

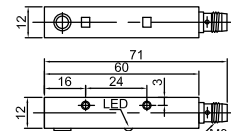
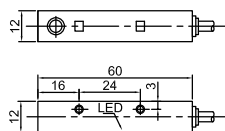
Item Code	PSB		PSB	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)	3m (Non-adjustable)	3m (Non-adjustable)



Output	NPN NO	PSB-TM3D	PSB-TM3DNO	PSB-TM3D-E1	PSB-TM3DNO-E1
	NPN NC	PSB-TM3D	PSB-TM3DNC	PSB-TM3D-E1	PSB-TM3DNC-E1
Output	PNP NO	PSB-TM3D	PSB-TM3DPO	PSB-TM3D-E1	PSB-TM3DPO-E1
	PNP NC	PSB-TM3D	PSB-TM3DPC	PSB-TM3D-E1	PSB-TM3DPC-E1

Technical Parameter

Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Red LED	Green LED	Red LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	ABS	ABS	ABS	ABS
Connection	2m PVC Cable	2m PVC Cable	M8 Connector	M8 Connector
Certification	CE	CE	CE	CE

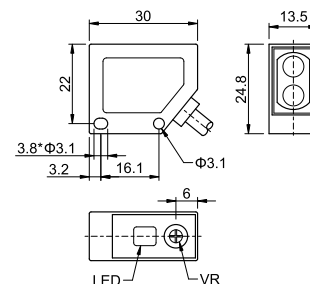
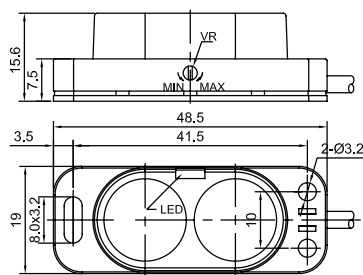


Item Code	PBA	PSI
Sensing mode	Diffuse reflection	Diffuse reflection
Sensing distance	2m (Adjustable)	30cm (Adjustable)



Output	NPN NO	PBA-BC200DNO	PSI-BC30DNO
	NPN NC	PBA-BC200DNC	PSI-BC30DNC
	NPN NO+NC		PSI-BC30DNR
Output	PNP NO	PBA-BC200DPO	PSI-BC30DPO
	PNP NC	PBA-BC200DPC	PSI-BC30DPC
	PNP NO+NC		PSI-BC30DPR

Technical Parameter			
Supply voltage	12...24 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	<100mA	<200mA	
Voltage drop	<2.5V	<2.5V	
Consumption current	<25mA	<25mA	
Hysteresis	3...20%	3...20%	
Repeat accuracy	<5%	<5%	
Response time	<3ms	<8.2ms	
Output indicator	Red LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	...	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP54	IP65	
Housing material	PC/ABS	ABS	
Connection	2m PVC Cable	2m PVC Cable	
Certification	CE	CE	

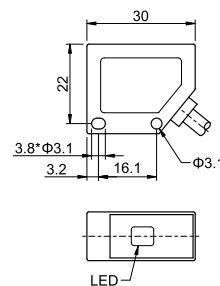
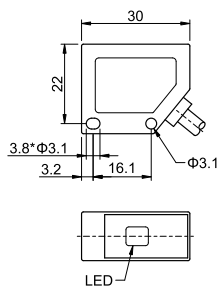


Item Code	PSI		PSI	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	NPN NO	PSI-TM5D	PSI-TM5DNO	PSI-TM10D	PSI-TM10DNO
	NPN NC	PSI-TM5D	PSI-TM5DNC	PSI-TM10D	PSI-TM10DNC
	NPN NO+NC	PSI-TM5D	PSI-TM5DNR	PSI-TM10D	PSI-TM10DNR
Output	PNP NO	PSI-TM5D	PSI-TM5DPO	PSI-TM10D	PSI-TM10DPO
	PNP NC	PSI-TM5D	PSI-TM5DPC	PSI-TM10D	PSI-TM10DPC
	PNP NO+NC	PSI-TM5D	PSI-TM5DPR	PSI-TM10D	PSI-TM10DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65
Housing material	ABS	ABS	ABS	ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

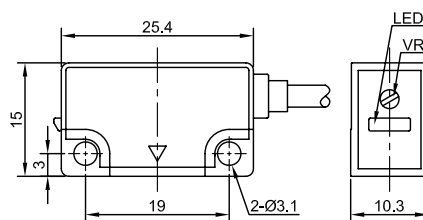
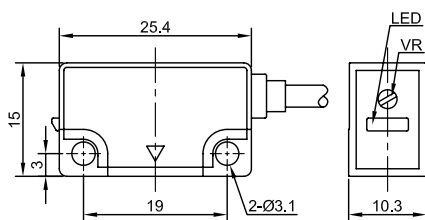


Item Code	PSL		PSL	
Sensing mode	Diffuse reflection		Focus reflection	
Sensing distance	30cm (Adjustable)		3cm (Adjustable)	5cm (Adjustable)



Output	NPN NO	PSL-BC30DNO	PSL-SC3DNO	PSL-SC5DNO
	NPN NC	PSL-BC30DNC	PSL-SC3DNC	PSL-SC5DNC
Output	PNP NO	PSL-BC30DPO	PSL-SC3DPO	PSL-SC5DPO
	PNP NC	PSL-BC30DPC	PSL-SC3DPC	PSL-SC5DPC

