

FUWEI

## FGM-CBD Series

# Ultra-thin Safety Light Curtain

FGM-CBD safety light curtain has a unique structure - emitting light surface is 15mm compact size, light is emitted from side. Multiple output signal, easy installation and cable connection. Mean while, quick response time to ensure reliable performance.



## Product Feature

- Ultra-thin photosensitive surface, the size is only 5mm.
- Quick response, the fastest response time < 1ms.
- Low wide voltage power supply, the working voltage is DC 10V-30V.
- Good performance to resist electromagnetic interference, and resist influence by electromagnetic of various equipment motors.
- Wire synchronization technology to resist light interference effectively.
- Easy to install cause of fixed end-cover.
- The section size is 39\*15mm.

## Specification

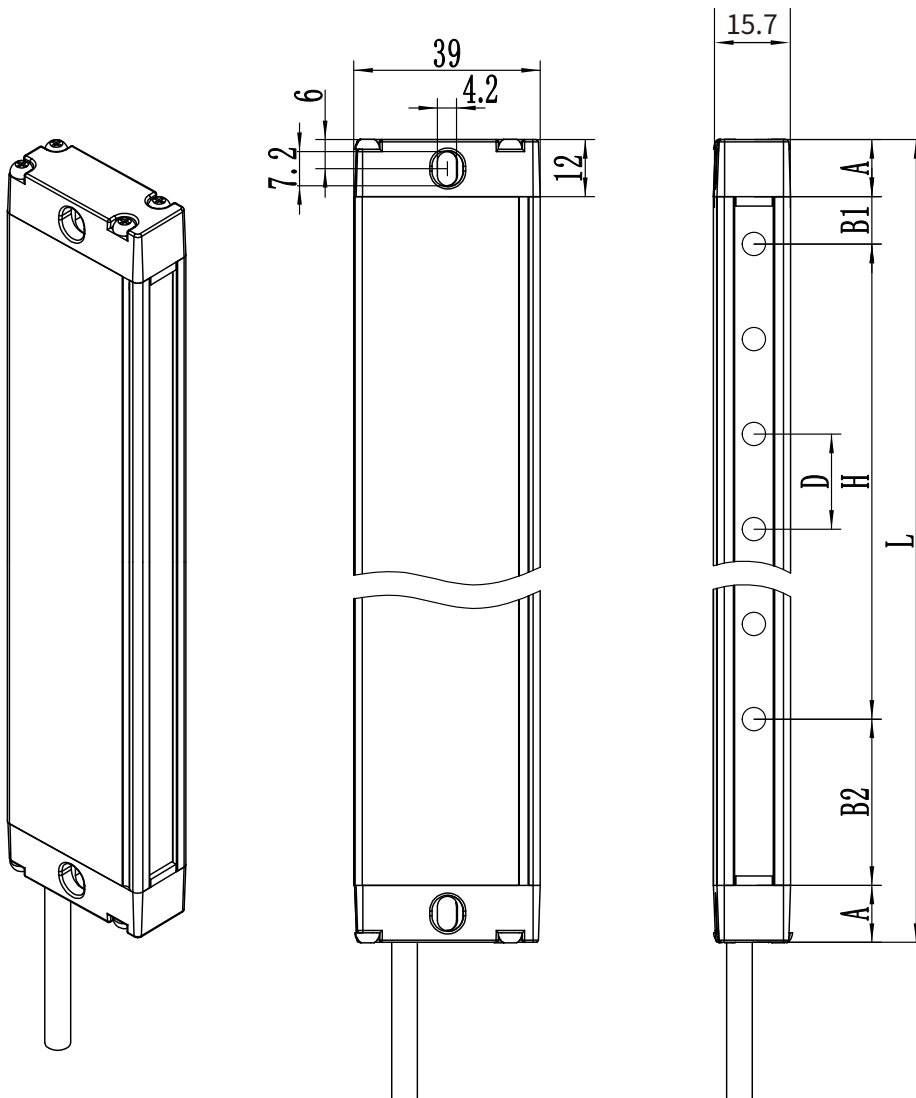
### Specification

Power supply	DC10V~30V
Capacity	<5W
Beam space	10mm, 20mm, 40mm
Resolution	15mm, 25mm, 45mm
Beams	10mm: 8, 12, 16……160 20mm: 4, 6, 8……80 40mm: 4, 6, 8……40
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, leakage current: 1mA max. (Except voltage influenced by lengthen wire)
