

FUWEI

## FGM-CB Series

# Ultra-compact safety light curtain

Light of FGM-CB series is emitted from front side. The thickness of curtains is only 13mm which is better to save installation space and easily align. Strong ability to resist light and electromagnetic interference. Low power to save electricity, short response time to ensure reliability.



## Product Feature

- Small and ultra-thin size is only 28\*13mm.
- Quick response time, the fastest response time < 1ms.
- Low wide voltage power supply is DC 10V-30V.
- Good performance to resist electromagnetic interference, and resist influence by electromagnetic of various equipment motors.
- Wire synchronization technology to anti light interference effectively.
- Easy to install and operate.



## Specification

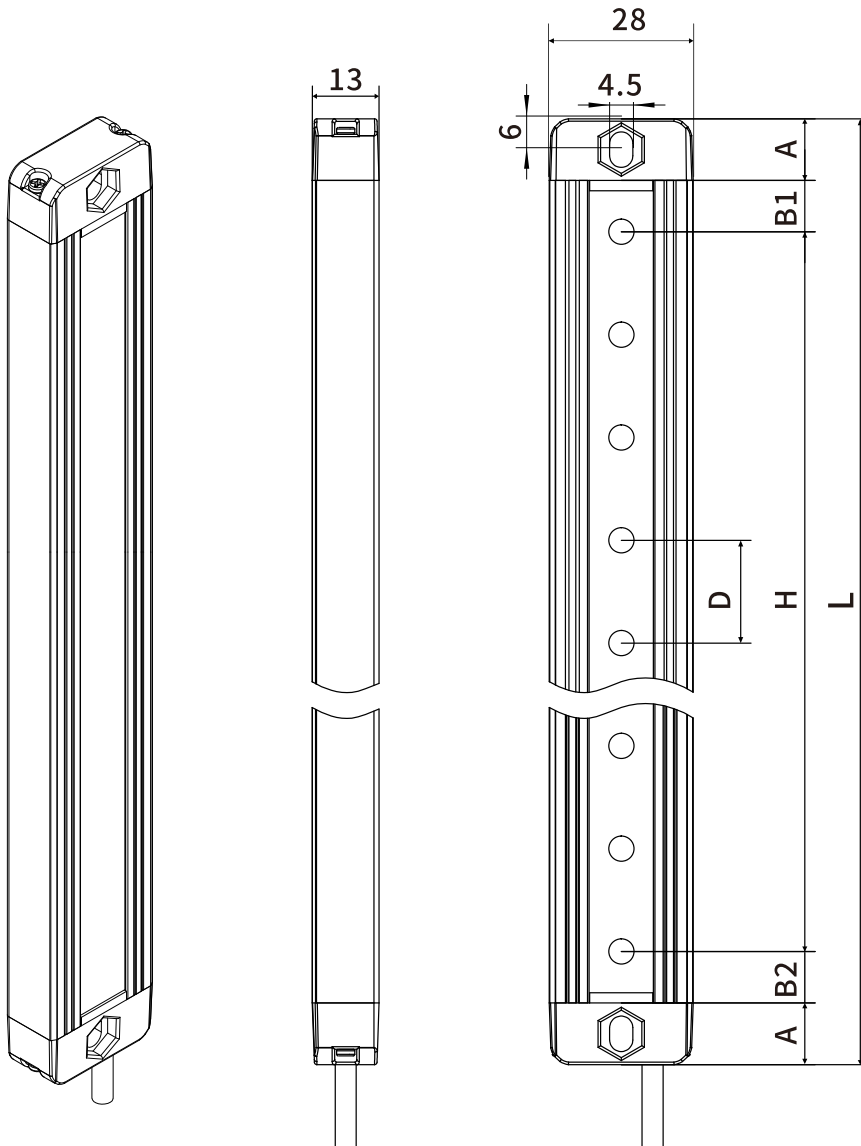
### Specification

Power supply	DC10V~30V
Capacity	<5W
Beam space	10mm, 20mm, 40mm
Resolution	15mm, 25mm, 45mm
Beams	10mm: 8, 12, 16……128 20mm: 4, 6, 8……64 40mm: 4, 6, 8……32
Protective height	Protective height= (N-1)* beam space, N is beam quantity
Wave length	940nm
Response time	Response time = N*0.1ms + 0.4ms (N is beam quantity)
Type of output (OSSD)	PNP/NPN semiconductors, current <200mA, residual voltage: 1V max, (Except voltage influenced by lengthen wire) leakage current: 1mA max.
Protective circuit	Overvoltage protection, power supply reverse polarity protection, Overcurrent protection
Sensing distance	0.1~0.5m, 0.1~1m, 0.1~2m (remark: if have light reflection, please let us know)
Anti-optical interference	10000Lux(angle>5°)
Sensing method	Through-beam type
Synchronization	Wire synchronization
Enclosure material	Aluminum alloy
Enclosure rating	IP54
Housing cross-section	28*13mm
Ambient operating temperature	-10°C~55°C (without freezing)
Storage temperature	-30°C~70°C (without freezing)
Ambient operating humidity	Whentemperature is 20°C, humidity max 85%

