



KUA0055A

Reflector Sensor

Features

Function	Reflector Sensor for Short Distance (Digital Output)
Product features	<ul style="list-style-type: none">• Outer Dimension : 23.7 x 9.3 x 11.4 mm (L x W x H)• Supply Voltage (Vcc) = 5V (Please contact our sales staff concerning Vcc=3V product)• Integrated IRED and Photo IC• Compact Small Package• Detection Distance : 1 mm~7.5 mm• RoHS compliant
Installation method	Snap On and Connector
Packing	Tray

Recommended Applications

Copier, Printer (Detection of Paper Jam, Paper Loading Timing and Paper Size)

Absolute Maximum Ratings

(Ta=25°C, Except Topr, Tstg, Hopr and Hstg)

Item	Conditions	Symbol	Absolute Maximum Rating	Unit
Supply Voltage		Vcc	-0.5 ~ 7	V
Output Voltage		Vout	12	V
Output Current		Io	50	mA
Operating Temperature		T _{opr}	-10~+85	°C
Storage Temperature		T _{stg}	-40~+85	°C
Operating Humidity	No Dew	H _{opr}	15~+95	%
Storage Humidity	No Dew	H _{stg}	15~+95	%
Acceptable Ambient Illuminate	Under Fluorescent Lamps and Incandescent Lamps	Ex	3,000	lx

