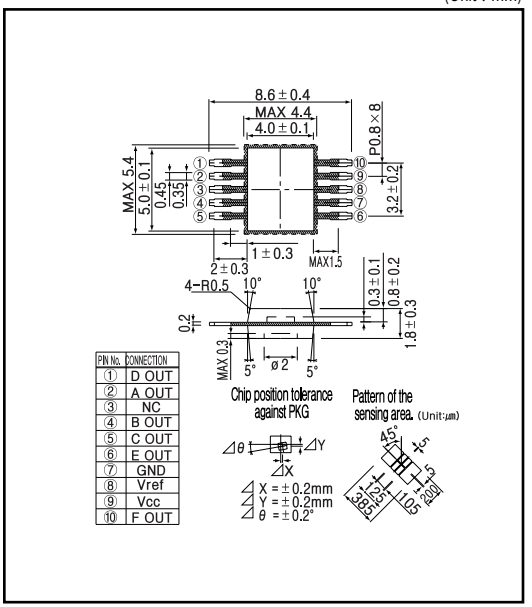
KOD-3005

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.

DIMENSIONS (Unit : mm)



FEATURES

- Bult - 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 ditection, focusing and positioning for CD and other optical disks

MAXIMUM RATINGS

(Ta=25℃)

Item	Symbol	Rating	Unit
Supply voltage	V_{CC}	12	V
Reference voltage	Vref	V_{CC}	V
Power dissipation	P_D	100	mW
Operating temp.	Topr.	−20 +80	℃
Storage temp.	Tstg.	−40 +90	℃

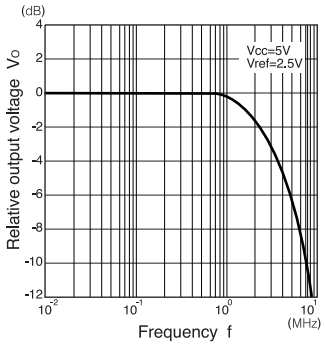
ELECTRO-OPTICAL CHARACTERISTICS

(V_{CC}=3V, Vref=1.5V, R=10kΩ, Ta=25℃)

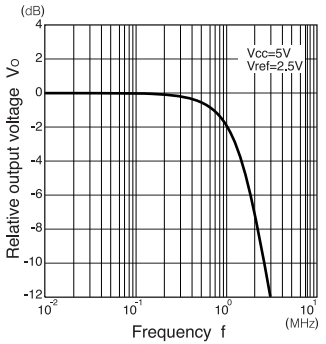
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Current consumption	I_{CC}	(shading)		2.5	3.5	mA
Output offset voltage (A F)	V_{off}	(shading)	−15	0	15	mV
Output offset voltage difference (A F)	ΔV_{off}	(A+B) - (C+D) (shading)	−15	0	15	mV
		(A+D) - (B+C) (shading)	−15	0	15	mV
		(A+C) - (B+D) (shading)	−15	0	15	mV
		E - F (shading)	−10	0	10	mV
Output voltage(A D)	V_O	Po=10μW λ=780nm	290	370	450	mV
Output voltage(E,F)	V_O	Po=10μW λ=780nm	610	770	930	mV
Maximum output voltage(A D)	Vomax	Po=100μW λ=780nm	2.0	2.2		V
Maximum output voltage(E,F)	Vomax	Po=100μW λ=780nm	2.0	2.2		V
Cutoff frequency(A D)	fc	100kHz−3dB	3.0	4.0		MHz
Cutoff frequency(E,F)	fc	10kHz−3dB	0.5	1.0		MHz
Noise level	Vn	RBW=30kHz,VBW=30kHz,f=1MHz		−75	−68	dBm
Peak wavelength	λmax			800		nm

KOD-3005

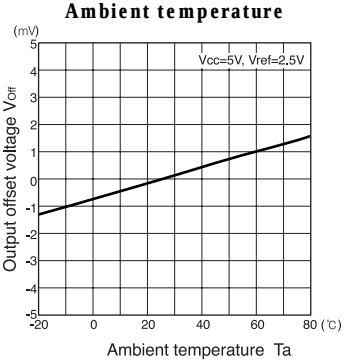
Focus



Tracking



Output offset voltage Vs. Ambient temperature



Relative output voltage Vs. Ambient temperature