## Raster Model Description

<b>FGM-CB13</b>	-	<b>16</b>		<b>20</b>	-	<b>N</b>		<b>C</b>	-	<b>2</b>
↓		↓		↓		↓		↓		↓
<b>Model</b>		<b>Beams</b>		<b>Beams Gap</b>		<b>Output Signal</b>		<b>Output Contact</b>		<b>Sensing Distance</b>
FGM-CB Series		04, 06, 08, 10, 12……		10mm 20mm 40mm		N: NPN P: PNP		C: Normal Close O: Normal Open		05: 0.1-0.5M 2: 0.1-2M 4: 0.1-4M

## Dimensions



A: Upper and bottom cover  
 B1: Upper stop-work range  
 B2: Bottom stop-work range

D: Beam gap  
 H: Protective height  
 L: Total height

A=12mm.

When D=10mm, B1=5mm; B2=25mm.

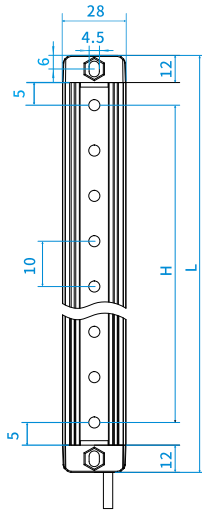
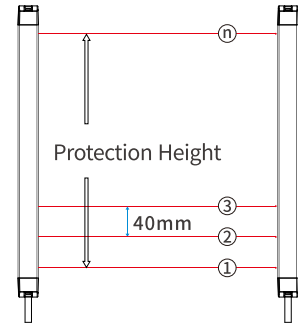
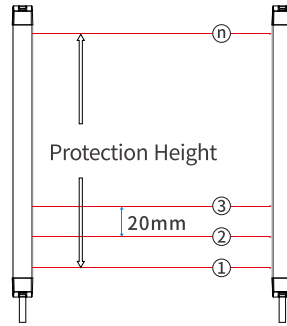
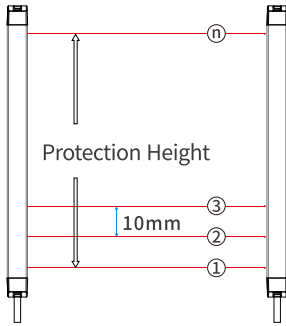
When D=20mm, B1=10mm; B2=10mm.

When D=40mm, B1=10mm; B2=30mm.

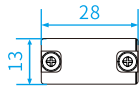
L is total height:  $L=A_1+A_2+B_1+B_2+H$