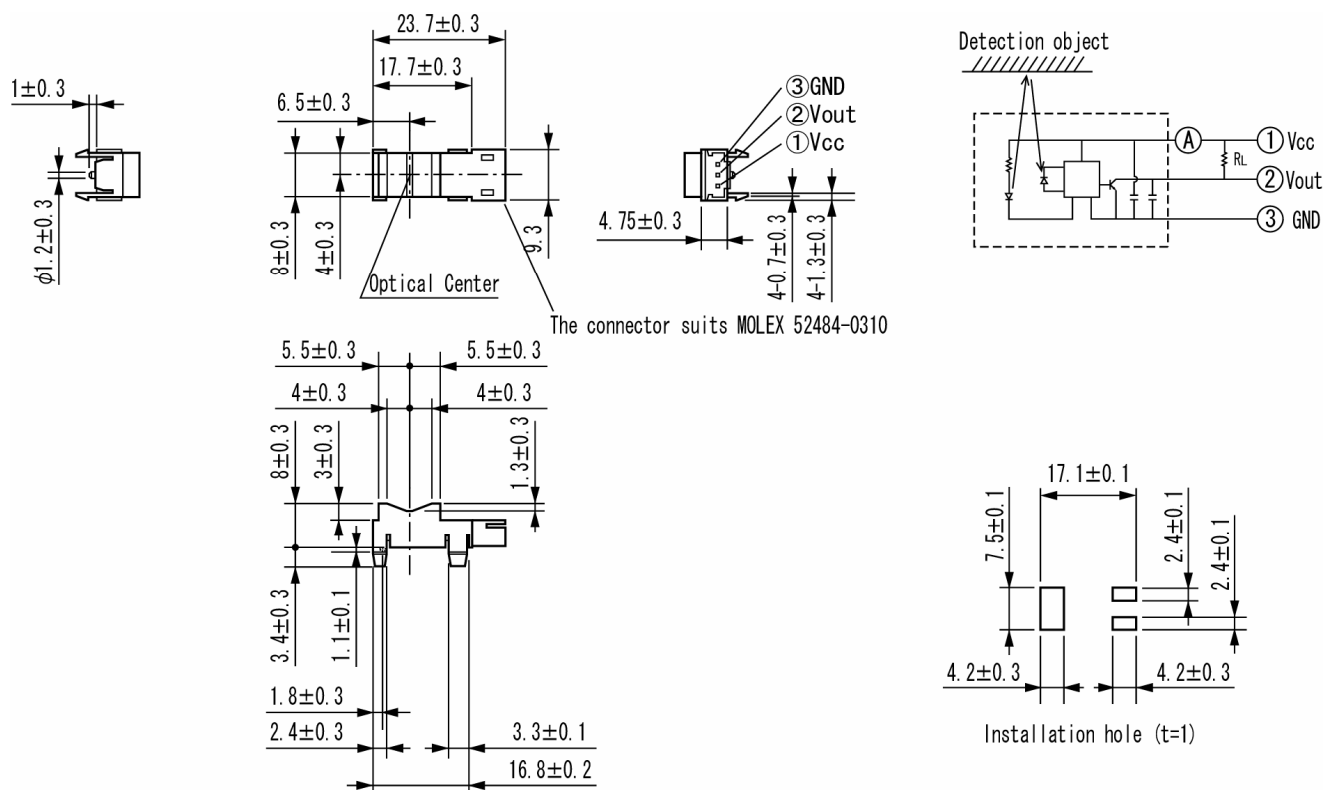
Electro-Optical Characteristics

(Ta=25°C, Vcc=5V, R_L=1kΩ, Ambient Brightness=0lx)

Item	Conditions	Symbol	Characteristics		Unit
Current Consumption	Average	I _{cc}	MAX.	20	mA
	Peak		MAX.	150	
High Level Output Voltage		V _{OH}	MIN.	4.5	V
Low Level Output Voltage	(At the time of Detecting) Transistor On	V _{OL}	MAX.	0.4	V
Output	Open Collector	Vout	(At the time of Detecting) Transistor On		-
Response Time	Rise Time/Fall Time	tr/tf	MAX.	1	ms
Detection Distance	Kodak 90% reflective paper Tracing paper OHP Regular paper	L _{HL}	MIN.	1.0	mm
			MAX.	7.5	
	Black paper	L _{HL}	MIN.	3.0	mm
			MAX.	7.0	
Undetectable Distance	90% Reflective Paper (White Paper)	L _{LH}	MIN.	27	mm
Detection Accuracy	Detection Distance : 6 mm — X1	-	-	1.5±0.5	mm
	— X2	-	-	1.5±0.5	
Detection Range	From Optical Center	-	MAX.	φ 10	mm

Package Dimensions

(Unit: mm)



Reliability Testing Result

Reliability Testing Result	Applicable Standard	Testing Conditions	Duration	Failure
Wet High Temp. Operating Life	EIAJ ED-4701/100(102)	Ta = 85°C, RH = 85%, V _{CC} = 5V	1,000 h	0/5
Wet High Temp. Storage Life	EIAJ ED-4701/100(103)	Ta = 85°C, 95%	1,000 h	0/5
High Temp. Operating Life	EIAJ ED-4701/100(101)	Ta = 85°C, V _{CC} = 5V	1,000 h	0/5
Low Temp. Operating Life	EIAJ ED-4701/100(101)	Ta = -10°C, V _{CC} = 5V	1,000 h	0/5
Thermal Shock	EIAJ ED-4701/200/(203)	-40°C ~ 85°C	200 cycles	0/5
Vibration, Variable Frequency	EIAJ ED-4701/400(403)	9.8m/s ² (1G), 10 ~ 55 ~ 10Hz sweep for 60s, XYZ each direction(State of packing)	30min	0/3
Shock	EIAJ ED-4701/400(404)	294m/s ² (30G), XYZ each direction (State of packing)	3 times	0/3
Terminal Strength	EIAJ ED-4701/400(401)	Pull : 20N 5s Bend : 10N 5s	-	0/Each 5
Electric Static Discharge (ESD)	EIAJ ED-4701/300(304)	C = 100pF, R = 1.5KΩ, ±1KV	once each terminal	0/3

Failure Criteria

Items	Failure criteria
Electro Characteristics	The Rated Values of Electro Characteristics is satisfied.
Cosmetic Appearance	Occurrence of notable decoloration, deformation and cracking

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