

Photo diode IC



KOD-1017

Features

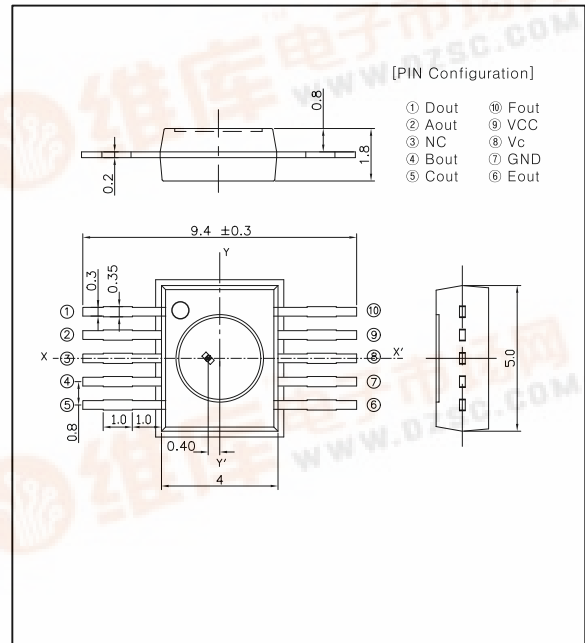
- Low Voltage Operation (2.5V ~ 5.5V)
- Frequency Characteristics : 8 MHz (Typ)
- Built-in Trans-Impedance Amplifier (current-to-voltage conversion circuit)
- High PD Sensitivity
- Recommended Diode for CD Applications is an IR Laser Diode ( $\lambda = 780\text{nm}$ )
- Supports Focus Servo (Astigmatism Method) and Tracking Servo (Three Beam Method)

Applications

- Optical Pick-up for Video CD-Players
- CD-ROM / CD-MP3 Players / CD Audio

DIMENSIONS

(Unit : mm)



Absolute Maximum Ratings

[Ta = 25 °C ]

Description	Symbol	Ratings	Condition
Power Supply Voltage	V <sub>cc</sub>	2.5 ~ 5.5V	-
Power Dissipation	P <sub>d</sub>	200 mW	-
Storage Temperature	T <sub>stg.</sub>	-40 ~ +85 °C	-

Electro-Optical Characteristics

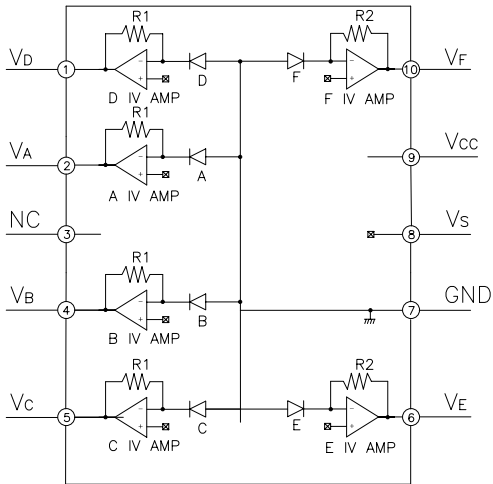
[Ta = 25 °C ]

Parameter	Symbol	Characteristics	Condition
Output Offset Voltage	V <sub>off</sub>	±15mV	Offset voltage with Respect to Vref
Output Offset Voltage Difference	$\Delta V_{off}$	±20mV	V <sub>A</sub> ~ V <sub>D</sub>
		±15mV	V <sub>E</sub> ~ V <sub>F</sub>
Sensitivity	V <sub>o</sub>	MIN 290 mV	$\lambda = 780\text{nm}$ , V <sub>A</sub> ~ V <sub>D</sub>
		MIN 610 mV	$\lambda = 780\text{nm}$ , V <sub>E</sub> ~ V <sub>F</sub>
Cutoff Frequency	f <sub>c</sub>	TYP 8.0 MHz	100 kHz, -3dB (A-D)
		TYP 400 KHz	10 kHz, -3dB (E-F)
Maximum Output Voltage	V <sub>omax</sub>	MIN 4.0V	P <sub>O</sub> = 100 $\mu$ W, $\lambda = 780\text{nm}$
Operating Temperature Range	T <sub>opr</sub>	-20 ~ +75 °C	-



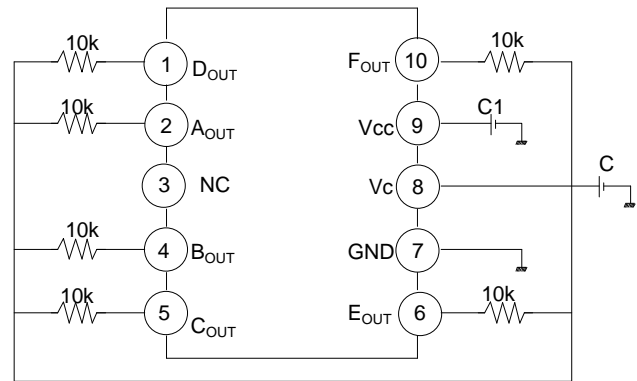
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**Block Diagram**



R1=182KΩ R2 = 182KΩ  
A-F Photodiodes

**Test Measurement Circuit Diagram**



Note: C1 and Cw are 0.1uF Capacitors

**Detecting Pattern of Photo Diode**

