 V max @ 100 mA
maximum load current		$\leq 100$ mA
output type		PNP or NPN NO or NC
switching frequency $f$	2 kHz	
time delay before availability	$\leq 100$ ms	
supply electrical protections		polarity reversal, over voltage pulses
output electrical protection		short circuit (auto reset), over voltage pulses
operative temperature range	- 25 ...+ 70° C (without freeze)	
thermal drift	- 30 ...+ 80° C	
LED indicators	yellow (output state LO/DO) green (Excess gain)	
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp	
protection degree	IP67 (EN60529) <sup>(5)</sup>	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm <sup>(6)</sup>	
weight (approx)	52 g cable, 10 g M8 plug	

<sup>(5)</sup> Protection guaranteed only with plug cable well mounted

<sup>(6)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)







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## specifiche (through beam models)

in accordo con IEC EN 60947-5-2 e IEC EN 60947-5-7

		
models	QMIH/0*-0*	QMID/0*-0*
		
nominal sensing distance $S_n$	30 m <sup>(1)</sup>	
minimum working distance	-	
sensitivity adjustment	yes	-
emission	infrared (850 nm)	
differential travel	$\leq 10\%$	
repeat accuracy	5%	
light-dark selection	yes	
$U_e$ operating voltage	10 ... 30 Vdc	
ripple	$\leq 10\%$	
no-load supply current	$\leq 45$ mA	
load current	$\leq 100$ mA	
leakage current	$\leq 10$ $\mu$ A	
output voltage drop $U_d$	2 V max @ 100 mA	
maximum load current	$\leq 100$ mA	
output type	PNP or NPN NO or NC	
switching frequency $f$	2 kHz	
time delay before availability	$\leq 100$ ms	
supply electrical protections	polarity reversal, over voltage pulses	
output electrical protection	short circuit (auto reset) , over voltage pulses	
operative temperature range	- 25 ...+ 70° C (without freeze)	
thermal drift	- 30 ...+ 80° C	
LED indicators	yellow (output state LO/DO) green (Excess gain)	
interference external light	10,000 lux sunlight 3,000 lux incandescent lamp	
protection degree	IP67 (EN60529) <sup>(5)</sup>	
housing material	PA66	
optic material	PMMA	
tightening torque	1 Nm <sup>(6)</sup>	
weight (approx)	52 g cable, 10 g M8 plug	

<sup>(1)</sup> White target *Kodak* 90% 200 x 200 mm    <sup>(2)</sup> White target *Kodak* 90% 400 x 400 mm    <sup>(3)</sup> With RL 110 reflector EG = 2

<sup>(4)</sup> With RL 110 reflector EG = 2, use RL113G and RL116    <sup>(5)</sup> Protection guaranteed only with plug cable well mounted

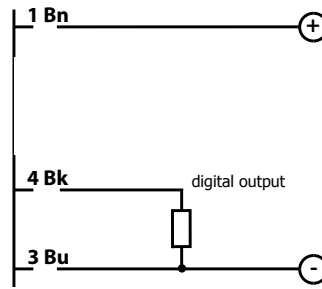
<sup>(6)</sup> Screws, nuts and mounting brackets are not included with the sensor (accessories)    <sup>(7)</sup> Not included in model QMRG/\*\*-\*\*

- BN** brown
- BU** blue
- BK** black
- WH** white

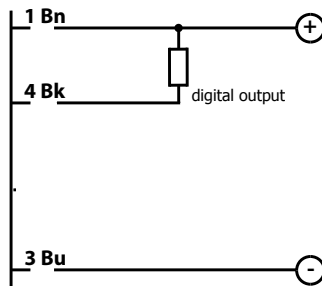
## electrical diagrams of connections

	<b>M8 - 4 pin</b>	
	<p>QMR*/0*-0F &amp; QMR*/0*-0AVG80</p> <p>QMI*/0*-0F &amp; QMI*/0*-0AVG80</p>	
	<p>QMRH/0*-0F &amp; QMRH/0*-0AVG80</p> <p>QMIH/0*-0F &amp; QMIH/0*-0AVG80</p>	
	<b>M12-pig tail</b>	
	<p>QMR*/0*-0F &amp; QMR*/0*-0AVG80</p> <p>QMI*/0*-0F &amp; QMI*/0*-0AVG80</p>	
	<p>QMRH/0*-0F &amp; QMRH/0*-0AVG80</p> <p>QMIH/0*-0F &amp; QMIH/0*-0AVG80</p>	
	<b>M8 - 3 pin - pig-tail</b>	
	<p>QMR*/0*-0F &amp; QMR*/0*-0AVG80</p> <p>QMI*/0*-0F &amp; QMI*/0*-0AVG80</p>	
	<p>QMRH/0*-0F &amp; QMRH/0*-0AVG80</p> <p>QMIH/0*-0F &amp; QMIH/0*-0AVG80</p>	

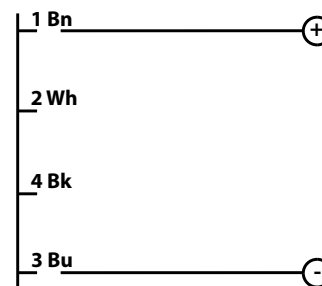
Background suppression, polarized, retroreflection, for transparent, diffuse reflection and receiver with PNP output



