

PS - R50L · PS - R50D

The PS - R50 photo switches are composed of a modulated infrared emitting diode at the light - emitting side and a modulated photo IC (in which a photodiode, signal processing circuit, constant voltage circuit and modulation circuit are integrated) at the light receiving side.

PS - R50L : High level output at shielding

PS - R50D : Low level output at shielding

FEATURES

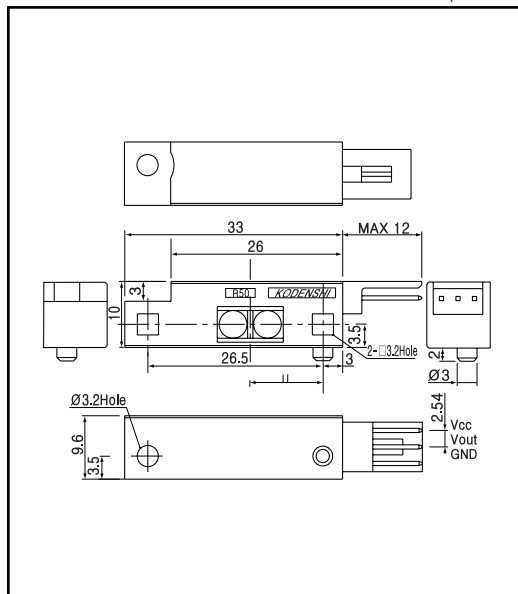
- High - speed response(0.5m sec.)
- Adjustable of detecting distance
- Resistible to exterior light because of composed of modulate

APPLICATIONS

- Copiers
- Facsimiles

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta = 25°C)

Item	Symbol	Rating	Unit
Supply voltage	V _{CC}	8.0	V
Output voltage *1	V _O	12	V
Low level output current *2	I _{OL}	30	mA
Output transistor power dissipation	P _O	30	mW
Operating temp. *3*4	Topr.	-10 +60	°C
Storage temp. *3*4	Tstg.	-20 +70	°C

*1. Output transistor : V_{CE} *2. Output transistor : I_C *3. No icebound or dew

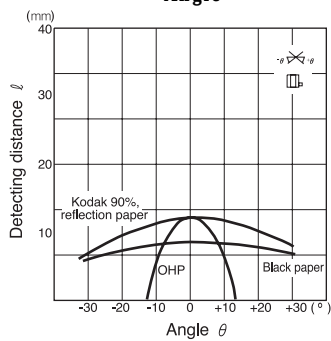
*4. The connector shall be inserted or pulled out at normal temperature.

ELECTRO-OPTICAL CHARACTERISTICS

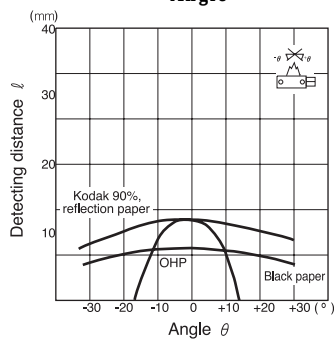
(Ta = 25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Supply voltage	V _{CC}		4.75		5.25	V
Low level output voltage	V _{OL}	V _{CC} = 5V, I _{OL} = 10mA			0.4	V
High level output voltage	V _{OH}	V _{CC} = 5V, R = 1kΩ	4.0			V
Supply current	I _{CC}	V _{CC} = 5V		16		mA
Minimum detecting distance	L _{DS}	V _{CC} = 5V, R = 1kΩ	Kodak 90%		2	mm
Maximum detecting distance	L _{DL}		Kodak 90%		6	mm
Non - detecting distance	L _{NS}		Kodak 90%		25	mm
Response speed	t _{PLH} /t _{PHL}	V _{CC} = 5V, R = 1kΩ			0.5	ms
Exterior light endure	E _V	V _{CC} = 5V, R = 1kΩ	3,000			lx
Output state			NPN open collector			

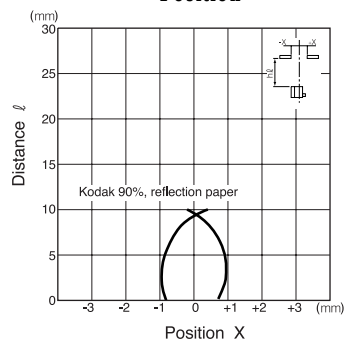
Detecting distance Vs. Angle



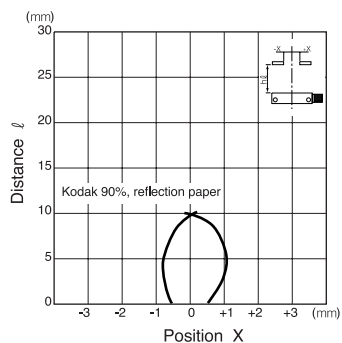
Detecting distance Vs. Angle



Distance Vs. Position



Distance Vs. Position



Relative distance Vs. Ambient temperature