Protective circuit	Overvoltage protection, power supply reverse polarity protection, Overcurrent protection
Sensing distance	0.1~0.5m, 0.1~2m, 0.1~4m( <b>remark: if have light reflection, please let us know</b> )
Anti-optical interference	10000Lux(angle>5°)
Sensing method	Through-beam type
Synchronization	Wire synchronization
Enclosure material	Aluminum alloy
Enclosure rating	IP54
Housing cross-section	39*15mm
Ambient operating temperature	-10°C~55°C (without freezing)
Storage temperature	-30°C~70°C (without freezing)
Ambient operating humidity	When temperature is 20°C, humidity mas 85%

## Raster Model Description

<b>FGM-CBD15</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-CBD 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

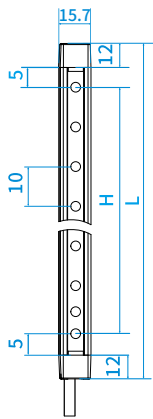
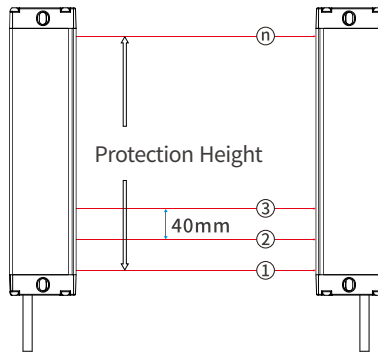
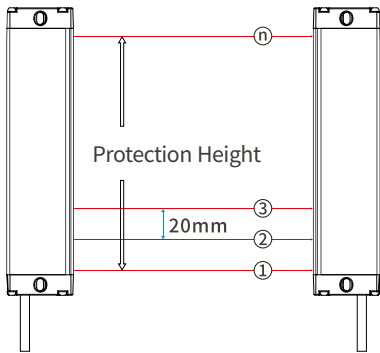
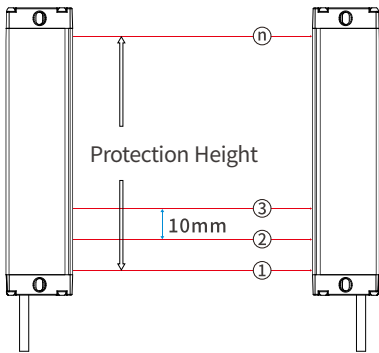
When D=20mm, B1=5mm; B2=15mm

When D=40mm, B1=5mm; B2=15mm

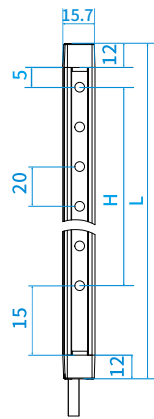
L is total height:  $L=A_1+A_2+B_1+B_2+H$