Technical Parameter				
Supply voltage	12...24 VDC		12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)		Infrared LED (660nm)	Infrared LED (660nm)
Load current	<100mA		<100mA	<100mA
Voltage drop	<2.5V		<2.5V	<2.5V
Consumption current	<25mA		<25mA	<25mA
Hysteresis	3...20%		3...20%	3...20%
Repeat accuracy	<5%		<5%	<5%
Response time	<1ms		<1ms	<1ms
Output indicator	Yellow LED		Yellow LED	Yellow LED
Polarity protection	yes		yes	yes
Surge protection	yes		yes	yes
Short-circuit protection	...		...	...
Ambient temperature	-15...+55°C		-15...+55°C	-15...+55°C
Ambient moisture	35...95%		35...95%	35...95%
Protection degree	IP67		IP67	IP67
Housing material	PC/ABS		PC/ABS	PC/ABS
Connection	2m PVC Cable		2m PVC Cable	2m PVC Cable
Certification	CE		CE	CE

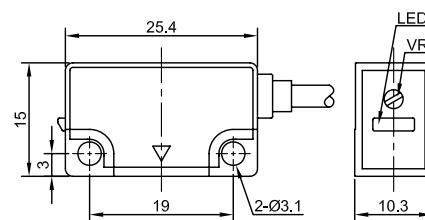
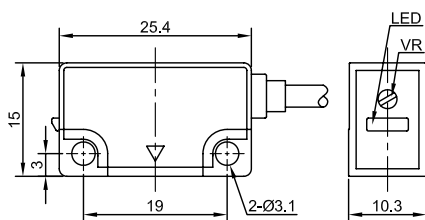


Item Code	PSL		PSL	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



Output	NPN NO	PSL-TM5D	PSL-TM10DNO	PSL-TM10D	PSL-TM10DNO
	NPN NC	PSL-TM5D	PSL-TM10DNC	PSL-TM10D	PSL-TM10DNC
Output	PNP NO	PSL-TM5D	PSL-TM10DPO	PSL-TM10D	PSL-TM10DPO
	PNP NC	PSL-TM5D	PSL-TM10DPC	PSL-TM10D	PSL-TM10DPC

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<100mA	...	<100mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<1ms	<1ms	<1ms	<1ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

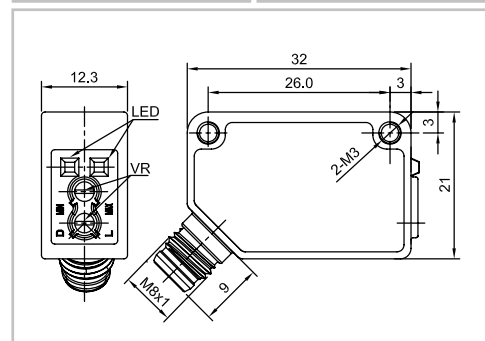
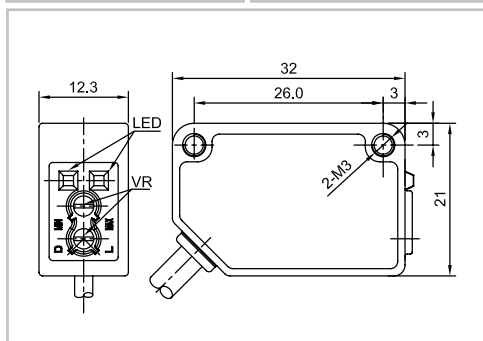
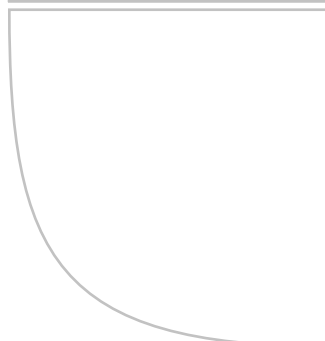


Item Code	PSF		PSF	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	30cm (Adjustable)	80cm (Adjustable)	30cm (Adjustable)	80cm (Adjustable)



Output	NPN NO	PSF-BC30DNO	PSF-BC80DNO	PSF-BC30DNO-E1	PSF-BC80DNO-E1
	NPN NC	PSF-BC30DNC	PSF-BC80DNC	PSF-BC30DNC-E1	PSF-BC80DNC-E1
	NPN NO/NC	PSF-BC30DNB	PSF-BC80DNB	PSF-BC30DNB-E1	PSF-BC80DNB-E1
Output	PNP NO	PSF-BC30DPO	PSF-BC80DPO	PSF-BC30DPO-E1	PSF-BC80DPO-E1
	PNP NC	PSF-BC30DPC	PSF-BC80DPC	PSF-BC30DPC-E1	PSF-BC80DPC-E1
	PNP NO/NC	PSF-BC30DPB	PSF-BC80DPB	PSF-BC30DPB-E1	PSF-BC80DPB-E1

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<100mA	<100mA	<100mA	<100mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<1ms	<1ms	<1ms	<1ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	M8 Connector	M8 Connector
Certification	CE	CE	CE	CE



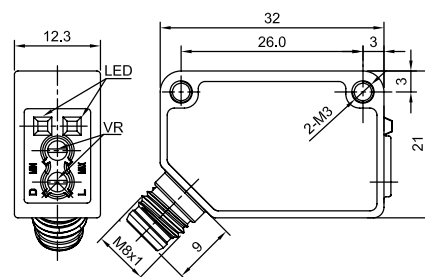
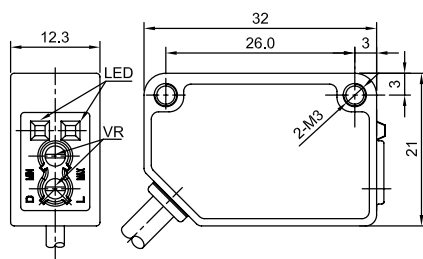
Item Code	PSF	PSF
Sensing mode	Retro reflection	
Sensing distance	2m (Adjustable)	2m (Adjustable)