Background suppression, polarized, retroreflection, for transparent, diffuse reflection and receiver with NPN output



Emitter



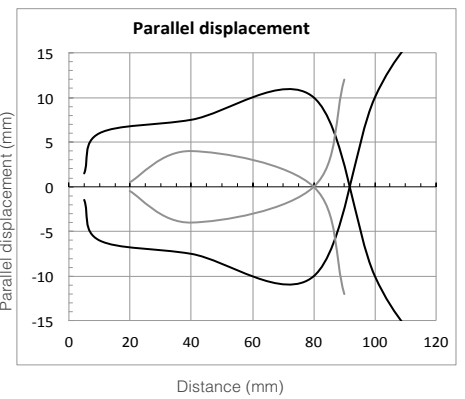
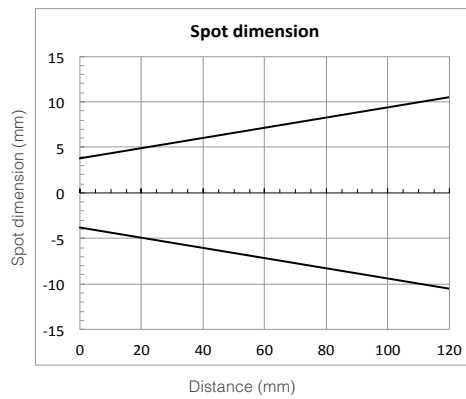
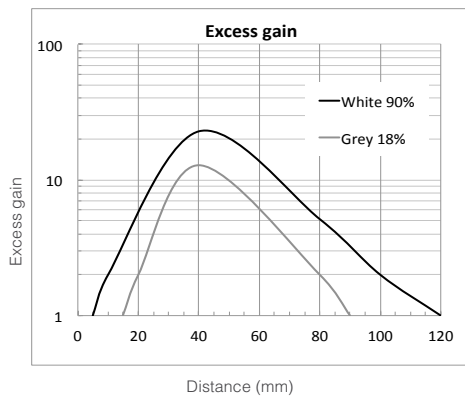


Products

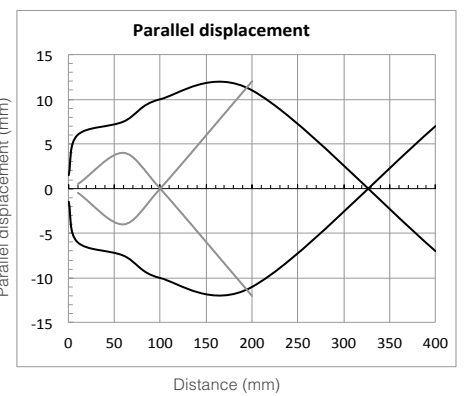
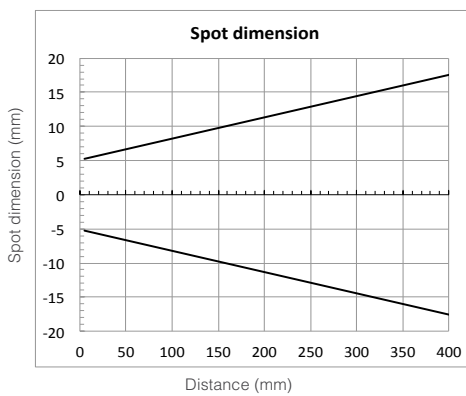
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## response diagrams

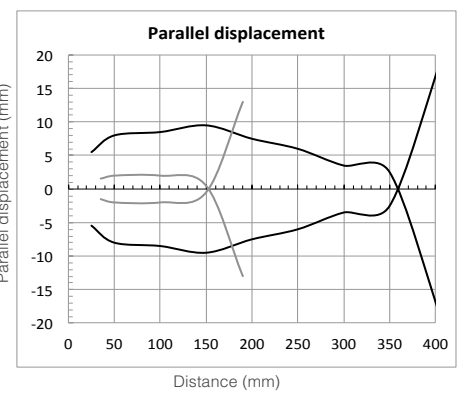
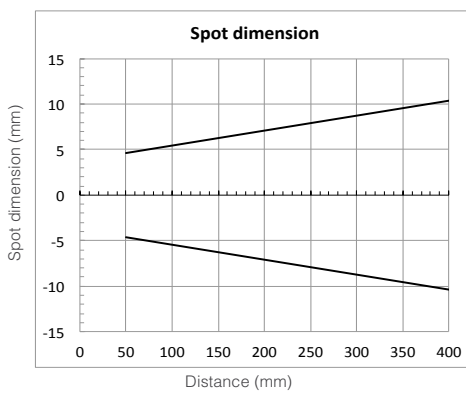
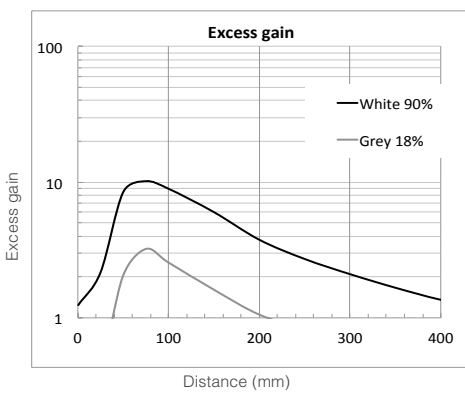
QMRB/0<sup>+</sup>-0<sup>+++</sup>