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

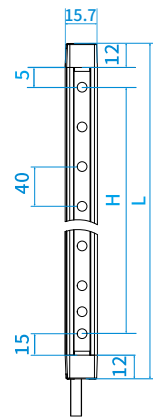
# Dimensions



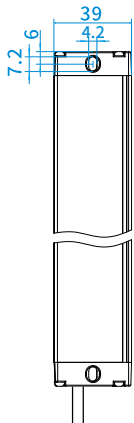
Front View



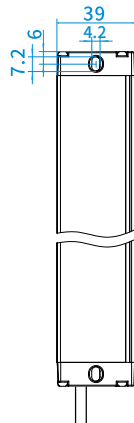
Front View



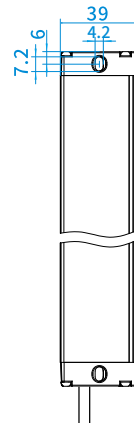
Front View



Top View



Top View



Top View

10mm Beams Pitch

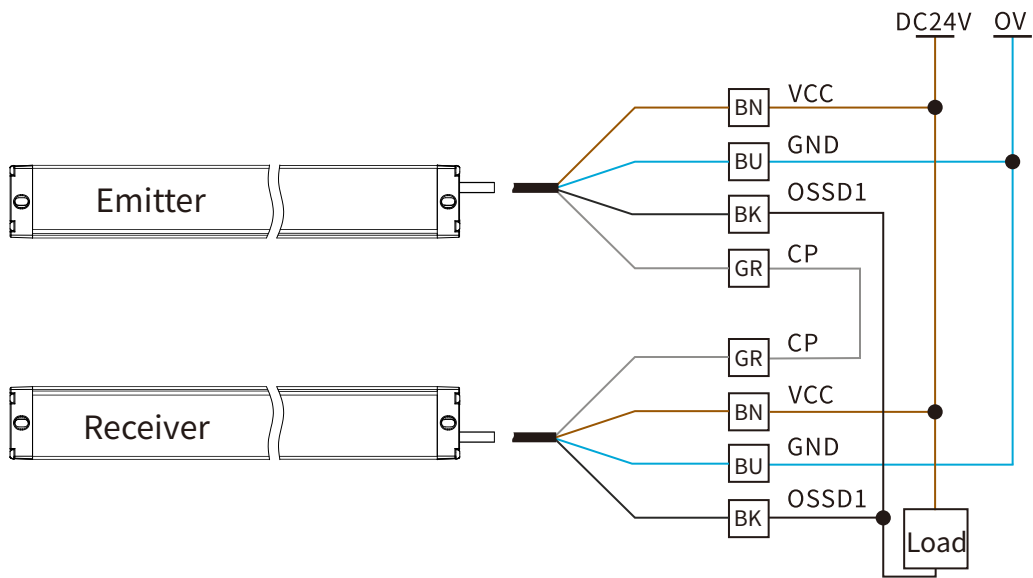
20mm Beams Pitch

40mm Beams Pitch

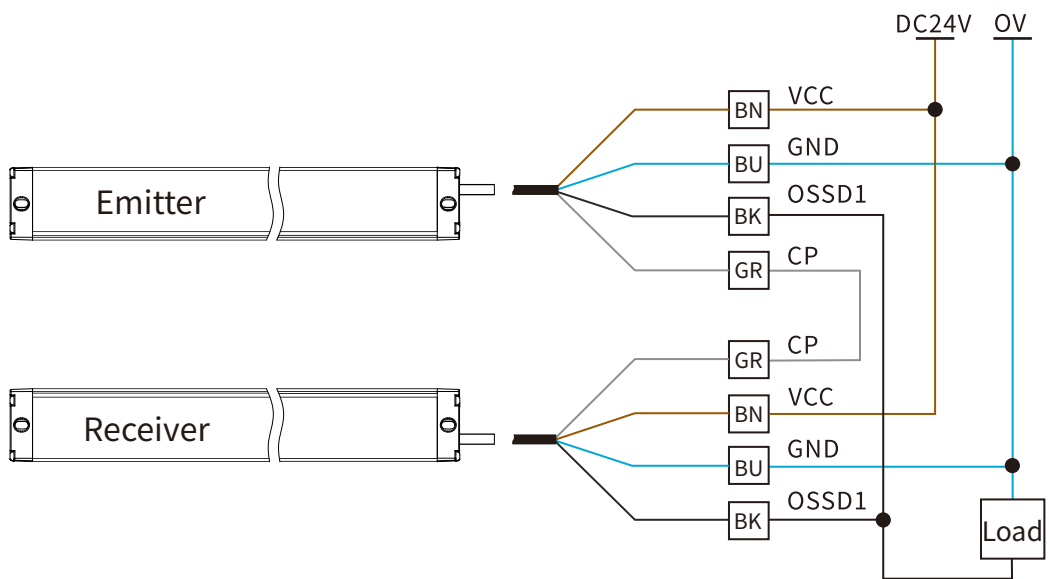
L is total height:  $L=A1+A2+B1+B2+H$

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
08	70	104	39*15*104	FGM-CBD15-0810-NO-2	FGM-CBD15-0810-NC-2	FGM-CBD15-0810-PO-2	FGM-CBD15-0810-PC-2
12	110	144	39*15*144	FGM-CBD15-1210-NO-2	FGM-CBD15-1210-NC-2	FGM-CBD15-1210-PO-2	FGM-CBD15-1210-PC-2
16	150	184	39*15*184	FGM-CBD15-1610-NO-2	FGM-CBD15-1610-NC-2	FGM-CBD15-1610-PO-2	FGM-CBD15-1610-PC-2
20	190	224	39*15*224	FGM-CBD15-2010-NO-2	FGM-CBD15-2010-NC-2	FGM-CBD15-2010-PO-2	FGM-CBD15-2010-PC-2
24	230	264	39*15*264	FGM-CBD15-2410-NO-2	FGM-CBD15-2410-NC-2	FGM-CBD15-2410-PO-2	FGM-CBD15-2410-PC-2
28	270	304	39*15*304	FGM-CBD15-2810-NO-2	FGM-CBD15-2810-NC-2	FGM-CBD15-2810-PO-2	FGM-CBD15-2810-PC-2
32	310	344	39*15*344	FGM-CBD15-3210-NO-2	FGM-CBD15-3210-NC-2	FGM-CBD15-3210-PO-2	FGM-CBD15-3210-PC-2
36	350	384	39*15*384	FGM-CBD15-3610-NO-2	FGM-CBD15-3610-NC-2	FGM-CBD15-3610-PO-2	FGM-CBD15-3610-PC-2
