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Reflective Type Opto Sensor OM-371-A8

■ Dustproof Enclosure

■ MAXIMUM RATINGS

(Ta = 25 °C)

Item		Symbol	Value
Input	Forward DC Current	I_F	50mA
	Forward DC Current Derating *1	ΔI_F/°C	-0.33mA/°C
	Reverse DC Voltage	V_R	5V
	Pulse Forward Current	I_{FP}	600mA *2
Output	C-E Voltage	V_{CEO}	30V
	E-C Voltage	V_{ECO}	5V
	Collector Current	I_C	50mA
	Collector Power Dissipation	P_C	75mW
	Collector Power Dissipation Derating *1	ΔP_C/°C	-1mW/°C
Operating Temperature Range		T_{OPR}	-25~+85 °C
Storage Temperature Range		T_{STG}	-40~+85 °C

■ MECHANICAL CHARACTERISTICS

Vibration Resistance	To withstand 10~55~10Hz, 1.5mm amplitude and 1 minute sweep time in X, Y and Z directions, each for 2 hours.
Shock Resistance	294m/S^2 (30G) or more.

■ ELECTRICAL/OPTICAL CHARACTERISTICS

(Ta = 25 °C)

Item			Symbol	Conditions	Min	Typ	Max	Unit
Input	Forward Voltage		V_F	I_F = 10mA	1.00	1.15	1.3	V
	Reverse Voltage		I_R	V_R = 5V	-	-	10	μA
	Peak Wavelength		λ_p	I_F = 20mA		940	-	nm
Output	Off-State Collector Current		I_{CEO}	V_{CE} = 24V E = 0	-	0.005	0.1	μA
	Peak Wavelength		λ_p	-	-	870	-	nm
Coupled	Light Current		I_L *3	V_{CE} = 5V *4 I_F = 20mA L = 6mm	80	-	1,400	μA
	Leak Current		I_{LEAK} *3	V_{CE} = 5V I_F = 20mA	-	500	-	nA
	Switching Time	Rise Time	t_r	V_{CC} = 5V I_C = 2mA R_L = 100Ω	-	6	-	μs
		Fall Time	t_f		-	6	-	μs