H is protective height:  $H=(\text{beams}-1) \times \text{beam space}$

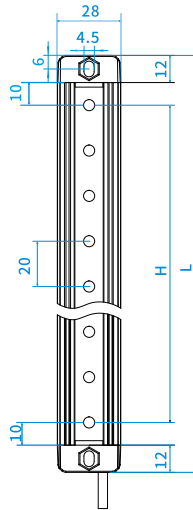
# Dimensions



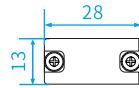
Front View



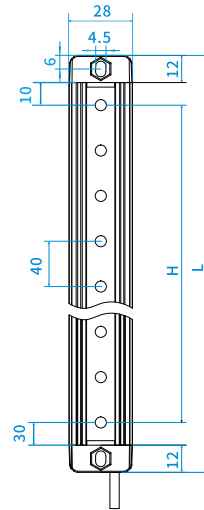
Top View



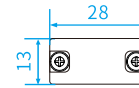
Front View



Top View



Front View



Top View

10mm Beams Pitch

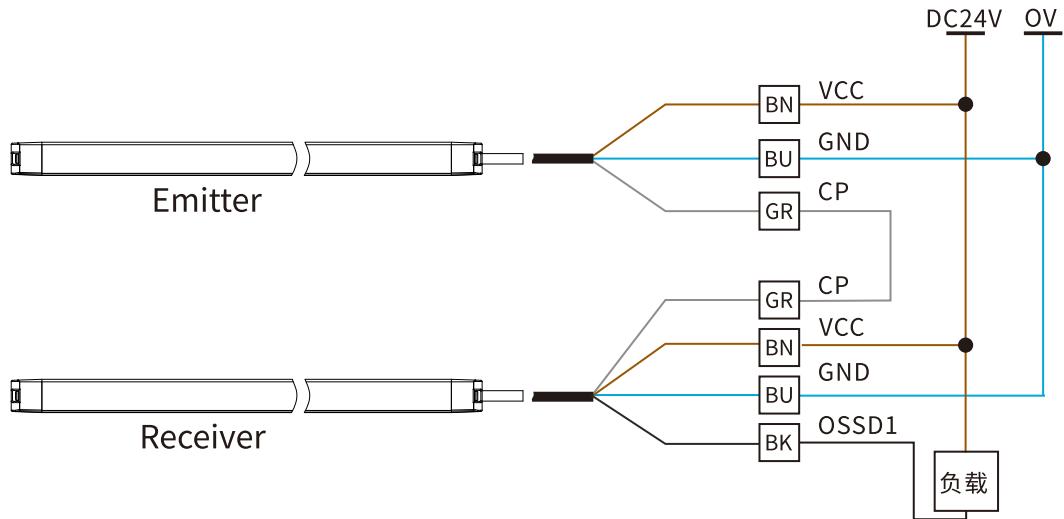
20mm Beams Pitch

40mm Beams Pitch

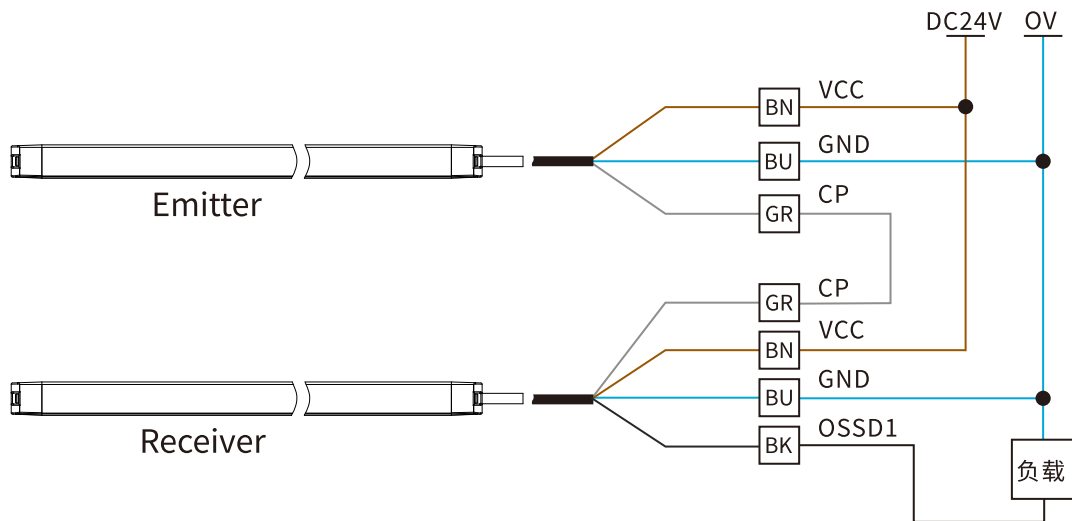
L is total height:  $L=A1+A2+B1+B2+H$

H is protective height:  $H=(beams-1) \times \text{beam space}$

# Wiring Diagram



NPN Output



PNP Output

## Select Sheet-Beams Pitch (10mm)

Beams (n)	Protective Height (mm)	Total Height (mm)	Size (mm)	Model NPN.NO	Model NPN.NC	Model PNP.NO	Model PNP.NC
8	70	104	28*13*104	FGM-CB13-0810-NO-1.5	FGM-CB13-0810-NC-1.5	FGM-CB13-0810-PO-1.5	FGM-CB13-0810-PC-1.5
12	110	144	28*13*144	FGM-CB13-1210-NO-1.5	FGM-CB13-1210-NC-1.5	FGM-CB13-1210-PO-1.5	FGM-CB13-1210-PC-1.5
16	150	184	28*13*184	FGM-CB13-1610-NO-1.5	FGM-CB13-1610-NC-1.5	FGM-CB13-1610-PO-1.5	FGM-CB13-1610-PC-1.5
20	190	224	28*13*224	FGM-CB13-2010-NO-1.5	FGM-CB13-2010-NC-1.5	FGM-CB13-2010-PO-1.5	FGM-CB13-2010-PC-1.5
24	230	264	28*13*264	FGM-CB13-2410-NO-1.5	FGM-CB13-2410-NC-1.5	FGM-CB13-2410-PO-1.5	FGM-CB13-2410-PC-1.5
28	270	304	28*13*304	FGM-CB13-2810-NO-1.5	FGM-CB13-2810-NC-1.5	FGM-CB13-2810-PO-1.5	FGM-CB13-2810-PC-1.5
32	310	344	28*13*344	FGM-CB13-3210-NO-1.5	FGM-CB13-3210-NC-1.5	FGM-CB13-3210-PO-1.5	FGM-CB13-3210-PC-1.5
36	350	384	28*13*384	FGM-CB13-3610-NO-1.5	FGM-CB13-3610-NC-1.5	FGM-CB13-3610-PO-1.5	FGM-CB13-3610-PC-1.5
40	390	424	28*13*424	FGM-CB13-4010-NO-1.5	FGM-CB13-4010-NC-1.5	FGM-CB13-4010-PO-1.5	FGM-CB13-4010-PC-1.5
44	430	464	28*13*464	FGM-CB13-4410-NO-1.5	FGM-CB13-4410-NC-1.5	FGM-CB13-4410-PO-1.5	FGM-CB13-4410-PC-1.5
48	470	504	28*13*504	FGM-CB13-4810-NO-1.5	FGM-CB13-4810-NC-1.5	FGM-CB13-4810-PO-1.5	FGM-CB13-4810-PC-1.5
52	510	544	28*13*544	FGM-CB13-5210-NO-1.5	FGM-CB13-5210-NC-1.5	FGM-CB13-5210-PO-1.5	FGM-CB13-5210-PC-1.5