40	390	424	39*15*424	FGM-CBD15-4010-NO-2	FGM-CBD15-4010-NC-2	FGM-CBD15-4010-PO-2	FGM-CBD15-4010-PC-2
44	430	464	39*15*464	FGM-CBD15-4410-NO-2	FGM-CBD15-4410-NC-2	FGM-CBD15-4410-PO-2	FGM-CBD15-4410-PC-2
48	470	504	39*15*504	FGM-CBD15-4810-NO-2	FGM-CBD15-4810-NC-2	FGM-CBD15-4810-PO-2	FGM-CBD15-4810-PC-2
52	510	544	39*15*544	FGM-CBD15-5210-NO-2	FGM-CBD15-5210-NC-2	FGM-CBD15-5210-PO-2	FGM-CBD15-5210-PC-2
56	550	584	39*15*584	FGM-CBD15-5610-NO-2	FGM-CBD15-5610-NC-2	FGM-CBD15-5610-PO-2	FGM-CBD15-5610-PC-2
60	590	624	39*15*624	FGM-CBD15-6010-NO-2	FGM-CBD15-6010-NC-2	FGM-CBD15-6010-PO-2	FGM-CBD15-6010-PC-2
64	630	664	39*15*664	FGM-CBD15-6410-NO-2	FGM-CBD15-6410-NC-2	FGM-CBD15-6410-PO-2	FGM-CBD15-6410-PC-2
68	670	704	39*15*704	FGM-CBD15-6810-NO-2	FGM-CBD15-6810-NC-2	FGM-CBD15-6810-PO-2	FGM-CBD15-6810-PC-2
72	710	744	39*15*744	FGM-CBD15-7210-NO-2	FGM-CBD15-7210-NC-2	FGM-CBD15-7210-PO-2	FGM-CBD15-7210-PC-2
76	750	784	39*15*784	FGM-CBD15-7610-NO-2	FGM-CBD15-7610-NC-2	FGM-CBD15-7610-PO-2	FGM-CBD15-7610-PC-2
80	790	824	39*15*824	FGM-CBD15-8010-NO-2	FGM-CBD15-8010-NC-2	FGM-CBD15-8010-PO-2	FGM-CBD15-8010-PC-2
84	830	864	39*15*864	FGM-CBD15-8410-NO-2	FGM-CBD15-8410-NC-2	FGM-CBD15-8410-PO-2	FGM-CBD15-8410-PC-2
88	870	904	39*15*904	FGM-CBD15-8810-NO-2	FGM-CBD15-8810-NC-2	FGM-CBD15-8810-PO-2	FGM-CBD15-8810-PC-2

