

# KOD-3005

KOD - 3005 is a photo IC developed as a detector for optical pick ups of compact discs. The output impedance is low and stable due to the I - V amplifier. The detectors of tracking are set on both sides of 4 segmented photodiodes.

### FEATURES

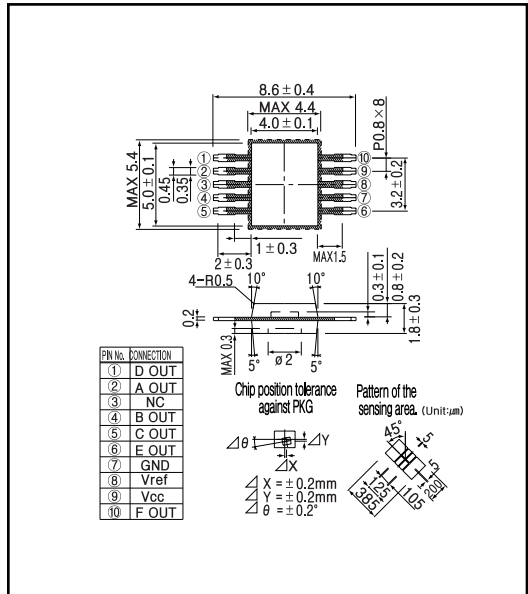
- Built - in I - V amplifier (current - to - voltage converter)
- Laser beam focusing/positioning is best performed by 4 segmented photodiodes
- Compact, clear mold package

### APPLICATIONS

- Signal detection, focusing and positioning for CD and other optical disks

### DIMENSIONS

(Unit : mm)



### MAXIMUM RATINGS

(Ta = 25 °C)

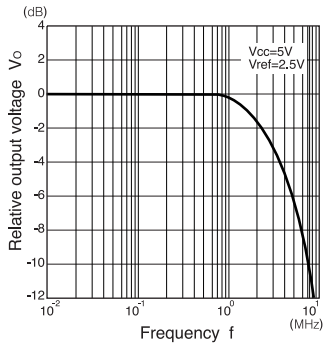
Item	Symbol	Rating	Unit
Supply voltage	V <sub>cc</sub>	12	V
Reference voltage	V <sub>ref</sub>	V <sub>cc</sub>	V
Power dissipation	P <sub>o</sub>	100	mW
Operating temp.	T <sub>opr.</sub>	- 20 + 80	
Storage temp.	T <sub>stg.</sub>	- 40 + 90	

### ELECTRO-OPTICAL CHARACTERISTICS

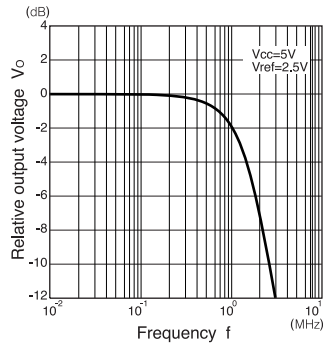
( V<sub>cc</sub> = 3V, V<sub>ref</sub> = 1.5V, R<sub>i</sub> = 10k Ω, Ta = 25 °C )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Current consumption	V <sub>cc</sub>	(shading)		2.5	3.5	mA
Output offset voltage (A - F)	V <sub>off</sub>	(shading)	- 15	0	15	mV
Output offset voltage difference (A - F)	V <sub>off</sub>	(A+B) - (C+D) (shading)	- 15	0	15	mV
		(A+D) - (B+C) (shading)	- 15	0	15	mV
		(A+C) - (B+D) (shading)	- 15	0	15	mV
		E - F (shading)	- 10	0	10	mV
Output voltage(A - D)	V <sub>o</sub>	P <sub>o</sub> = 10μW = 780nm	290	370	450	mV
Output voltage(E,F)	V <sub>o</sub>	P <sub>o</sub> = 10μW = 780nm	610	770	930	mV
Maximum output voltage(A - D)	V <sub>omax</sub>	P <sub>o</sub> = 100μW = 780nm	2.0	2.2		V
Maximum output voltage(E,F)	V <sub>omax</sub>	P <sub>o</sub> = 100μW = 780nm	2.0	2.2		V
Cutoff frequency(A - D)	f <sub>c</sub>	100kHz - 3dB	3.0	4.0		MHz
Cutoff frequency(E,F)	f <sub>c</sub>	10kHz - 3dB	0.5	1.0		MHz
Noise level	V <sub>n</sub>	RBW = 30kHz, VBW = 30kHz, f = 1MHz		- 75	- 68	dBm
Peak wavelength	max			800		nm

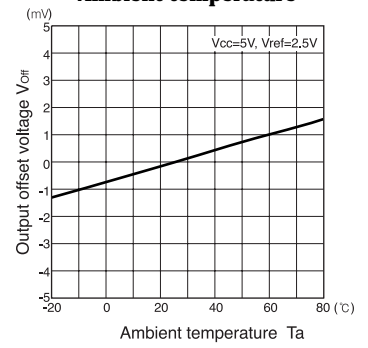
**Focus**



**Tracking**



**Output offset voltage Vs. Ambient temperature**



**Relative output voltage Vs. Ambient temperature**