QMR7/0<sup>+</sup>-0<sup>+++</sup>

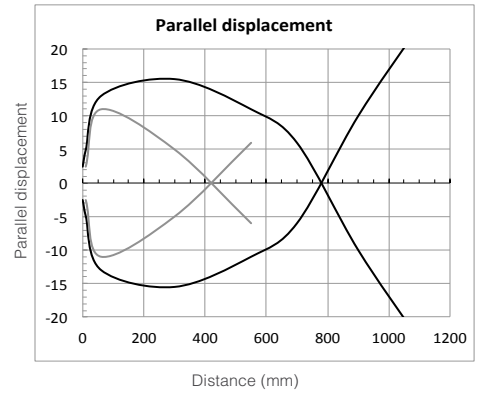
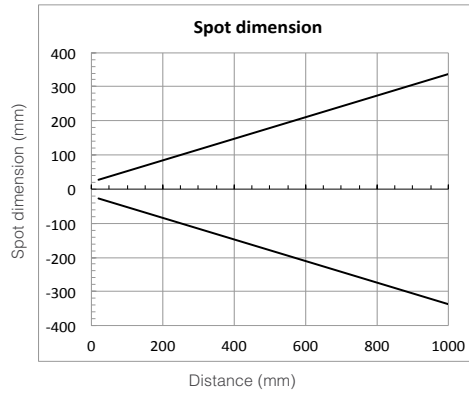
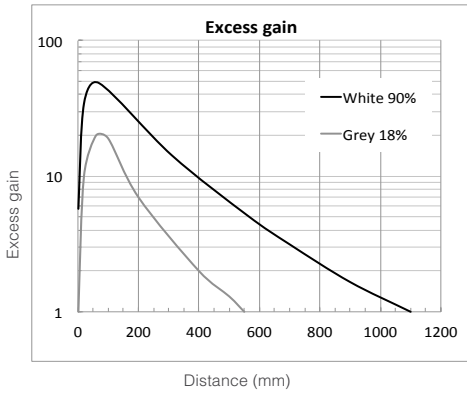


QMI7/0<sup>+</sup>-0<sup>+++</sup>

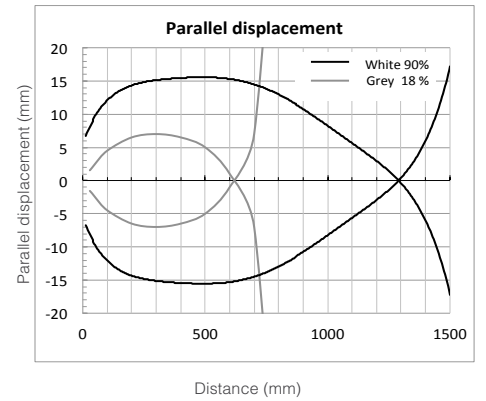
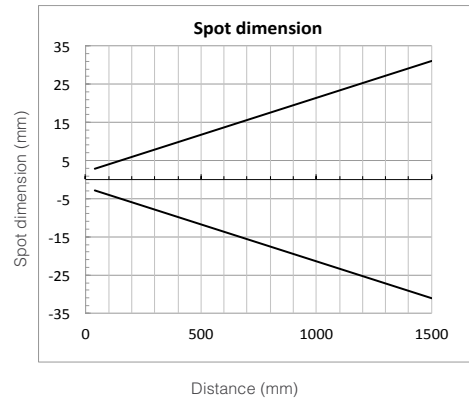
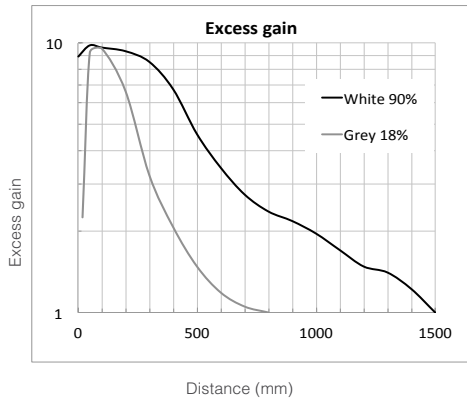