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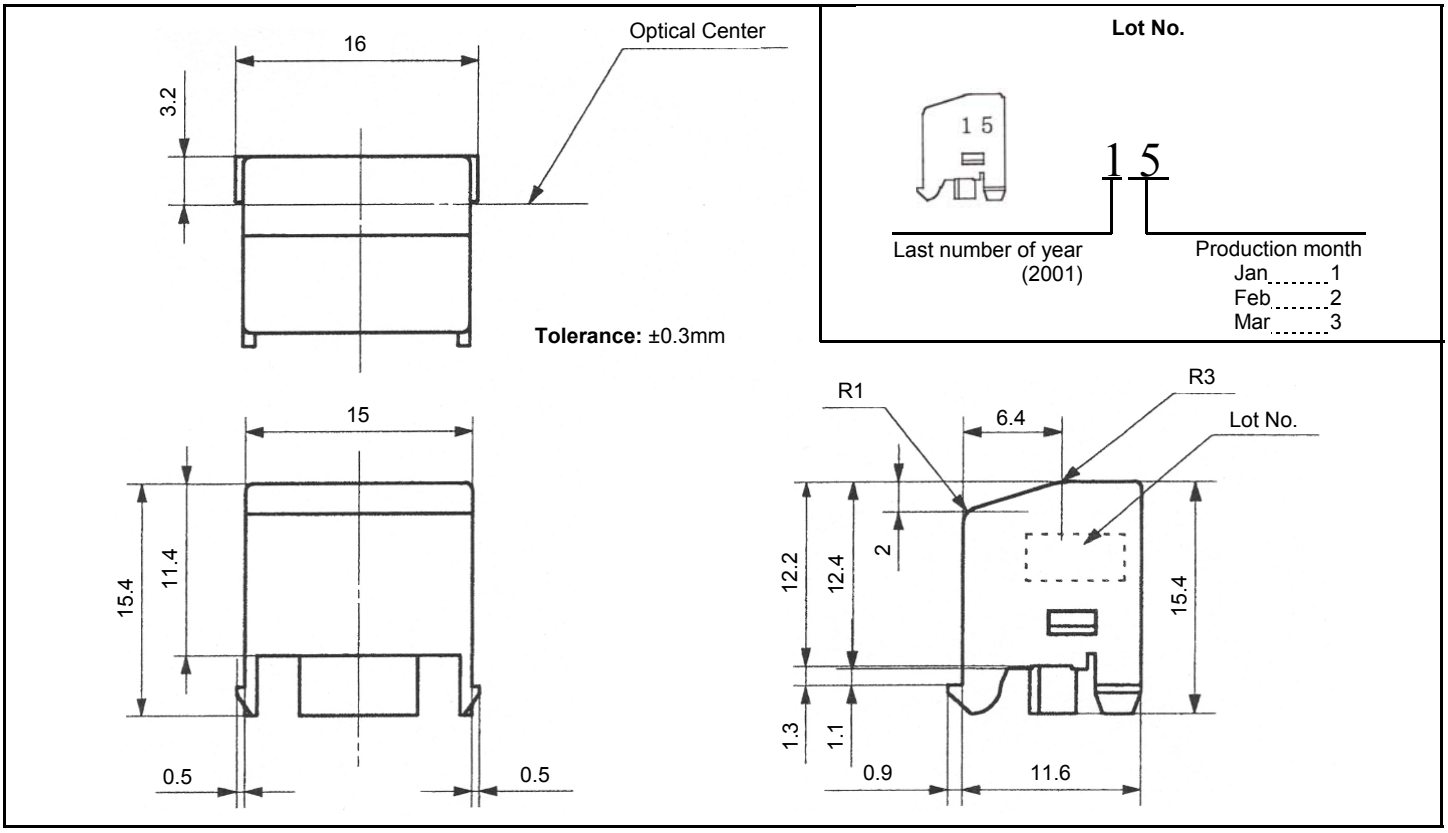
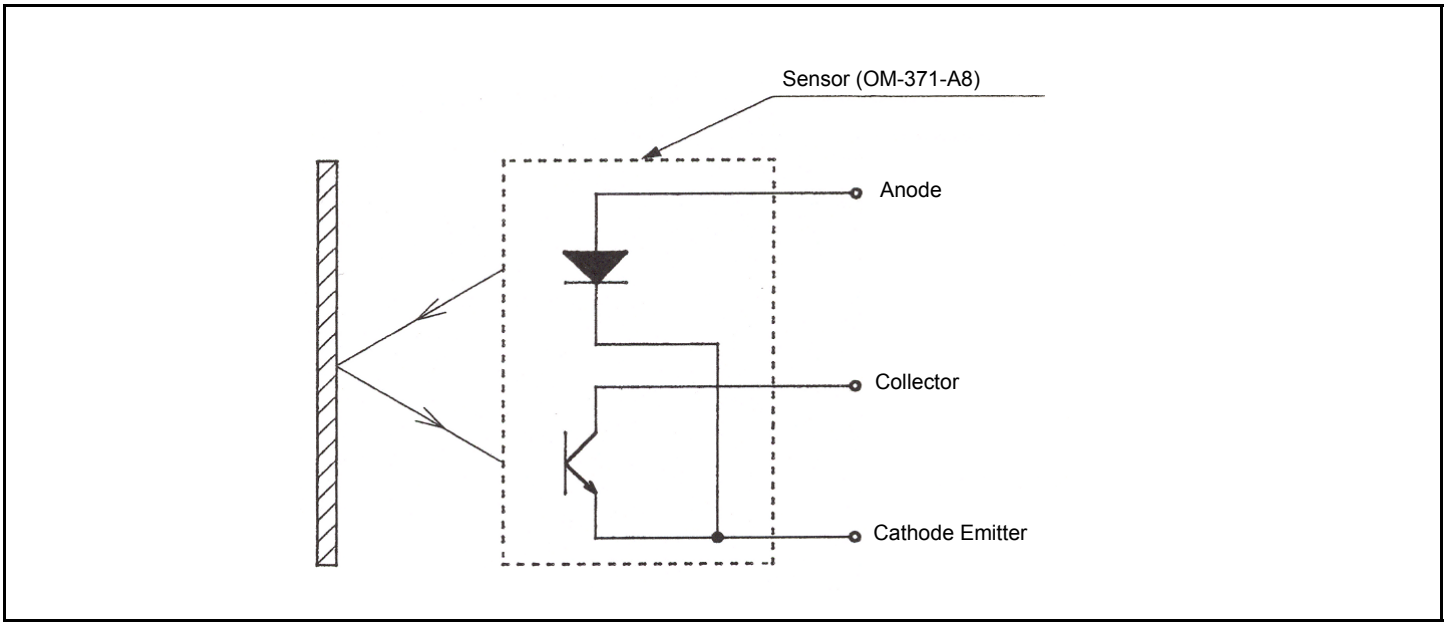
OUTLINE DIMENSIONS