Output	NPN NO	PSF-DM2DNO		PSF-DM2DNO-E1	
	NPN NC	PSF-DM2DNC		PSF-DM2DNC-E1	
	NPN NO/NC	PSF-DM2DNB		PSF-DM2DNB-E1	
Output	PNP NO	PSF-DM2DPO		PSF-DM2DPO-E1	
	PNP NC	PSF-DM2DPC		PSF-DM2DPC-E1	
	PNP NO/NC	PSF-DM2DPB		PSF-DM2DPB-E1	

Technical Parameter

Supply voltage	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<100mA	<100mA
Voltage drop	<2.5V	<2.5V
Consumption current	<25mA	<25mA
Hysteresis	...	...
Repeat accuracy	<5%	<5%
Response time	<1ms	<1ms
Output indicator	Yellow LED	Yellow LED
Polarity protection	yes	yes
Surge protection	yes	yes
Short-circuit protection	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%
Protection degree	IP67	IP67
Housing material	PC/ABS	PC/ABS
Connection	2m PVC Cable	M8 Connector
Certification	CE	CE

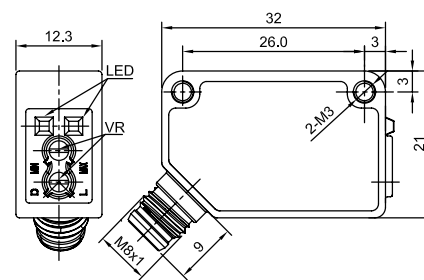
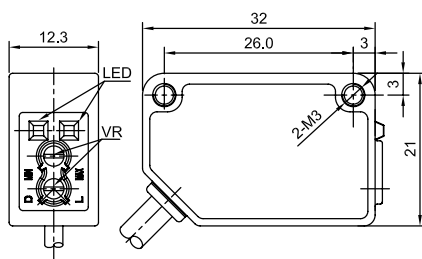


Item Code	PSF	PSF
Sensing mode	Polarized reflection	
Sensing distance	2m (Adjustable)	2m (Adjustable)



Output				
	NPN NO/NC	PSF-PM2DNB		PSF-PM2DNB-E1
Output				
	PNP NO/NC	PSF-PM2DPB		PSF-PM2DPB-E1

Technical Parameter				
Supply voltage	12...24 VDC		12...24 VDC	
Light source	Infrared LED (660nm)		Infrared LED (660nm)	
Load current	<100mA		<100mA	
Voltage drop	<2.5V		<2.5V	
Consumption current	<25mA		<25mA	
Hysteresis	...		...	
Repeat accuracy	<5%		<5%	
Response time	<1ms		<1ms	
Output indicator	Yellow LED		Yellow LED	
Polarity protection	yes		yes	
Surge protection	yes		yes	
Short-circuit protection	yes		yes	
Ambient temperature	-15...+55°C		-15...+55°C	
Ambient moisture	35...95%		35...95%	
Protection degree	IP67		IP67	
Housing material	PC/ABS		PC/ABS	
Connection	2m PVC Cable		M8 Connector	
Certification	CE		CE	

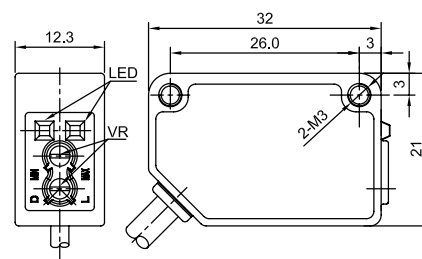
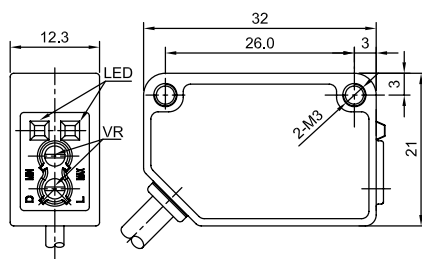


Item Code	PSF		PSF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



Output	NPN NO	PSF-TM5D	PSF-TM5DNO	PSF-TM10D	PSF-TM10DNO
	NPN NC	PSF-TM5D	PSF-TM5DNC	PSF-TM10D	PSF-TM10DNC
	NPN NO/NC	PSF-TM5D	PSF-TM5DNB	PSF-TM10D	PSF-TM10DNB
Output	PNP NO	PSF-TM5D	PSF-TM5DPO	PSF-TM10D	PSF-TM10DPO
	PNP NC	PSF-TM5D	PSF-TM5DPC	PSF-TM10D	PSF-TM10DPC
	PNP NO/NC	PSF-TM5D	PSF-TM5DPB	PSF-TM10D	PSF-TM10DPB

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<100mA	...	<100mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<1ms	...	<1ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

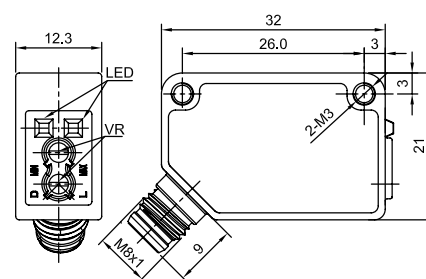
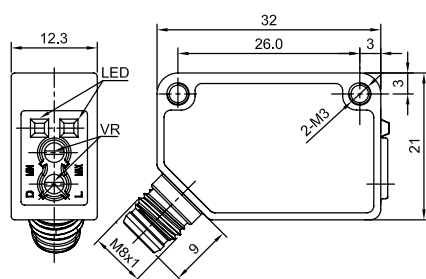


