

**Date code (2 digit)**

1st digit		2nd digit	
Year of production		Month of production	
A.D.	Mark	Month	Mark
2000	0	1	1
2001	1	2	2
2002	2	3	3
2003	3	4	4
2004	4	5	5
2005	5	6	6
2006	6	7	7
2007	7	8	8
2008	8	9	9
2009	9	10	X
2010	0	11	Y
:	:	12	Z

repeats in a 10 year cycle

**Country of origin**

Japan

### ■ Absolute Maximum Ratings (T<sub>a</sub>=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	-0.5 to +7	V
Output voltage	V <sub>O</sub>	30	V
*1 Output current	I <sub>OL</sub>	50	mA
*2 Operating temperature	T <sub>opr</sub>	-10 to +60	°C
*2 Storage temperature	T <sub>stg</sub>	-20 to +80	°C

\*1 Sink current refer to Fig.5.

\*2 The connector should be plugged in/out at normal temperature.

### ■ Electro-optical Characteristics (T<sub>a</sub>=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Supply voltage	V <sub>CC</sub>	-	4.75	-	5.25	V
Current dissipation (I)	I <sub>CC</sub>	Smoothing value V <sub>CC</sub> =5V, R <sub>L</sub> =∞	-	-	30	mA
*3 Current dissipation (II)	I <sub>CCP</sub>	Pulse peak value V <sub>CC</sub> =5V	-	-	150	mA
Low level output voltage	V <sub>OL</sub>	V <sub>CC</sub> =5V, I <sub>OL</sub> =16mA, at detecting time	-	-	0.4	V
High level output voltage	V <sub>OH</sub>	V <sub>CC</sub> =5V, R <sub>L</sub> =1kΩ, at non detecting time	4.5	-	-	V
*4 Non detection distance	L <sub>LHL</sub>	KODAK Gray Cards, V <sub>CC</sub> =5V	-	-	27	mm
*4 Detection distance	L <sub>HLS</sub>	KODAK Gray Cards, V <sub>CC</sub> =5V	-	-	1	mm
		Black paper, V <sub>CC</sub> =5V	-	-	3	
	L <sub>HLL</sub>	KODAK Gray Cards, V <sub>CC</sub> =5V	9	-	-	mm
		Black paper, V <sub>CC</sub> =5V	7	-	-	
*5 Response time	t <sub>PLH</sub>	V <sub>CC</sub> =5V	-	-	1	ms
	t <sub>PHL</sub>		-	-	1	ms
*6 Acceptable illuminance	Ev1	-	3 000	-	-	lx
	Ev2		1 500	-	-	lx

\*3 Refer to Fig.1.

\*4 Refer to Fig.2.

\*5 Refer to Fig.3.

\*6 Refer to Fig.4.

Reflective object    Black paper (black)    : Standard reflective object (provided by SHARP Corporation)  
                                  KODAK Gray Cards (use the white side reflects about 90%)  
                                  : Standard reflective object (provided by SHARP Corporation)  
                                  PPC paper                                : Standard reflective object (provided by SHARP Corporation)