

KOE1007

The KOE1007 is an advance ambient light sensor which incorporates photo diode and current amplifier in a single chip.

FEATURES

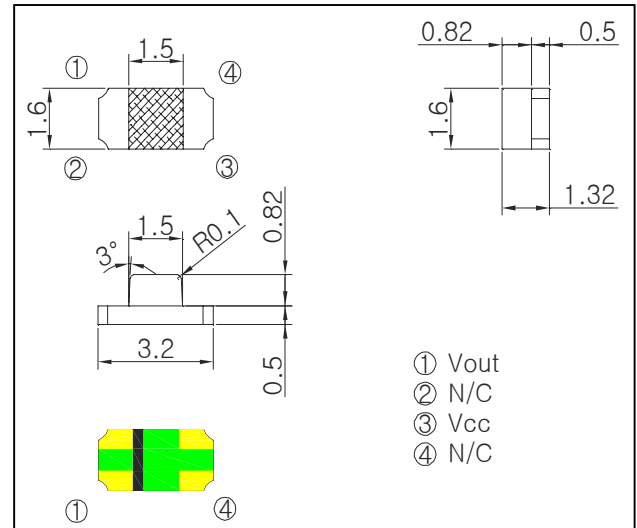
- Miniature Surface Mounted Package.
- 1.6mm(L) X 3.2mm(W) X 1.32mm(H)
- RoHS compliant and Lead-Free Packsge.
- Excellent output Linearity of illumination.

APPLICATIONS

- Mobile phone, PDA, Smart Phone
- Notebooks, Web pads, LCD monitors.
- TVs, Video Cameras, Digital Cameras
- Automotive

DIMENSIONS

(Unit : mm)



ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Min	Max	Unit
Supply Voltage	V_{cc}	-0.5	6.5	V
Output Voltage	V_{out}	-	$\leq V_{cc}$	V
Light Current	I_L	-	8	mA
Supply Voltage	V_{cc}	2.4	5.5	V
Load Resistance	R_{LOAD}	0	100K	Ω
Operating Temperature	$T_{opr.}$	-30	85	°C
Operating Temperature	$T_{opr.}$	-30	85	°C
Storage Temperature	$T_{stg.}$	-40	100	°C
Soldering Temperature ^{*1}	T_{sol}	260		°C

Notes *1 : $V_{cc}=5V$, $R_L=100\Omega$

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ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Light Current	I_{L1}	V _{CC} =3V, E _V =10Lx [2][4]	-	22	-	μA
Light Current	I_{L2}	V _{CC} =3V, E _V =100Lx [2][4]	-	220	-	μA
Light Current	I_{L3}	V _{CC} =3V, E _V =100Lx [1][4]	-	220	-	μA
Dark Current	I_D	V _{CC} =3V, E _V =0Lx	-	0.1	0.4	μA
Light Current Ratio	I_{L3} / I_{L2}	-	-	1	1.5	
Saturation Output Voltage	V _{OUT}	V _{CC} =3V, E _V =1000Lx R _{LOAD} =7.5K [2][4]	-	2.1	-	V
Switching speeds	Rise time	V _{CC} =3V, E _V =100Lx R _{LOAD} =1K [4]	-	2	-	mS
	Fall time		-	3	-	mS
Peak wavelength	λ_p	I _F =20mA	-	520	-	nm
Half angle	$\Delta\theta$		-	±70	-	degrees

NOTE :

1. Illuminance by CIE standard light source, illuminant-A / 2856K standard Tungsten Lamp.
2. Fluorescent light is used as light source.
3. 520nm LED is substituted in mass production.
4. Light current measurement circuit.

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