

DISTANCE INFRARED SENSOR

P/N: RDP-2425-S000



Infrared range finding sensor that uses a triangulation system with an infrared LED and a PSD. This sensor produces analog output that depends on a distance to an object, and is thus ideal for measuring distance to a person or an object.

FEATURES

- A triangulation system that uses an infrared LED and a PSD
- Integrated LED drive circuit and PSD signal processing circuit
- Analog output that depends on a distance to an object
- Short range detecting distance: 1.5 ~ 15cm

MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Supply voltage	Vcc	-0.3~+7	V
Output terminal voltage	Vo	-0.3~Vcc+0.3	V
Operating temp.	*1 Topr.	-10~+60	°C
Storage temp.	*1 Tstg.	-20~+70	°C

*1. No icebound or dew.

APPLICATIONS

Robot, Multi function peripheral, Noncontact switch, ATM, Vending machine, Amusement machine, Toilet seat with shower unit

Recommended operating conditions

Item	Symbol	Min.	Typ.	Max.	Unit
電源電圧 Supply voltage	Vcc	4.5	5.0	5.5	V

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

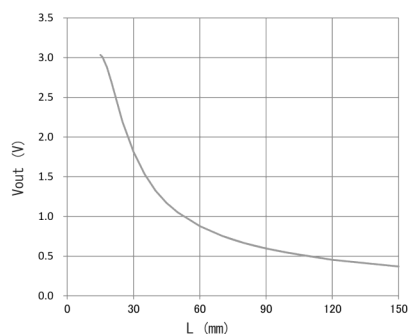
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Current consumption	Icc	平均値 Average	—	18	27	mA
Detection distance range *2	ΔL	—	1.5	—	15	cm
Output voltage *3	Vout	L=7cm	0.65	—	1.05	V
Output voltage amplitude *3	ΔVout	L=15cm→1.5cm	2.25	—	2.85	V

Detection standard object (No luster reflection paper, White, Reflectance 90%)

*3. L: Distance to an object

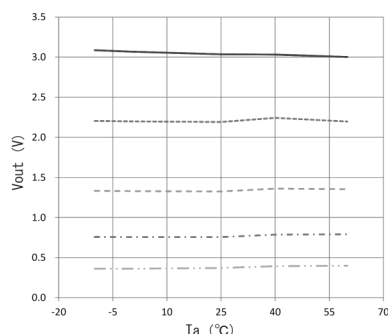


Distance Characteristic



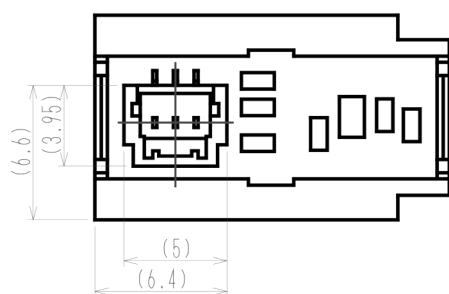
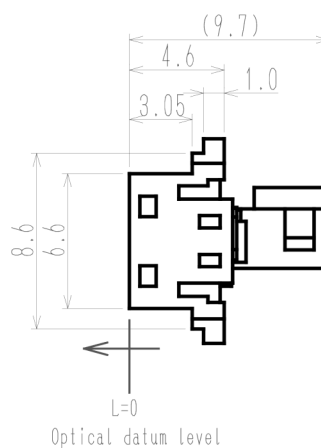
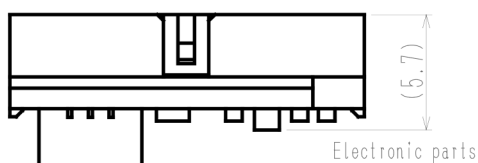
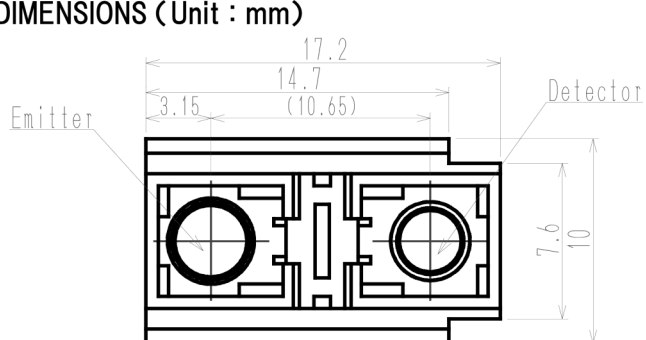
— White (R= 90%)

Temperature Characteristic



— L=15mm - - - L=25mm - - - L=40mm
- - - L=70mm - - - L=150mm

DIMENSIONS (Unit : mm)



Pin arrangement

- 1 Vout
- 2 GND
- 3 Vcc

