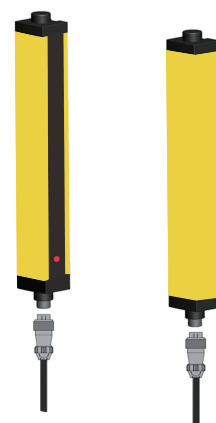


Universal Safety Light Curtain ■ BF-Series

- Fast and easy installation
- Beam gap: 10mm, 20mm, 40mm
- Resolution: 15mm, 25mm, 50mm
- Range: 3 m
(8-10m customizable, with specialized lens)
- Protected height: 60 to 3160 mm
- Very compact size: 36.5 × 30 mm



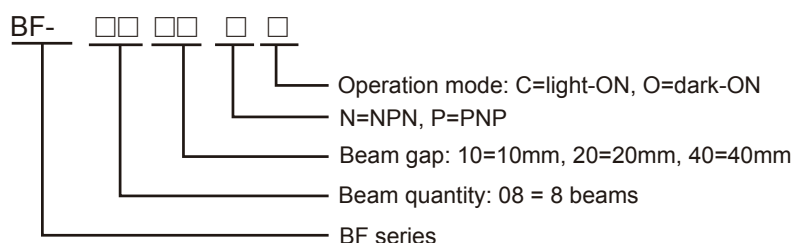
Ratings and Specifications

Beam gap	10mm	20mm	40mm
Sensing object	φ15mm min. opaque object	φ25mm min. opaque object	φ50mm min. opaque object
Sensing distance	20-3000mm (8m-10m customizable, with specialized lens)		
Protection height	60mm-3120mm		
Light source	Infrared LED (wave length 850nm)		
Ambient illumination	Sunlight: 10,000 lx max. ; Incandescent lamp: 3,000 lx max.		
Ambient temperature	Operating: -20°C to 60°C, Storage: -30°C to 70°C		
Ambient humidity	Operating: 35% to 85%, Storage: 35% to 95%		
Degree of protection	IP65		
Vibration resistance (destruction)	10 to 55 Hz, 0.35 mm double amplitude for 20 times each in X, Y and Z directions		
Shock resistance (destruction)	100 m/s ² , for 16ms, 1000 times each in X, Y and Z directions		
Material	Housing: aluminum alloy. Terminal cover: PP. Filter lens: acrylic. Cable: oil-resistant PVC		
Power supply voltage	DC 12V-24V		
Current consumption	Emitter: 200mA max. Receiver: 25mA		
Response time	10ms-65ms		
Cable length	Standard: 2m. (customizable length)		
Protection	Power polarity protection, short circuit protection		
Accessory	M4 screw*8, M8 square head screw*4, M8 hex head screws*4, mounting bracket*4		

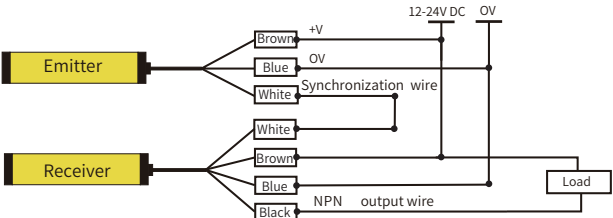
Operation Mode and Indicator Mode

Output	Operation mode	Receiver indicator	Transistor output status	
NPN	Light-ON	Green light-ON	ON	0.3W, residual voltage: 1V max.
	Dark-ON	Red light-ON	OFF	OFF current (leakage current) : 2mA max.
PNP	Light-ON	Green light-ON	ON	Source current: 200mA max. applied voltage: 24V, residual voltage: 2V max.
	Dark-ON	Red light-ON	OFF	OFF current (leakage current): 2 mA max.