## 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
04	60	104	39*15*104	FGM-CBD15-0420-NO-2	FGM-CBD15-0420-NC-2	FGM-CBD15-0420-PO-2	FGM-CBD15-0420-PC-2
06	100	144	39*15*144	FGM-CBD15-0620-NO-2	FGM-CBD15-0620-NC-2	FGM-CBD15-0620-PO-2	FGM-CBD15-0620-PC-2
08	140	184	39*15*184	FGM-CBD15-0820-NO-2	FGM-CBD15-0820-NC-2	FGM-CBD15-0820-PO-2	FGM-CBD15-0820-PC-2
10	180	224	39*15*224	FGM-CBD15-1020-NO-2	FGM-CBD15-1020-NC-2	FGM-CBD15-1020-PO-2	FGM-CBD15-1020-PC-2
12	220	264	39*15*264	FGM-CBD15-1220-NO-2	FGM-CBD15-1220-NC-2	FGM-CBD15-1220-PO-2	FGM-CBD15-1220-PC-2
14	260	304	39*15*304	FGM-CBD15-1420-NO-2	FGM-CBD15-1420-NC-2	FGM-CBD15-1420-PO-2	FGM-CBD15-1420-PC-2
16	300	344	39*15*344	FGM-CBD15-1620-NO-2	FGM-CBD15-1620-NC-2	FGM-CBD15-1620-PO-2	FGM-CBD15-1620-PC-2
18	340	384	39*15*384	FGM-CBD15-1820-NO-2	FGM-CBD15-1820-NC-2	FGM-CBD15-1820-PO-2	FGM-CBD15-1820-PC-2
20	380	424	39*15*424	FGM-CBD15-2020-NO-2	FGM-CBD15-2020-NC-2	FGM-CBD15-2020-PO-2	FGM-CBD15-2020-PC-2
22	420	464	39*15*464	FGM-CBD15-2220-NO-2	FGM-CBD15-2220-NC-2	FGM-CBD15-2220-PO-2	FGM-CBD15-2220-PC-2
24	460	504	39*15*504	FGM-CBD15-2420-NO-2	FGM-CBD15-2420-NC-2	FGM-CBD15-2420-PO-2	FGM-CBD15-2420-PC-2
26	500	544	39*15*544	FGM-CBD15-2620-NO-2	FGM-CBD15-2620-NC-2	FGM-CBD15-2620-PO-2	FGM-CBD15-2620-PC-2
28	540	584	39*15*584	FGM-CBD15-2820-NO-2	FGM-CBD15-2820-NC-2	FGM-CBD15-2820-PO-2	FGM-CBD15-2820-PC-2
30	580	624	39*15*624	FGM-CBD15-3020-NO-2	FGM-CBD15-3020-NC-2	FGM-CBD15-3020-PO-2	FGM-CBD15-3020-PC-2
32	620	664	39*15*664	FGM-CBD15-3220-NO-2	FGM-CBD15-3220-NC-2	FGM-CBD15-3220-PO-2	FGM-CBD15-3220-PC-2
34	660	704	39*15*704	FGM-CBD15-3420-NO-2	FGM-CBD15-3420-NC-2	FGM-CBD15-3420-PO-2	FGM-CBD15-3420-PC-2
36	700	744	39*15*744	FGM-CBD15-3620-NO-2	FGM-CBD15-3620-NC-2	FGM-CBD15-3620-PO-2	FGM-CBD15-3620-PC-2
38	740	784	39*15*784	FGM-CBD15-3820-NO-2	FGM-CBD15-3820-NC-2	FGM-CBD15-3820-PO-2	FGM-CBD15-3820-PC-2
40	780	824	39*15*824	FGM-CBD15-4020-NO-2	FGM-CBD15-4020-NC-2	FGM-CBD15-4020-PO-2	FGM-CBD15-4020-PC-2
42	820	864	39*15*864	FGM-CBD15-4220-NO-2	FGM-CBD15-4220-NC-2	FGM-CBD15-4220-PO-2	FGM-CBD15-4220-PC-2
44	860	904	39*15*904	FGM-CBD15-4420-NO-2	FGM-CBD15-4420-NC-2	FGM-CBD15-4420-PO-2	FGM-CBD15-4420-PC-2