Item Code	PSF		PSF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



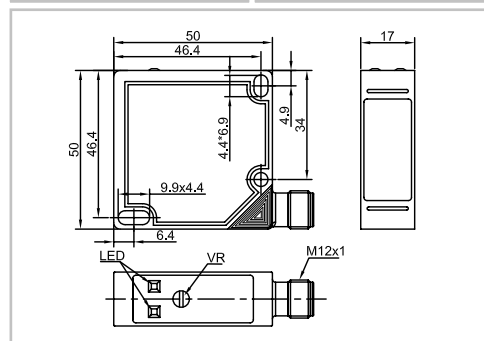
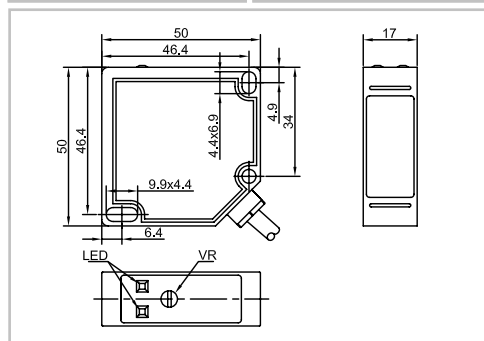
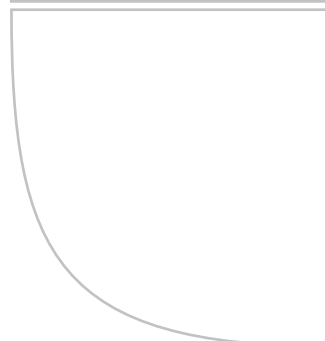
Output	NPN NO	PSF-TM5D-E1	PSF-TM5DNO-E1	PSF-TM10D-E1	PSF-TM10DNO-E1
	NPN NC	PSF-TM5D-E1	PSF-TM5DNC-E1	PSF-TM10D-E1	PSF-TM10DNC-E1
	NPN NO/NC	PSF-TM5D-E1	PSF-TM5DNB-E1	PSF-TM10D-E1	PSF-TM10DNB-E1
Output	PNP NO	PSF-TM5D-E1	PSF-TM5DPO-E1	PSF-TM10D-E1	PSF-TM10DPO-E1
	PNP NC	PSF-TM5D-E1	PSF-TM5DPC-E1	PSF-TM10D-E1	PSF-TM10DPC-E1
	PNP NO/NC	PSF-TM5D-E1	PSF-TM5DPB-E1	PSF-TM10D-E1	PSF-TM10DPB-E1

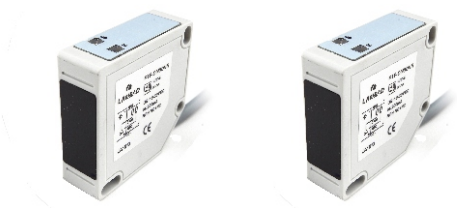
Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<100mA	...	<100mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<1ms	...	<1ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	M8 Connector	M8 Connector	M8 Connector	M8 Connector
Certification	CE	CE	CE	CE



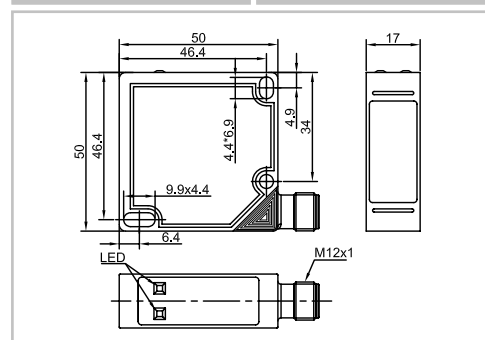
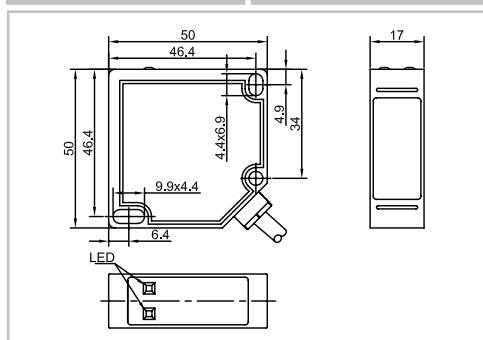
Item Code		PTF		PTF	
Sensing mode		Diffuse reflection		Diffuse reflection	
Sensing distance		50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)
					
Output	NPN NO	PTF-BC50DNO	PTF-BC100DNO	PTF-BC50DNO-E2	PTF-BC100DNO-E2
	NPN NC	PTF-BC50DNC	PTF-BC100DNC	PTF-BC50DNC-E2	PTF-BC100DNC-E2
	NPN NO+NC	PTF-BC50DNR	PTF-BC100DNR	PTF-BC50DNR-E2	PTF-BC100DNR-E2
Output	PNP NO	PTF-BC50DPO	PTF-BC100DPO	PTF-BC50DPO-E2	PTF-BC100DPO-E2
	PNP NC	PTF-BC50DPC	PTF-BC100DPC	PTF-BC50DPC-E2	PTF-BC100DPC-E2
	PNP NO+NC	PTF-BC50DPR	PTF-BC100DPR	PTF-BC50DPR-E2	PTF-BC100DPR-E2

Technical Parameter					
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA	<200mA	<200mA	<200mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%	<5%
Response time	< 3ms	< 3ms	< 3ms	< 3ms	< 3ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE	CE



Item Code		PTF		PTF	
Sensing mode		Retro reflection		Retro reflection	
Sensing distance		3m (Non-adjustable)	5m (Non-adjustable)	3m (Non-adjustable)	5m (Non-adjustable)
					
