

Photo diode IC

KODENSHI

KOD-1082

Features

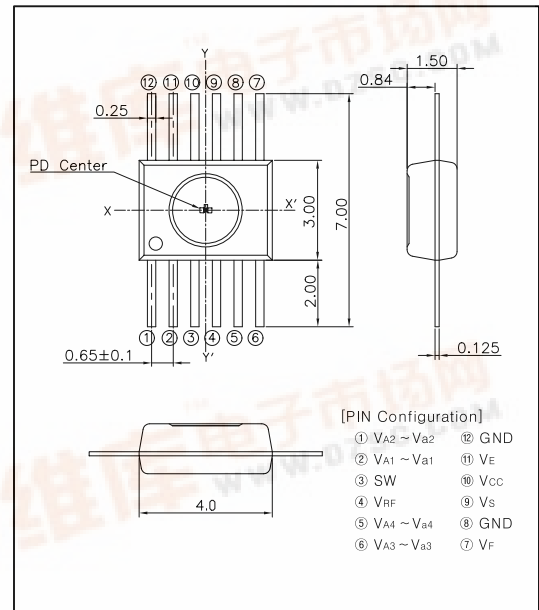
- Full CMOS Seven Channel, Integrated High Speed Photodiodes and Current to Voltage Transimpedance Amplifiers
- Four High Speed(55/35MHz typ) Data Channels (A1/a1 ~ A4/a4)
- Two Low Speed Tracking Channels (E, F)
- High PD Sensitivity Optimized for DVD/CD Applications with Red Laser Diode ($\lambda = 650\text{nm}$) and for CD Applications with IR Laser Diodes ($\lambda = 780\text{nm}$)

Applications

- CD-R/CD-RW Pick-up
- DVD-ROM / CD-ROM Drivers

DIMENSIONS

(Unit : mm)



Absolute Maximum Ratings

[Ta = 25 °C]

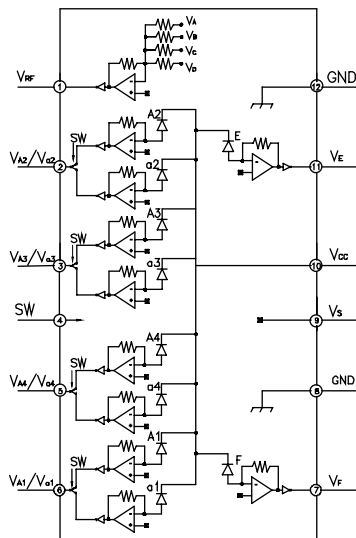
Description	Symbol	Ratings	Condition
Power Supply Voltage	V _{CC}	4.5 ~ 5.5 V	-
Output Voltage	V _O	V _{CC} + 0.5 V	-
Soldering Temperature	T _{sol}	260°C	-
Storage Temperature	T _{stg}	- 30 ~ + 85 °C	-

Electro-Optical Characteristics

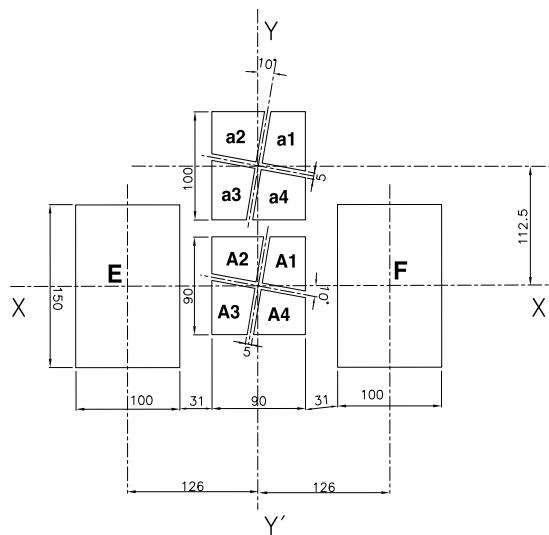
[Ta = 25 °C]

Parameter	Symbol	Characteristics	Condition
Output Offset Voltage	V _{off}	±15mV	V _{A1/a1} ~ V _{A4/a4}
Output Offset Voltage Difference	ΔV _{off}	±25mV	V _{A1/a1} ~ V _{A4/a4}
Sensitivity	V _O	MIN 25.6 mV/μW	λ=650nm, V _{a1} ~ V _{a4}
		MIN 32.0 mV/μW	λ=780nm, V _{A1} ~ V _{A4}
Cutoff Frequency	f _c	TYP 55 MHz	λ=650nm, V _{a1} ~ V _{a4}
		TYP 35 MHz	λ=780nm, V _{A1} ~ V _{A4}
Maximum Output Voltage	V _{omax}	MIN 3.9V	V _{A1/a1} ~ V _{A4/a4}
Output Noise Level	V _n	TYP -81dBm	V _{A1/a1} ~ V _{A4/a4}
Operating Temperature Range	T _{opr}	-20 ~ +75°C	-

Block Diagram



Detecting Pattern of Photo Diode



Unit: μm