## 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	164	39*15*164	FGM-CBD15-0440-NO-2	FGM-CBD15-0440-NC-2	FGM-CBD15-0440-PO-2	FGM-CBD15-0440-PC-2
6	200	244	39*15*164	FGM-CBD15-0640-NO-2	FGM-CBD15-0640-NC-2	FGM-CBD15-0640-PO-2	FGM-CBD15-0640-PC-2
8	280	324	39*15*164	FGM-CBD15-0840-NO-2	FGM-CBD15-0840-NC-2	FGM-CBD15-0840-PO-2	FGM-CBD15-0840-PC-2
10	360	404	39*15*164	FGM-CBD15-1040-NO-2	FGM-CBD15-1040-NC-2	FGM-CBD15-1040-PO-2	FGM-CBD15-1040-PC-2
12	440	484	39*15*164	FGM-CBD15-1240-NO-2	FGM-CBD15-1240-NC-2	FGM-CBD15-1240-PO-2	FGM-CBD15-1240-PC-2
14	520	564	39*15*164	FGM-CBD15-1440-NO-2	FGM-CBD15-1440-NC-2	FGM-CBD15-1440-PO-2	FGM-CBD15-1440-PC-2
16	600	644	39*15*164	FGM-CBD15-1640-NO-2	FGM-CBD15-1640-NC-2	FGM-CBD15-1640-PO-2	FGM-CBD15-1640-PC-2
18	680	724	39*15*164	FGM-CBD15-1840-NO-2	FGM-CBD15-1840-NC-2	FGM-CBD15-1840-PO-2	FGM-CBD15-1840-PC-2
20	760	804	39*15*164	FGM-CBD15-2040-NO-2	FGM-CBD15-2040-NC-2	FGM-CBD15-2040-PO-2	FGM-CBD15-2040-PC-2
22	840	884	39*15*164	FGM-CBD15-2240-NO-2	FGM-CBD15-2240-NC-2	FGM-CBD15-2240-PO-2	FGM-CBD15-2240-PC-2
24	920	964	39*15*164	FGM-CBD15-2440-NO-2	FGM-CBD15-2440-NC-2	FGM-CBD15-2440-PO-2	FGM-CBD15-2440-PC-2
26	1000	1044	39*15*164	FGM-CBD15-2640-NO-2	FGM-CBD15-2640-NC-2	FGM-CBD15-2640-PO-2	FGM-CBD15-2640-PC-2
28	1080	1124	39*15*164	FGM-CBD15-2840-NO-2	FGM-CBD15-2840-NC-2	FGM-CBD15-2840-PO-2	FGM-CBD15-2840-PC-2
30	1160	1204	39*15*164	FGM-CBD15-3040-NO-2	FGM-CBD15-3040-NC-2	FGM-CBD15-3040-PO-2	FGM-CBD15-3040-PC-2
32	1240	1284	39*15*164	FGM-CBD15-3240-NO-2	FGM-CBD15-3240-NC-2	FGM-CBD15-3240-PO-2	FGM-CBD15-3240-PC-2
34	1320	1364	39*15*164	FGM-CBD15-3440-NO-2	FGM-CBD15-3440-NC-2	FGM-CBD15-3440-PO-2	FGM-CBD15-3440-PC-2
36	1400	1444	39*15*164	FGM-CBD15-3640-NO-2	FGM-CBD15-3640-NC-2	FGM-CBD15-3640-PO-2	FGM-CBD15-3640-PC-2
38	1480	1524	39*15*164	FGM-CBD15-3840-NO-2	FGM-CBD15-3840-NC-2	FGM-CBD15-3840-PO-2	FGM-CBD15-3840-PC-2
40	1560	1604	39*15*164	FGM-CBD15-4040-NO-2	FGM-CBD15-4040-NC-2	FGM-CBD15-4040-PO-2	FGM-CBD15-4040-PC-2



## Installation Picture

Picture	Installation method	Accessories
	<p>End cap with hole for mounting</p>	<p>M4*20 Screws(4PCS)</p>

## Application Example

