Photointerrupters

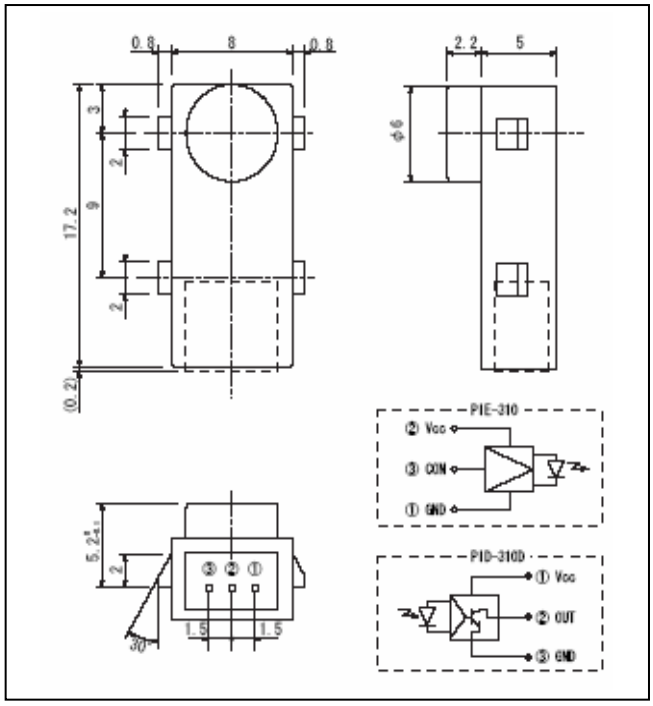
KODENSHI

PIE310 · PID310D

A modulative emitting diode and a modulative detecting photo IC with connector has been put together in a package. The use of the emitter and detector as a pair enables it to work as a penetrative type photo-sensor of approximately 100cm (can be practically used as a reflective type sensor). Can be used as a paper sensor due to easy equipping and its high auti-dust factor.

PIE310 : Modulated emitting diode
PID310D : Modulated Photo IC

Dimensions (Unit : ㎜)



Features

- Anti-visible rays due to visible ray cut resin for detector type
- Connector type(JAE IL-Y type)
- Dust proof

Applications

- ATM
- Auto stampers
- Card readers / writers
- Optical switches

Absolute Maximum Ratings [Ta = 25°C]

Description		Symbol	Ratings	Unit
Emitter	Supply voltage	V_{CC}	7	V
Detector	Supply voltage	V_{CC}	13.2	V
	Low level output current	I_{OL}	30	mA
	Power dissipation	P_D	100	mW
Operating temp. *1		Topr.	-10~+60	°C
Storage temp. *1		Tstg.	-20~+80	°C

*1. No icebound or dew

Electro-Optical Characteristics [Vcc= 5V, Ta = 25°C]

Parameter		Symbol	Conditions	Min.	Typ.	Max.	Unit.
Emitter	Operating supply voltage	V_{CC}		4.75	-	5.25	V
	Current consumption	I_{CC}	V_{CC}=5V	-	15	30	mA
	Peak wavelength	λp	V_{CC}=5V	-	830	-	nm
	Half angle	$\Delta\Theta$		-	±5	-	deg.
Detector	Operating supply voltage	V_{CC}		4.75	-	5.25	V
	Low level output voltage	V_{OL}	V_{CC}=5V, I_{OL}=16mA, Shading	-	-	0.4	V
	High level output voltage	V_{OH}	V_{CC}=5V, R_L=10kΩ, Non-Shading	4.0	-	-	V
	Currint consumption	I_{CC}	V_{CC}=5V	-	5	10	mA
	Half angle	$\Delta\Theta$		-	±5	-	deg.
Combination	Detecting distance	L	V_{CC}=5V	100	200	850	cm
	Hysteresis	I_{FHL}/I_{FLH}	V_{CC}=5V	-	0.9	-	-
	L→H propagation time	t_{PLH}	V_{CC}=5V, L=100cm, R_L=3.3kΩ	-	-	0.5	ms
	H→L propagation time	t_{PHL}		-	-	0.5	ms