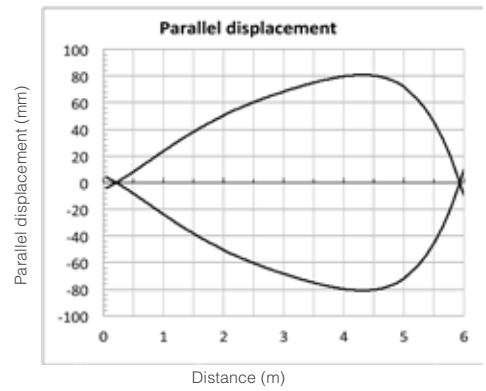
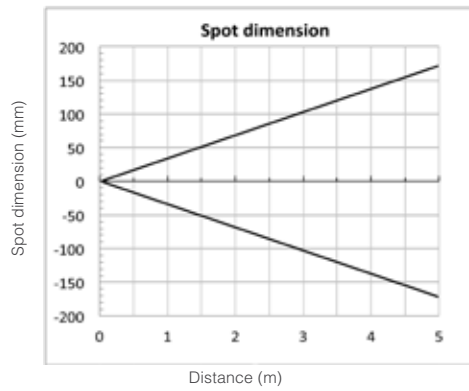
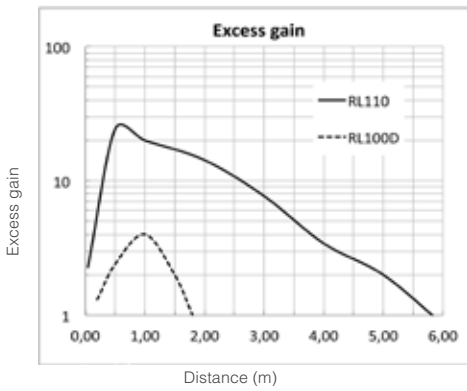
QMR8/0\*-0\*\*\*



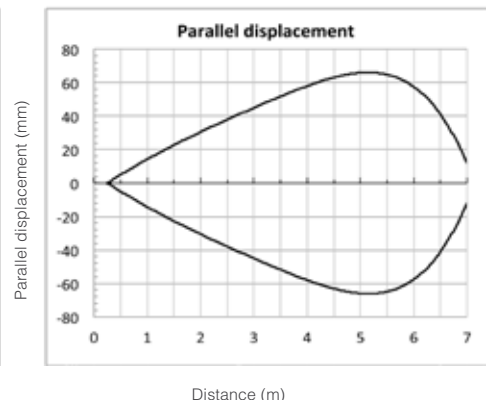
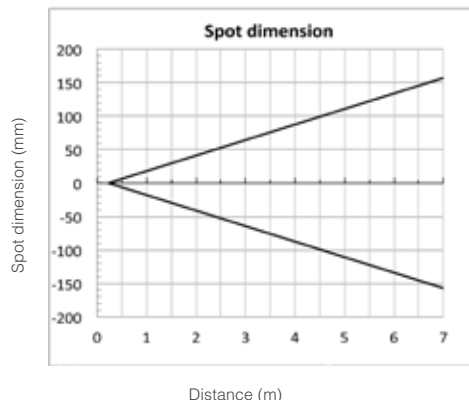
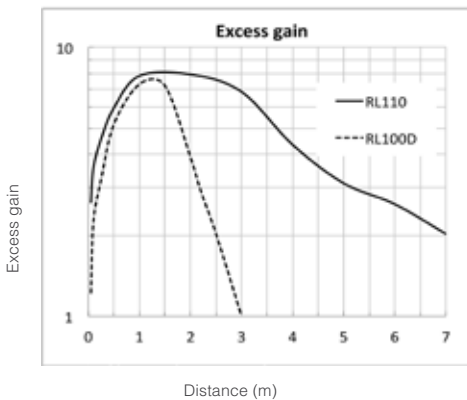
QMI9/0\*-0\*\*\*



QMRN/0\*-0\*\*\*



QMIC/0\*-0\*\*\*

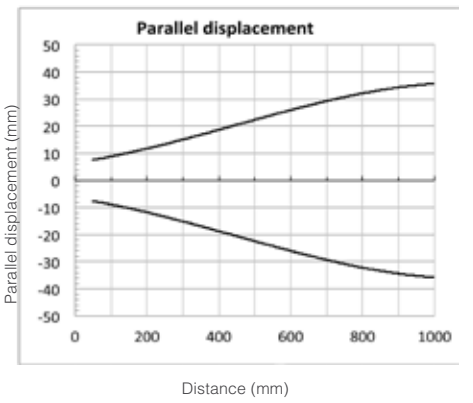
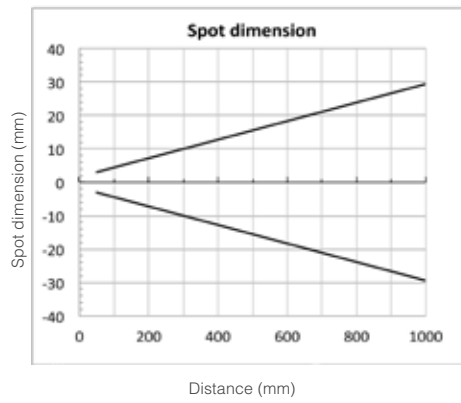
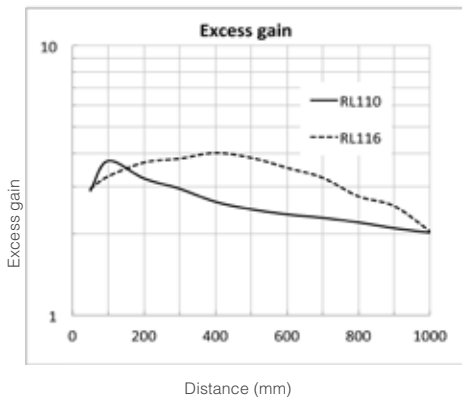