56	550	584	28*13*584	FGM-CB13-5610-NO-1.5	FGM-CB13-5610-NC-1.5	FGM-CB13-5610-PO-1.5	FGM-CB13-5610-PC-1.5
60	590	624	28*13*624	FGM-CB13-6010-NO-1.5	FGM-CB13-6010-NC-1.5	FGM-CB13-6010-PO-1.5	FGM-CB13-6010-PC-1.5
64	630	664	28*13*664	FGM-CB13-6410-NO-1.5	FGM-CB13-6410-NC-1.5	FGM-CB13-6410-PO-1.5	FGM-CB13-6410-PC-1.5

## Select Sheet-Beams Pitch (20mm)


Beams (n)	Protective Height (mm)	Total Height (mm)	Size (mm)	Model NPN.NO	Model NPN.NC	Model PNP.NO	Model PNP.NC
4	60	104	28*13*104	FGM-CB13-0420-NO-1.5	FGM-CB13-0420-NC-1.5	FGM-CB13-0420-PO-1.5	FGM-CB13-0420-PC-1.5
6	100	144	28*13*144	FGM-CB13-0620-NO-1.5	FGM-CB13-0620-NC-1.5	FGM-CB13-0620-PO-1.5	FGM-CB13-0620-PC-1.5
8	140	184	28*13*184	FGM-CB13-0820-NO-1.5	FGM-CB13-0820-NC-1.5	FGM-CB13-0820-PO-1.5	FGM-CB13-0820-PC-1.5
10	180	224	28*13*224	FGM-CB13-1020-NO-1.5	FGM-CB13-1020-NC-1.5	FGM-CB13-1020-PO-1.5	FGM-CB13-1020-PC-1.5
12	220	264	28*13*264	FGM-CB13-1220-NO-1.5	FGM-CB13-1220-NC-1.5	FGM-CB13-1220-PO-1.5	FGM-CB13-1220-PC-1.5
14	260	304	28*13*304	FGM-CB13-1420-NO-1.5	FGM-CB13-1420-NC-1.5	FGM-CB13-1420-PO-1.5	FGM-CB13-1420-PC-1.5
16	300	344	28*13*344	FGM-CB13-1620-NO-1.5	FGM-CB13-1620-NC-1.5	FGM-CB13-1620-PO-1.5	FGM-CB13-1620-PC-1.5
18	340	384	28*13*384	FGM-CB13-1820-NO-1.5	FGM-CB13-1820-NC-1.5	FGM-CB13-1820-PO-1.5	FGM-CB13-1820-PC-1.5
20	380	424	28*13*424	FGM-CB13-2020-NO-1.5	FGM-CB13-2020-NC-1.5	FGM-CB13-2020-PO-1.5	FGM-CB13-2020-PC-1.5
22	420	464	28*13*464	FGM-CB13-2220-NO-1.5	FGM-CB13-2220-NC-1.5	FGM-CB13-2220-PO-1.5	FGM-CB13-2220-PC-1.5
24	460	504	28*13*504	FGM-CB13-2420-NO-1.5	FGM-CB13-2420-NC-1.5	FGM-CB13-2420-PO-1.5	FGM-CB13-2420-PC-1.5
26	500	544	28*13*544	FGM-CB13-2620-NO-1.5	FGM-CB13-2620-NC-1.5	FGM-CB13-2620-PO-1.5	FGM-CB13-2620-PC-1.5
28	540	584	28*13*584	FGM-CB13-2820-NO-1.5	FGM-CB13-2820-NC-1.5	FGM-CB13-2820-PO-1.5	FGM-CB13-2820-PC-1.5
30	580	624	28*13*624	FGM-CB13-3020-NO-1.5	FGM-CB13-3020-NC-1.5	FGM-CB13-3020-PO-1.5	FGM-CB13-3020-PC-1.5
32	620	664	28*13*664	FGM-CB13-3220-NO-1.5	FGM-CB13-3220-NC-1.5	FGM-CB13-3220-PO-1.5	FGM-CB13-3220-PC-1.5