Output	NPN NO	PTF-DM3DNO	PTF-DM5DNO	PTF-DM3DNO-E2	PTF-DM5DNO-E2
	NPN NC	PTF-DM3DNC	PTF-DM5DNC	PTF-DM3DNC-E2	PTF-DM5DNC-E2
	NPN NO+NC	PTF-DM3DNR	PTF-DM5DNR	PTF-DM3DNR-E2	PTF-DM5DNR-E2
Output	PNP NO	PTF-DM3DPO	PTF-DM5DPO	PTF-DM3DPO-E2	PTF-DM5DPO-E2
	PNP NC	PTF-DM3DPC	PTF-DM5DPC	PTF-DM3DPC-E2	PTF-DM5DPC-E2
	PNP NO+NC	PTF-DM3DPR	PTF-DM5DPR	PTF-DM3DPR-E2	PTF-DM5DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA	<200mA	<200mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<8.2ms	<8.2ms	<8.2ms	<8.2ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE



10-30VDC 3/4 Wires

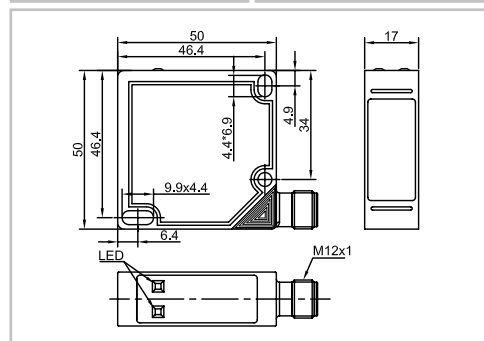
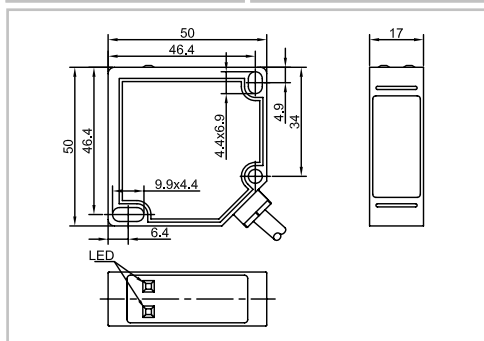
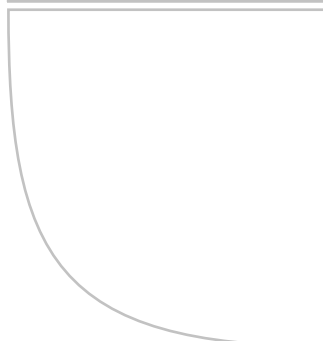
Item Code	PTF	PTF
Sensing mode	Polarized reflection	Polarized reflection
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



Output				
	NPN NO+NC	PTF-PM5DNR		PTF-PM5DNR-E2
Output				
	PNP NO+NC	PTF-PM5DPR		PTF-PM5DPR-E2

Technical Parameter

Supply voltage	10...30 VDC	10...30 VDC
Light source	Infrared LED (660nm)	Infrared LED (660nm)
Load current	<200mA	<200mA
Voltage drop	<2.5V	<2.5V
Consumption current	<25mA	<25mA
Hysteresis	...	...
Repeat accuracy	<5%	<5%
Response time	<8.2ms	<8.2ms
Output indicator	Yellow LED	Yellow LED
Polarity protection	yes	yes
Surge protection	yes	yes
Short-circuit protection	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%
Protection degree	IP64	IP64
Housing material	PC/ABS	PC/ABS
Connection	2m PVC Cable	M12 Connector
Certification	CE	CE

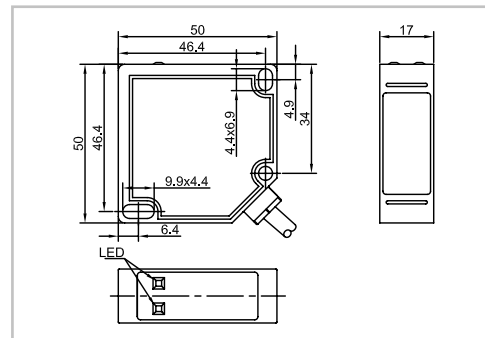
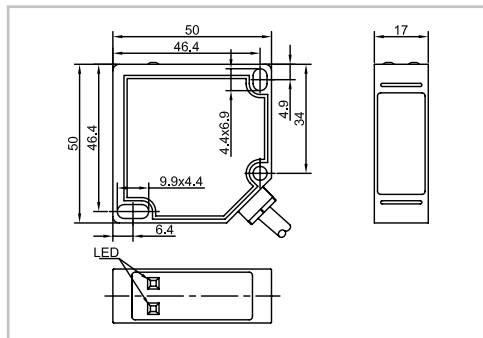
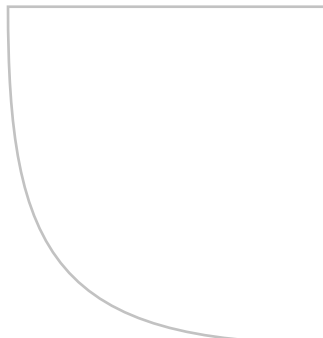


Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PTF-TM10D	PTF-TM10DNO	PTF-TM20D	PTF-TM20DNO
	NPN NC	PTF-TM10D	PTF-TM10DNC	PTF-TM20D	PTF-TM20DNC
	NPN NO+NC	PTF-TM10D	PTF-TM10DNR	PTF-TM20D	PTF-TM20DNR
Output	PNP NO	PTF-TM10D	PTF-TM10DPO	PTF-TM20D	PTF-TM20DPO
	PNP NC	PTF-TM10D	PTF-TM10DPC	PTF-TM20D	PTF-TM20DPC
	PNP NO+NC	PTF-TM10D	PTF-TM10DPR	PTF-TM20D	PTF-TM20DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