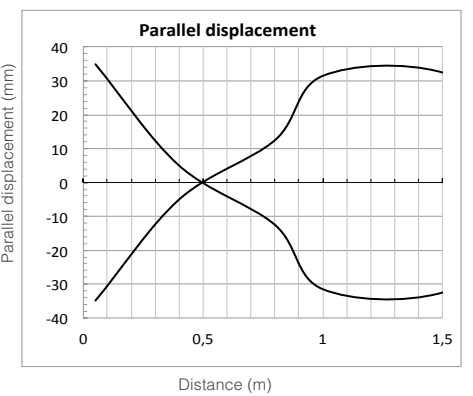
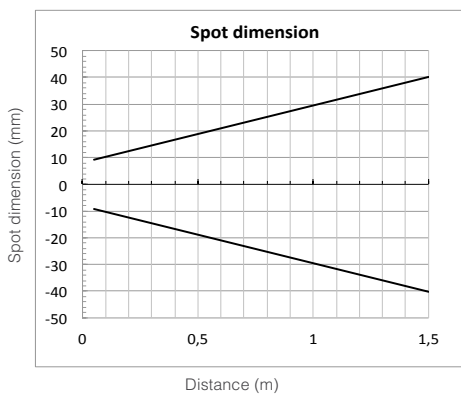
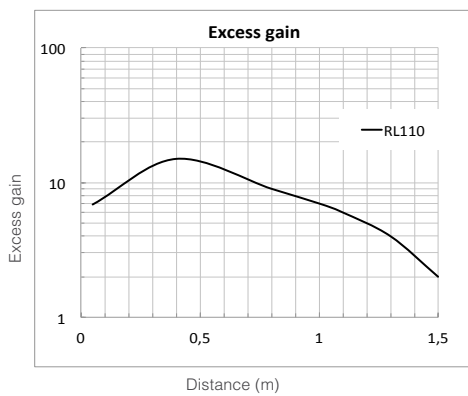
Products

QM  
cubic

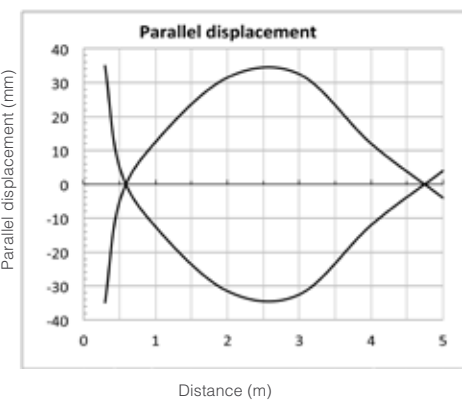
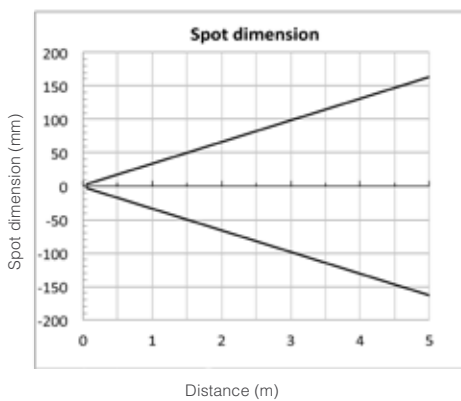
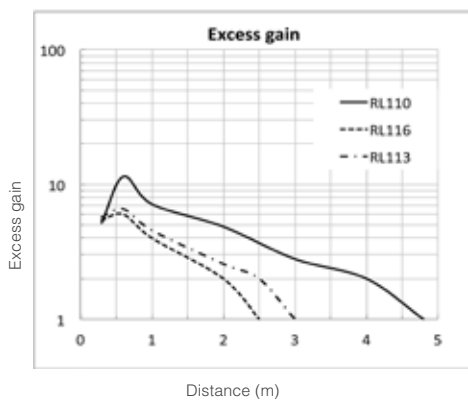
QMIG/0°-0\*\*\*