CONNECTION DIAGRAM



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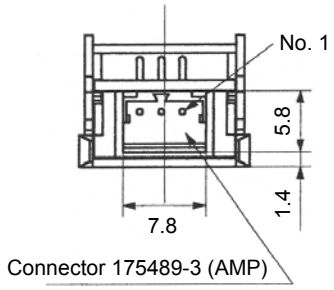
INSTALLATION HOLE DIMENSIONS (REFERENCE)



Tolerance: ±0.1mm

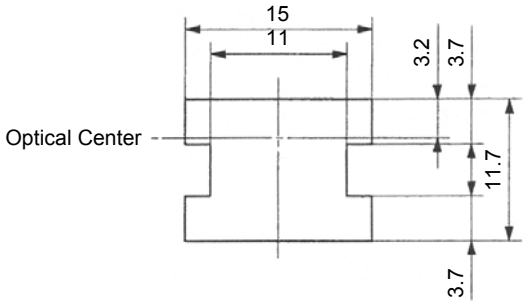


Plate Thickness
t = 1 mm

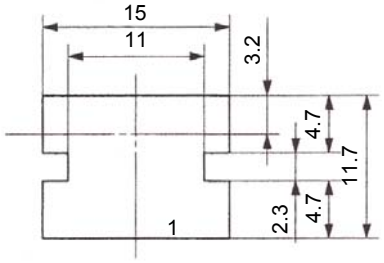


Plate Thickness
t = 1.2 mm

Terminal No.	Symbol
1	Collector
2	Cathode—Emitter
3	Anode

PARTS CONSTRUCTION LIST

No.	Description	Qty. Used	Materials	Remarks
1	Case	1	Polycarbonate	Flammability: UL94V-2 or more
2	Inner Case	1	Polycarbonate	Flammability: UL94V-2 or more
3	PCB	1	CEM-3	Flammability: UL94V-0
4	Connector	1	175489-3	AMP (Natural)
5	Light Emitting Diode	1	-	GaAs Infrared Light Emitting Diode
6	Detector	1	-	Phototransistor

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HANDLING NOTES

1. Careful attention should be made to avoid deformation of components.
2. Environmental air must be free from corrosive gasses such as hydrogen sulfide or salt water air.
3. Mount sensor away from direct sunlight and incandescent light.
4. The side with emitting and receiving elements should be handled very carefully.
5. Insert and remove connectors at room temperature only.
6. Degrading LED radiant power should be addressed if sensor is used repeatedly over a long period of time.
7. This product was designed for use in the following applications:

   OA equipment, video equipment, consumer electronics, communication equipment, measuring equipment, and control equipment.

   When designing a system for safety and reliability, be sure to incorporate fail-safe and other appropriate measures.

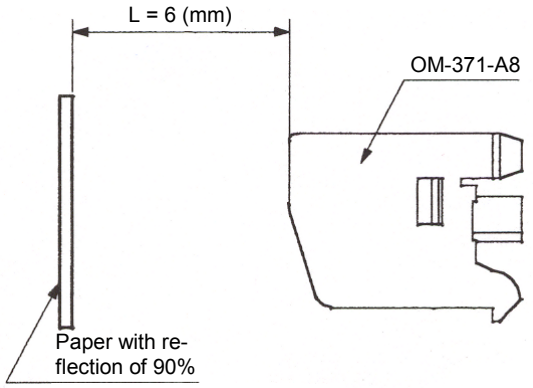
FOOTNOTES

*1: Ta > 25 °C

*2: ?? ≤ 100μs; ?? = 100 Hz

*3: ??

*4:



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