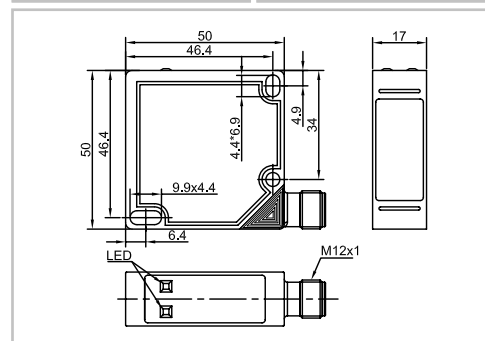
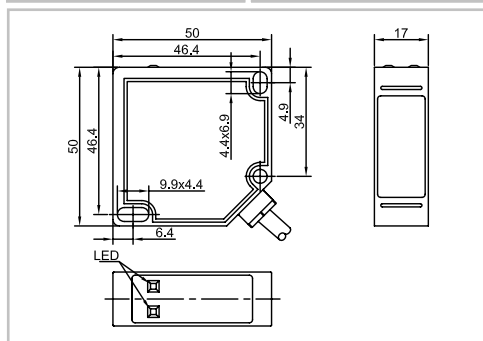


Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



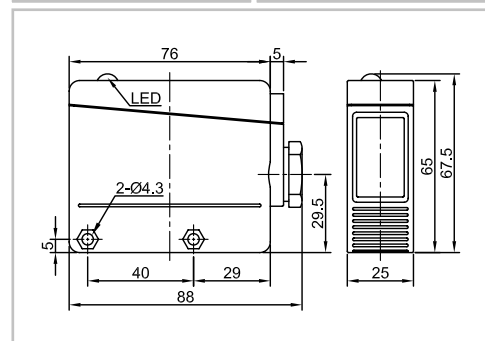
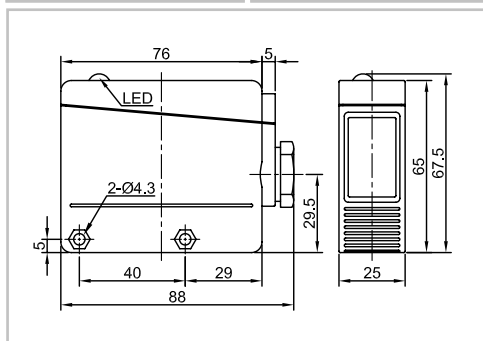
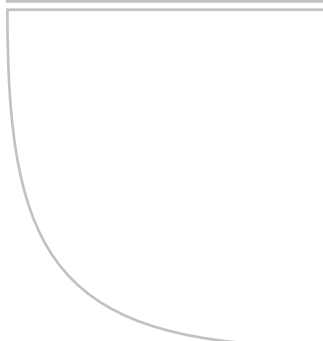
Output	NPN NO	PTF-TM10D-E2	PTF-TM10DNO-E2	PTF-TM20D-E2	PTF-TM20DNO-E2
	NPN NC	PTF-TM10D-E2	PTF-TM10DNC-E2	PTF-TM20D-E2	PTF-TM20DNC-E2
	NPN NO+NC	PTF-TM10D-E2	PTF-TM10DNR-E2	PTF-TM20D-E2	PTF-TM20DNR-E2
Output	PNP NO	PTF-TM10D-E2	PTF-TM10DPO-E2	PTF-TM20D-E2	PTF-TM20DPO-E2
	PNP NC	PTF-TM10D-E2	PTF-TM10DPC-E2	PTF-TM20D-E2	PTF-TM20DPC-E2
	PNP NO+NC	PTF-TM10D-E2	PTF-TM10DPR-E2	PTF-TM20D-E2	PTF-TM20DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE



Item Code	PTL		PTL	
Sensing mode	Diffuse reflection		Retro reflection	
Sensing distance	80cm (Adjustable)	2m (Adjustable)	5m (Non-adjustable)	
				
Output				
NPN NO+NC	PTL-BC80DNRT3-D	PTL-BC200DNRT3-D	PTL-DM5DNRT3-D	
Output				
PNP NO+NC	PTL-BC80DPRT3-D	PTL-BC200DPRT3-D	PTL-DM5DPRT3-D	

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	<200mA	<200mA	<200mA	
Voltage drop	<2.5V	<2.5V	<2.5V	
Consumption current	<25mA	<25mA	<25mA	
Hysteresis	5...20%	5...20%	...	
Repeat accuracy	<5%	<5%	<5%	
Response time	<8.2ms	<8.2ms	<8.2ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	
Polarity protection	yes	yes	yes	
Surge protection	yes	yes	yes	
Short-circuit protection	yes	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	
Housing material	PC/ABS	PC/ABS	PC/ABS	
Connection	Terminal Connect	Terminal Connect	Terminal Connect	
Certification	CE	CE	CE	

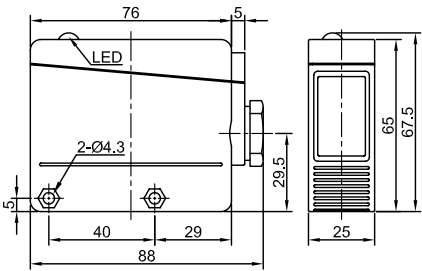


Item Code	PTL			
Sensing mode	Polarized reflection			
Sensing distance	12m (Non-adjustable)			