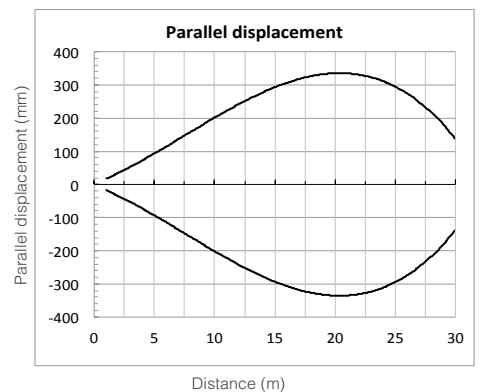
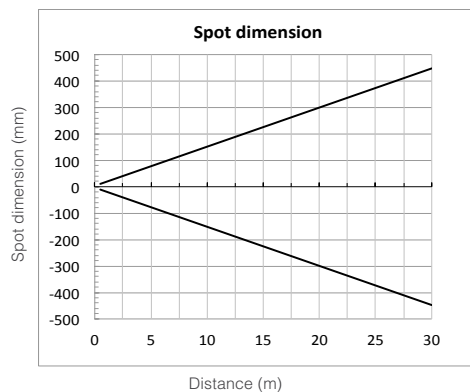
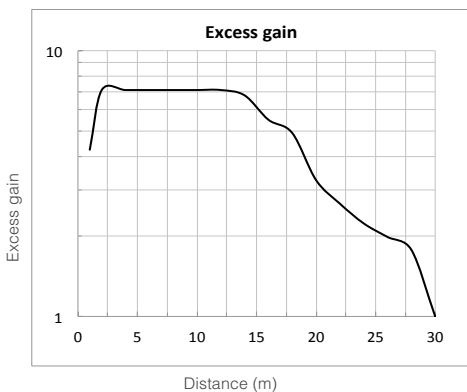
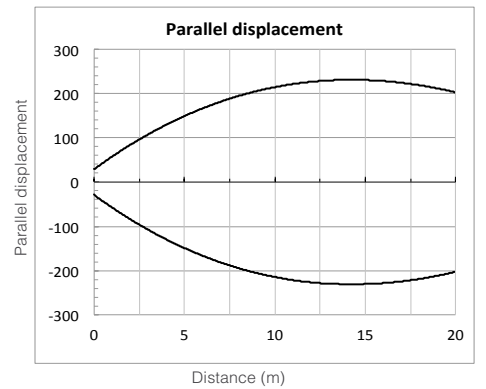
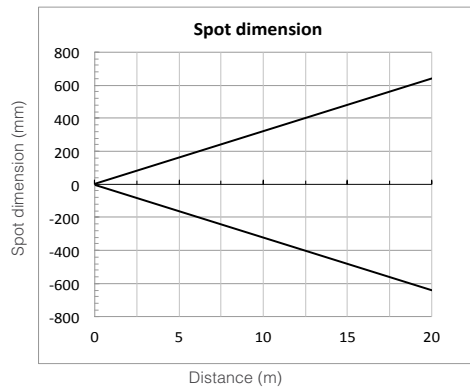
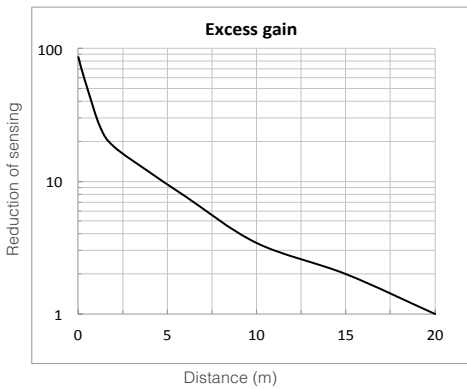
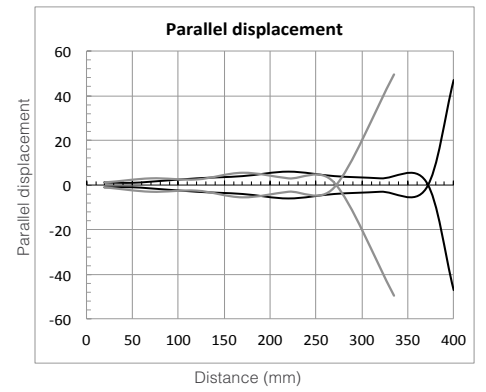
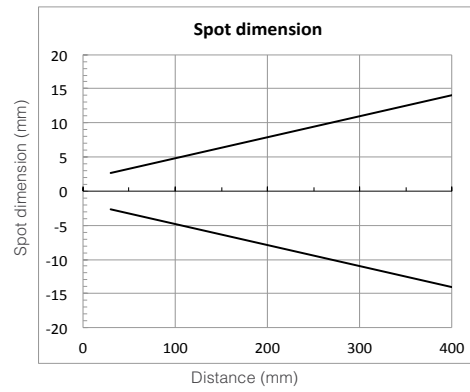
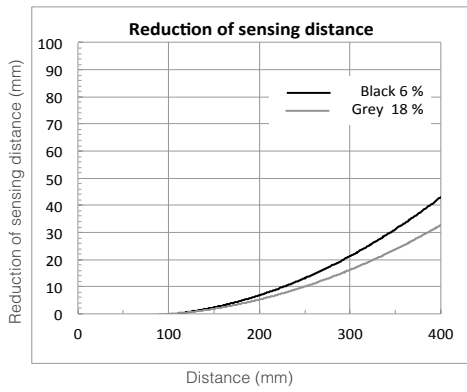
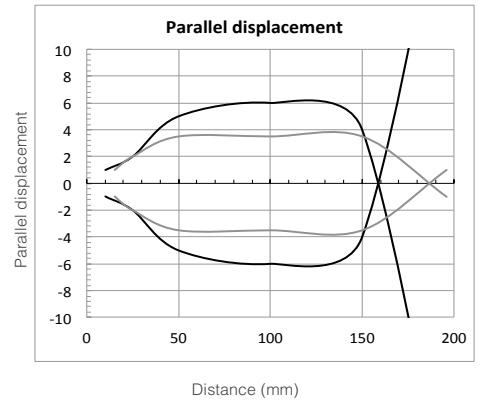
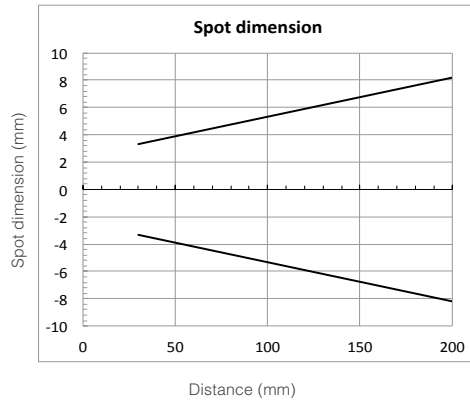
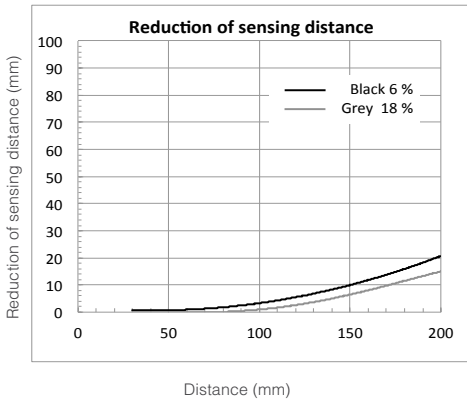