## Select Sheet-Beams Pitch (40mm)

Beams (n)	Protective Height (mm)	Total Height (mm)	Size (mm)	Model NPN.NO	Model NPN.NC	Model PNP.NO	Model PNP.NC
4	120	184	28*13*184	FGM-CB13-0440-NO-1.5	FGM-CB13-0440-NC-1.5	FGM-CB13-0440-PO-1.5	FGM-CB13-0440-PC-1.5
6	200	264	28*13*264	FGM-CB13-0640-NO-1.5	FGM-CB13-0640-NC-1.5	FGM-CB13-0640-PO-1.5	FGM-CB13-0640-PC-1.5
8	280	344	28*13*344	FGM-CB13-0840-NO-1.5	FGM-CB13-0840-NC-1.5	FGM-CB13-0840-PO-1.5	FGM-CB13-0840-PC-1.5
10	360	424	28*13*424	FGM-CB13-1040-NO-1.5	FGM-CB13-1040-NC-1.5	FGM-CB13-1040-PO-1.5	FGM-CB13-1040-PC-1.5
12	440	504	28*13*504	FGM-CB13-1240-NO-1.5	FGM-CB13-1240-NC-1.5	FGM-CB13-1240-PO-1.5	FGM-CB13-1240-PC-1.5
14	520	584	28*13*584	FGM-CB13-1440-NO-1.5	FGM-CB13-1440-NC-1.5	FGM-CB13-1440-PO-1.5	FGM-CB13-1440-PC-1.5
16	600	664	28*13*664	FGM-CB13-1640-NO-1.5	FGM-CB13-1640-NC-1.5	FGM-CB13-1640-PO-1.5	FGM-CB13-1640-PC-1.5
18	680	744	28*13*744	FGM-CB13-1840-NO-1.5	FGM-CB13-1840-NC-1.5	FGM-CB13-1840-PO-1.5	FGM-CB13-1840-PC-1.5
20	760	824	28*13*824	FGM-CB13-4040-NO-1.5	FGM-CB13-4040-NC-1.5	FGM-CB13-4040-PO-1.5	FGM-CB13-4040-PC-1.5
22	840	904	28*13*904	FGM-CB13-2240-NO-1.5	FGM-CB13-2240-NC-1.5	FGM-CB13-2240-PO-1.5	FGM-CB13-2240-PC-1.5
24	920	984	28*13*984	FGM-CB13-2440-NO-1.5	FGM-CB13-2440-NC-1.5	FGM-CB13-2440-PO-1.5	FGM-CB13-2440-PC-1.5
26	1000	1064	28*13*1064	FGM-CB13-2640-NO-1.5	FGM-CB13-2640-NC-1.5	FGM-CB13-2640-PO-1.5	FGM-CB13-2640-PC-1.5
28	1080	1144	28*13*1144	FGM-CB13-2840-NO-1.5	FGM-CB13-2840-NC-1.5	FGM-CB13-2840-PO-1.5	FGM-CB13-2840-PC-1.5
30	1160	1224	28*13*1224	FGM-CB13-4040-NO-1.5	FGM-CB13-4040-NC-1.5	FGM-CB13-4040-PO-1.5	FGM-CB13-4040-PC-1.5
32	1240	1304	28*13*1304	FGM-CB13-3240-NO-1.5	FGM-CB13-3240-NC-1.5	FGM-CB13-3240-PO-1.5	FGM-CB13-3240-PC-1.5



## Installation Picture

Picture	Installation method	Accessories
	<p>End cap with hole for mounting</p>	<p>M4*16Screws (4PCS)</p>

## Application Example