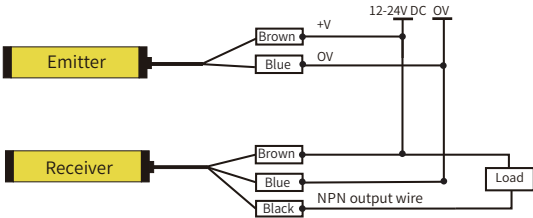
Model Definition



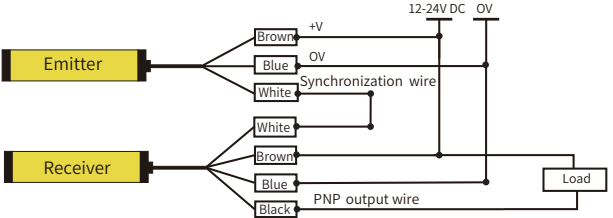
I/O Circuit Diagrams



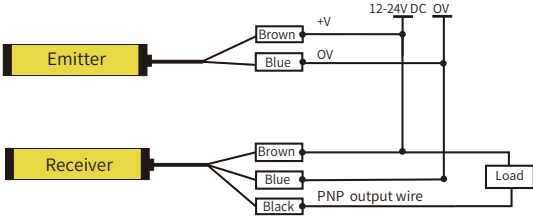
Wire-synchronization(NPN)



Optical-synchronization(NPN)



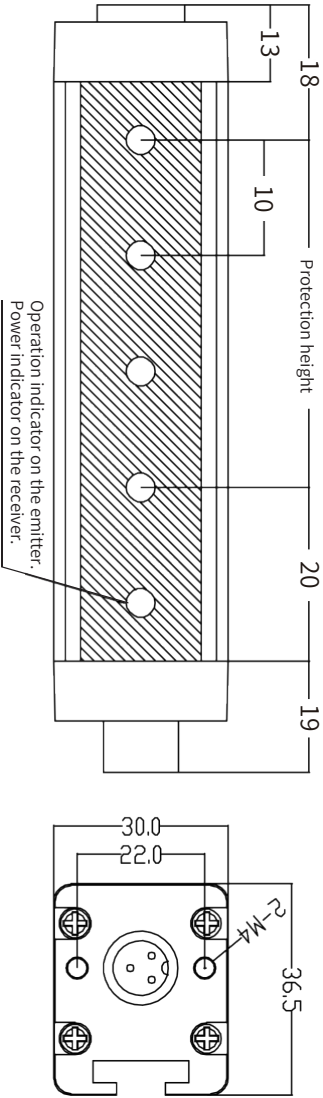
Wire-synchronization(PNP)



Optical-synchronization(PNP)