QMRG/0°-0\*\*\*



QMRL/0°-0\*\*\*







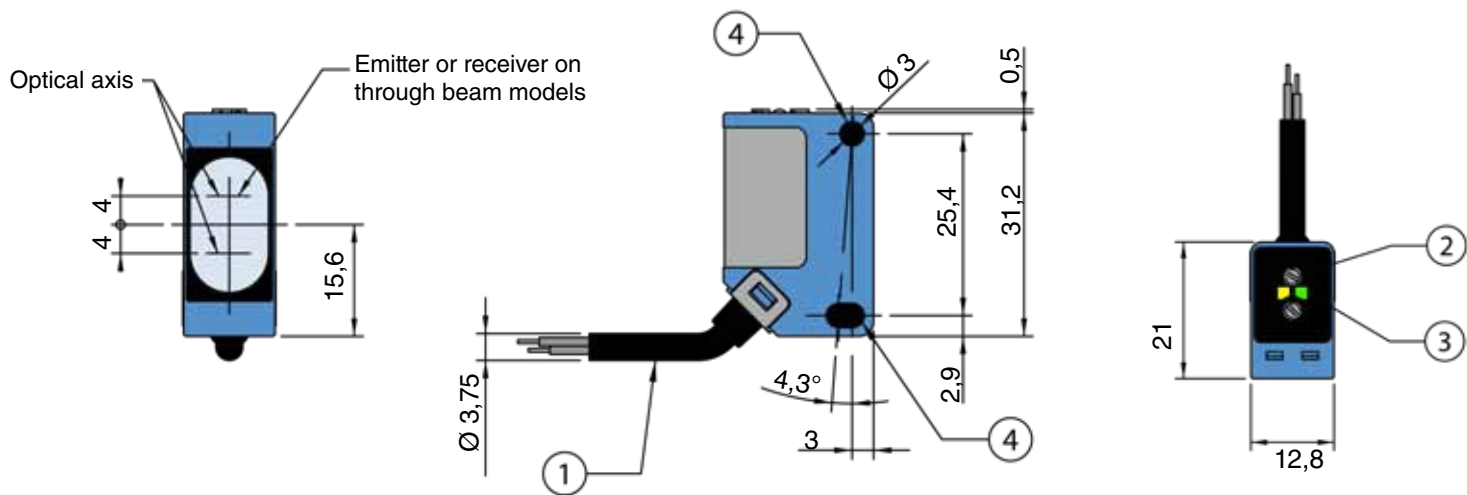
Products

QM  
cubic

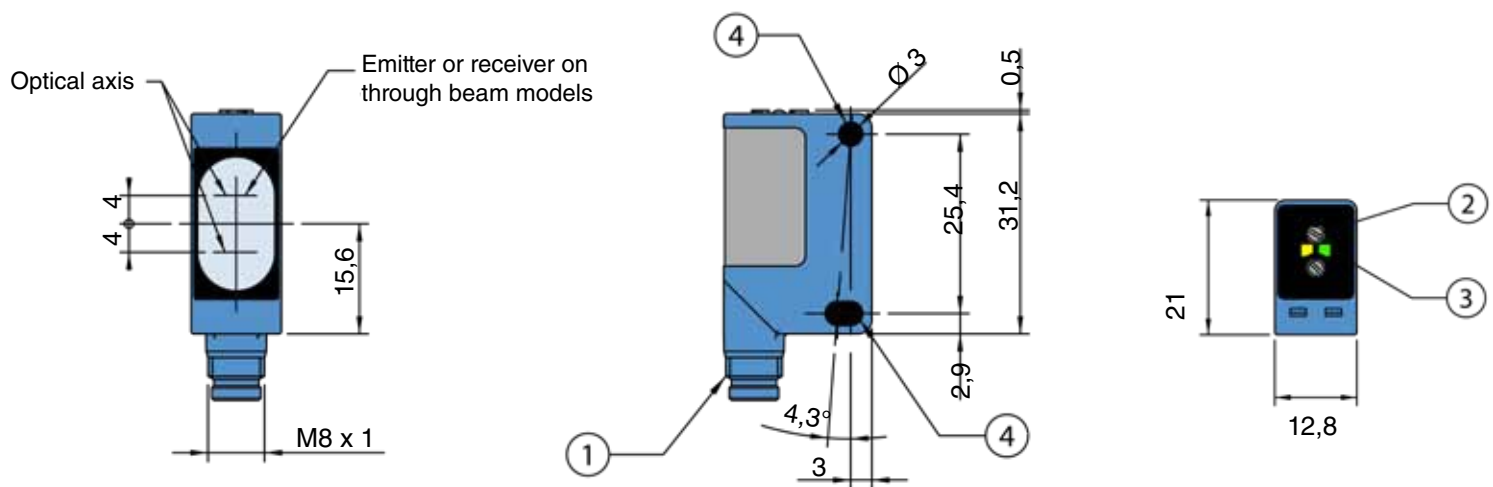
## dimensions

- ① Cable exit   
 ② Trimmer   
 ③ Led   
 ④ Mounting holes

### Cable exit QM

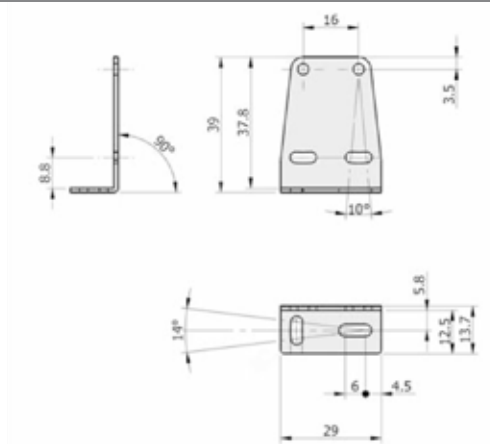


### Connector exit QM

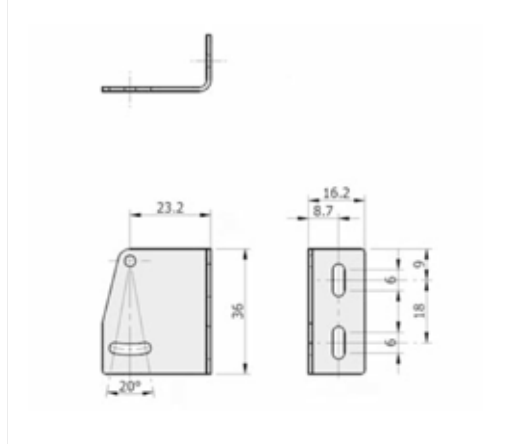


model	description
ST 101	L vertical mounting bracket
ST 102	L side mounting bracket
ST 103	vertical mounting bracket with protective cover
ST 104	horizontal mounting bracket with protective cover
STQM0	vertical and horizontal shutters
STQMS	screws - nuts - lockwashers

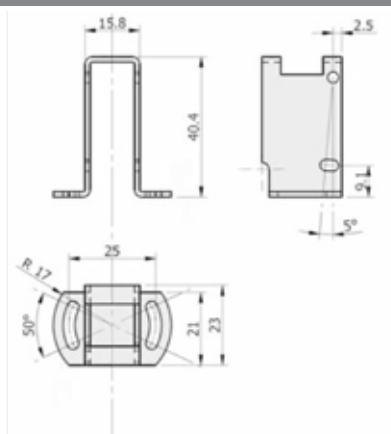
ST 101