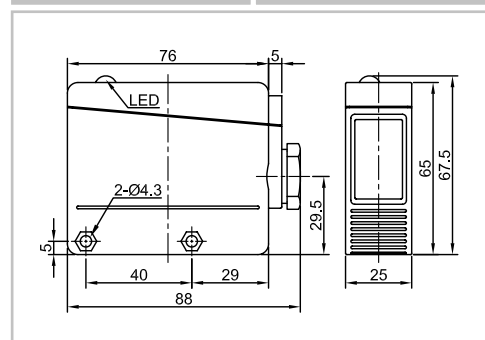
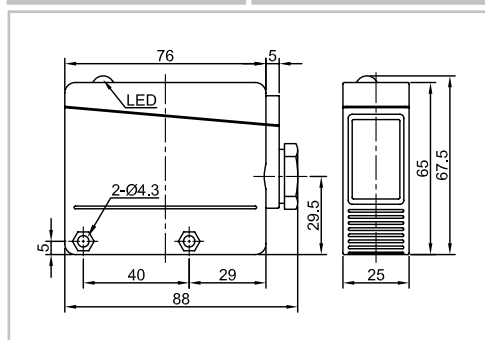
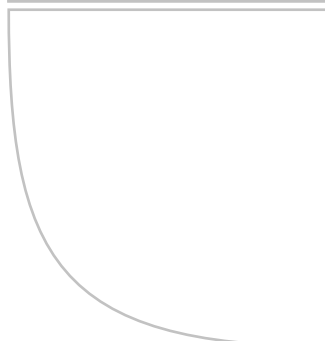
Output				
	NPN NO+NC	PTL-PM12DNR-D		
Output				
	PNP NO+NC	PTL-PM12DPR-D		

Technical Parameter				
Supply voltage	10...30 VDC			
Light source	Infrared LED (660nm)			
Load current	<200mA			
Voltage drop	<2.5V			
Consumption current	<25mA			
Hysteresis	...			
Repeat accuracy	<5%			
Response time	< 8.2ms			
Output indicator	Yellow LED			
Polarity protection	yes			
Surge protection	yes			
Short-circuit protection	yes			
Ambient temperature	-15...+55°C			
Ambient moisture	35...95%			
Protection degree	IP67			
Housing material	PC/ABS			
Connection	Terminal Connect			
Certification	CE			



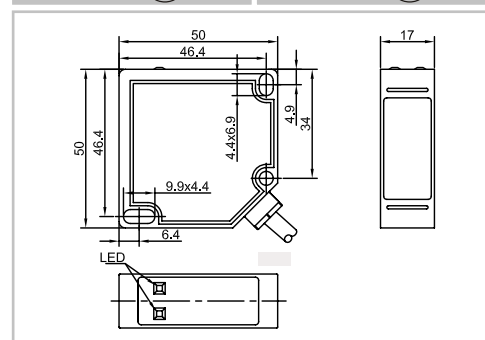
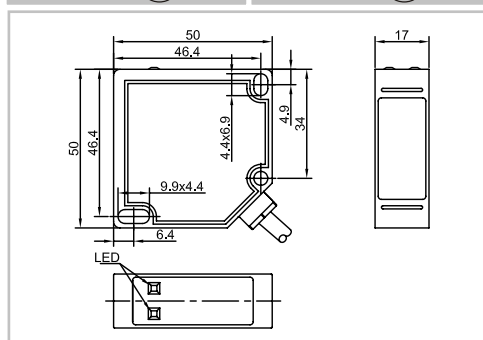
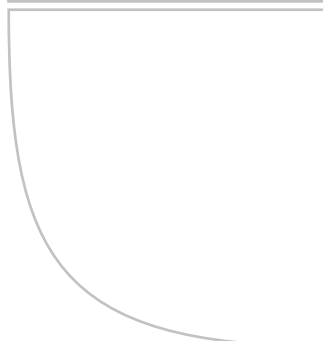
Item Code		PTL		PTL	
Sensing mode		Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance		20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (adjustable)
					
Output					
	NPN NO+NC	PTL-TM20D-D	PTL-TM20DNRT3-D	PTL-TM40D-D	PTL-TM40DNRT3-D
Output					
	PNP NO+NC	PTL-TM20D-D	PTL-TM20DPRT3-D	PTL-TM40D-D	PTL-TM40DPRT3-D

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	Terminal Connect	Terminal Connect	Terminal Connect	Terminal Connect
Certification	CE	CE	CE	CE



Item Code	PTF		PTF	
Sensing mode	Diffuse reflection		Retro reflection	
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	3m (Non-adjustable)	5m (Non-adjustable)
				
Output				
Contact output	PTF-BC50SK	PTF-BC100SK	PTF-DM3SK	PTF-DM5SK

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	<3A		<3A	
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	3...20%		...	
Repeat accuracy	<5%		<5%	
Response time	<30ms		<30ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CCC	CE	CCC

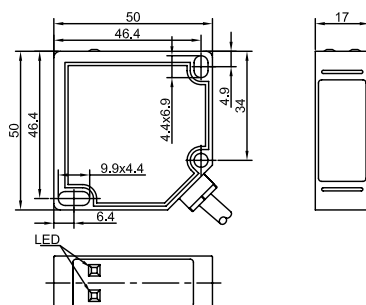


Item Code	PTF		
Sensing mode	Polarized reflection		
Sensing distance	5m (Non-adjustable)		



Output				
	Contact output	PTF-PM5SK		

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC			
Light source	Infrared LED (660nm)			
Load current	<3A			
Voltage drop	...			
Leakage current	...			
Hysteresis	3...20%			
Repeat accuracy	<5%			
Response time	<30ms			
Output indicator	Yellow LED			
Polarity protection	...			
Surge protection	yes			
Short-circuit protection	...			
Ambient temperature	-15...+55°C			
Ambient moisture	35...95%			
Protection degree	IP64			
Housing material	PC/ABS			
Connection	2m PVC Cable			
Certification	CE CCC			