Ordering Information & Dimensions Unit:mm

Beam gap: 10mm

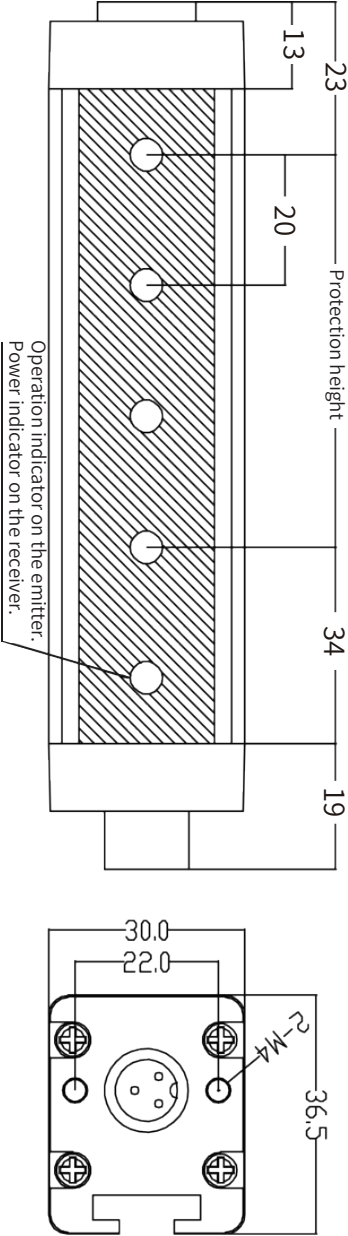


Model	Beam quantity	Protection height	Dimensions	Mounting space
BF-0810NC	8	70	36.5*30*127	155
BF-1210NC	12	110	36.5*30*167	195
BF-1610NC	16	150	36.5*30*207	235
BF-2010NC	20	190	36.5*30*247	275
BF-2410NC	24	230	36.5*30*287	315
BF-2810NC	28	270	36.5*30*327	355
BF-3210NC	32	310	36.5*30*367	395
BF-3610NC	36	350	36.5*30*407	435
BF-4010NC	44	390	36.5*30*447	475
BF-4410NC	44	430	36.5*30*487	515
BF-4810NC	48	470	36.5*30*527	555
BF-5210NC	52	510	36.5*30*567	595
BF-5610NC	56	550	36.5*30*607	635
BF-6010NC	60	590	36.5*30*647	675
BF-6410NC	64	630	36.5*30*687	715
BF-6810NC	68	670	36.5*30*727	755
BF-7210NC	72	710	36.5*30*767	795
BF-7610NC	76	750	36.5*30*807	835
BF-8010NC	80	790	36.5*30*847	875
BF-8410NC	84	830	36.5*30*887	915
BF-8810NC	88	870	36.5*30*927	955
BF-9210NC	92	910	36.5*30*967	995
BF-9610NC	96	950	36.5*30*1007	1035
BF-10010NC	100	990	36.5*30*1047	1075
BF-10410NC	104	1030	36.5*30*1087	1115
BF-10810NC	108	1070	36.5*30*1127	1155
BF-11210NC	112	1110	36.5*30*1167	1195
BF-11610NC	116	1150	36.5*30*1207	1235
BF-12010NC	120	1190	36.5*30*1247	1275
BF-12410NC	124	1230	36.5*30*1287	1315
BF-12810NC	128	1270	36.5*30*1327	1355

* **Mounting space:** the space between the holes of the top and bottom mounting brackets.