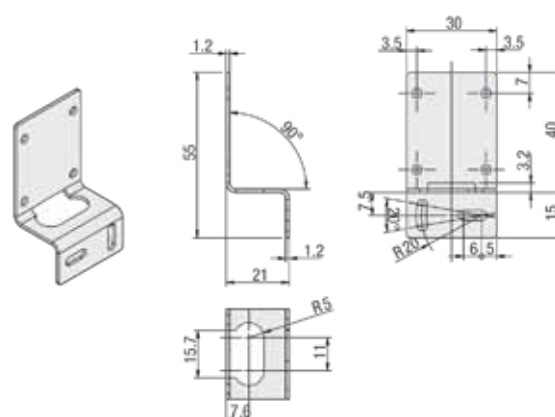
ST 102



ST 103<sup>(1)</sup>



ST 104<sup>(1)</sup>



STQM0



Vertical and horizontal diaphragms (0.5 - 1.2)  
Packing units 2

Dia.	0,5	1	2
Sn (EG=1)	1,5 m	2 m	4,5 m
Sn (EG=2)	1 m	1,5 m	4 m
Min Ø	0,8 mm	1,5 mm	2,5 mm

STQMS<sup>(2)</sup>



20 Cross-slotted screw M3x20  
20 Hexagon nuts M3  
20 Lockwashers Ø3

<sup>(1)</sup> Can be used only for cable or pig-tail exit models

<sup>(2)</sup> Components not present in standard sensors packaging



Catalogue  
Photoelectric sensors



CAT3EQM1375401 QM CUBIC MINIATURIZED PHOTOELECTRIC SENSOR QM ENG ED.01/2014

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