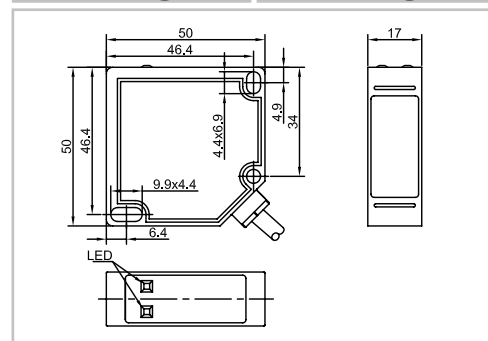
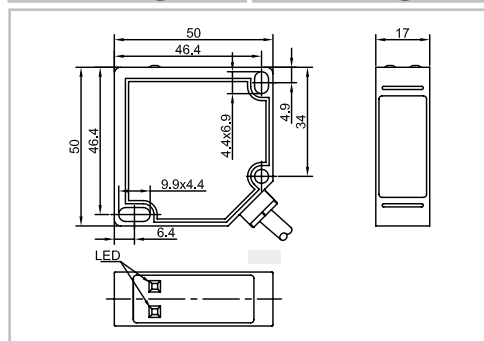
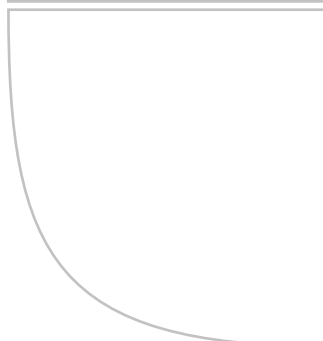
Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output					
	Contact output	PTF-TM10S	PTF-TM10SK	PTF-TM20S	PTF-TM20SK

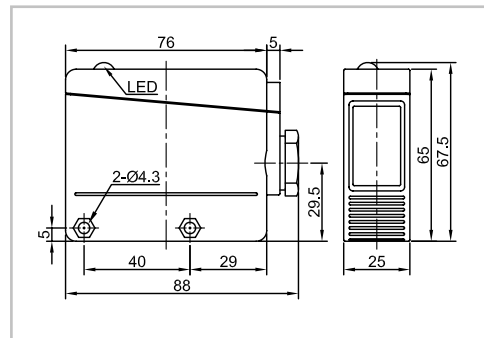
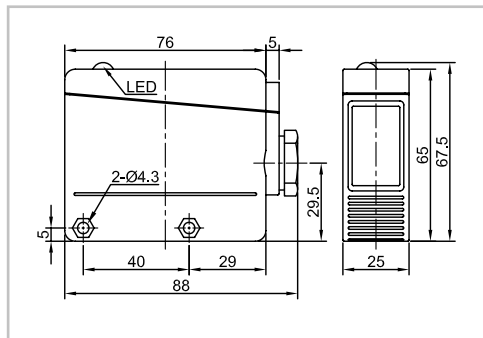
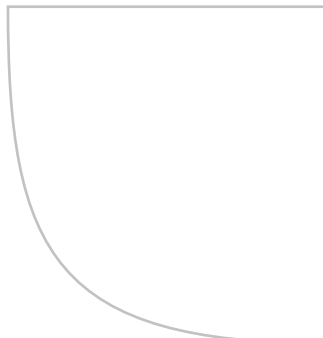
Technical Parameter

Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	...	<3A	...	<3A
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	...		...	
Repeat accuracy	<5%		<5%	
Response time	< 30ms		< 30ms	
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	...	...	...	...
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE CCC		CE CCC	



Item Code		PTL		PTL	
Sensing mode		Diffuse reflection		Retro reflection	
Sensing distance		80cm (Adjustable)	200cm (Adjustable)	5m (Non-adjustable)	
					
Output					
	Contact output	PTL-BC80SKT3-D	PTL-BC200SKT3-D	PTL-DM5SKT3-D	

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	<3A		<3A	
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	3...20%		...	
Repeat accuracy	<5%		<5%	
Response time	< 30ms		< 30ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	
Polarity protection	...	...	...	
Surge protection	yes	yes	yes	
Short-circuit protection	...	...	...	
Ambient temperature	-15...+55℃	-15...+55℃	-15...+55℃	
Ambient moisture	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	
Housing material	PC/ABS	PC/ABS	PC/ABS	
Connection	Terminal Connect	Terminal Connect	Terminal Connect	
Certification	CECCC	CECCC	CECCC	

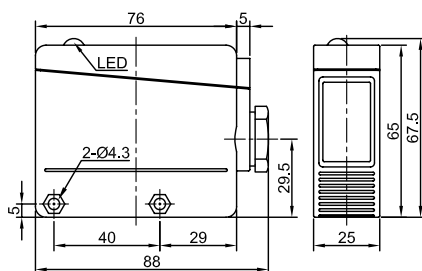


Item Code	PTL		
Sensing mode	Polarized reflection		
Sensing distance	12m (Non-adjustable)		



Output				
	Contact output	PTL-PM12SK-D		

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC			
Light source	Infrared LED (660nm)			
Load current	<3A			
Voltage drop	...			
Leakage current	...			
Hysteresis	...			
Repeat accuracy	<5%			
Response time	< 30ms			
Output indicator	Yellow LED			
Polarity protection	...			
Surge protection	yes			
Short-circuit protection	...			
Ambient temperature	-15...+55°C			
Ambient moisture	35...95%			
Protection degree	IP67			
Housing material	PC/ABS			
Connection	Terminal Connect			
Certification	CE CCC			



Item Code		PTL		PTL	
Sensing mode		Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance		20m (Non-adjustable)	20m (adjustable)	30m (Non-adjustable)	30m (adjustable)
					
Output					
	Contact output	PTL-TM20S-D	PTL-TM20SKT3-D	PTL-TM30S-D	PTL-TM30SKT3-D

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	... <3A		... <3A	
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	...		...	
Repeat accuracy	< 5%		< 5%	
Response time	< 30ms		< 30ms	
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	...	...	...	...
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C		-15...+55°C	
Ambient moisture	35...95%		35...95%	
Protection degree	IP67		IP67	
Housing material	PC/ABS		PC/ABS	
Connection	Terminal Connect	Terminal Connect	Terminal Connect	Terminal Connect
Certification	CE CCC		CE CCC	