Ordering Information & Dimensions Unit:mm

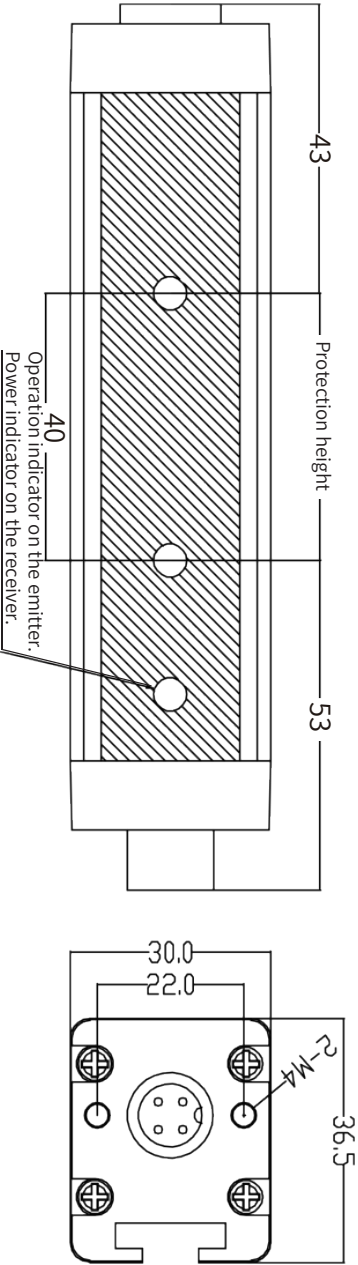
Beam gap: 20mm



Model	Beam quantity	Protection height	Dimensions	Mounting space
BF-0420NC	4	60	36.5*30*136	164
BF-0620NC	6	100	36.5*30*176	204
BF-0820NC	8	140	36.5*30*216	244
BF-1020NC	10	180	36.5*30*256	284
BF-1220NC	12	220	36.5*30*296	324
BF-1420NC	14	260	36.5*30*336	364
BF-1620NC	16	300	36.5*30*376	404
BF-1820NC	18	340	36.5*30*416	444
BF-2020NC	20	380	36.5*30*456	484
BF-2220NC	22	420	36.5*30*496	524
BF-2420NC	24	460	36.5*30*536	564
BF-2620NC	26	500	36.5*30*576	604
BF-2820NC	28	540	36.5*30*616	644
BF-3020NC	30	580	36.5*30*656	684
BF-3220NC	32	620	36.5*30*696	724
BF-3420NC	34	660	36.5*30*736	764
BF-3620NC	36	700	36.5*30*776	804
BF-3820NC	38	740	36.5*30*816	844
BF-4020NC	40	780	36.5*30*856	884
BF-4220NC	42	820	36.5*30*896	924
BF-4420NC	44	860	36.5*30*936	964
BF-4620NC	46	900	36.5*30*976	1004
BF-4820NC	48	940	36.5*30*1016	1044
BF-5020NC	50	980	36.5*30*1056	1084
BF-5220NC	52	1020	36.5*30*1096	1124
BF-5420NC	54	1060	36.5*30*1136	1164
BF-5620NC	56	1100	36.5*30*1176	1204
BF-5820NC	58	1140	36.5*30*1216	1244
BF-6020NC	60	1180	36.5*30*1256	1284
BF-6220NC	62	1220	36.5*30*1296	1324
BF-6420NC	64	1260	36.5*30*1336	1364
BF-6620NC	66	1300	36.5*30*1376	1404
BF-6820NC	68	1340	36.5*30*1416	1444
BF-7020NC	70	1380	36.5*30*1456	1484
BF-7220NC	72	1420	36.5*30*1496	1524
BF-7420NC	74	1460	36.5*30*1536	1564
BF-7620NC	76	1500	36.5*30*1576	1604
BF-7820NC	78	1540	36.5*30*1616	1644
BF-8020NC	80	1580	36.5*30*1656	1684

* **Mounting space:** the space between the holes of the top and bottom mounting brackets.

Beam gap: 40mm



Model	Beam quantity	Protection height	Dimensions	Mounting space
BF-0440NC	4	120	36.5*30*216	244
BF-0640NC	6	200	36.5*30*296	324
BF-0840NC	8	280	36.5*30*376	404
BF-1040NC	10	360	36.5*30*456	484
BF-1240NC	12	440	36.5*30*536	564
BF-1440NC	14	520	36.5*30*616	644
BF-1640NC	16	600	36.5*30*696	724
BF-1840NC	18	680	36.5*30*776	804
BF-2040NC	20	760	36.5*30*856	884
BF-2240NC	22	840	36.5*30*936	964
BF-2440NC	24	920	36.5*30*1016	1044
BF-2640NC	26	1000	36.5*30*1096	1124
BF-2840NC	28	1080	36.5*30*1176	1204
BF-3040NC	30	1160	36.5*30*1256	1284
BF-3240NC	32	1240	36.5*30*1336	1364
BF-3440NC	34	1320	36.5*30*1416	1444
BF-3640NC	36	1400	36.5*30*1496	1524
BF-3840NC	38	1480	36.5*30*1576	1604
BF-4040NC	40	1560	36.5*30*1656	1684
BF-4240NC	42	1640	36.5*30*1736	1764
BF-4440NC	44	1720	36.5*30*1816	1844
BF-4640NC	46	1800	36.5*30*1896	1924
BF-4840NC	48	1880	36.5*30*1976	2004
BF-5040NC	50	1960	36.5*30*2056	2084
BF-5240NC	52	2040	36.5*30*2136	2164
BF-5440NC	54	2120	36.5*30*2216	2244
BF-5640NC	56	2200	36.5*30*2296	2324
BF-5840NC	58	2280	36.5*30*2376	2404
BF-6040NC	60	2360	36.5*30*2456	2484
BF-6240NC	62	2440	36.5*30*2536	2564
BF-6440NC	64	2520	36.5*30*2616	2644
BF-6640NC	66	2600	36.5*30*2696	2724
BF-6840NC	68	2680	36.5*30*2776	2804
BF-7040NC	70	2760	36.5*30*2856	2884
BF-7240NC	72	2840	36.5*30*2936	2964
BF-7440NC	74	2920	36.5*30*3016	3044
BF-7640NC	76	3000	36.5*30*3096	3124
BF-7840NC	78	3080	36.5*30*3176	3204
BF-8040NC	80	3160	36.5*30*3256	3284

* **Mounting space:** the space between the holes of the top and bottom mounting brackets.