

## KOE1007

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

### FEATURES

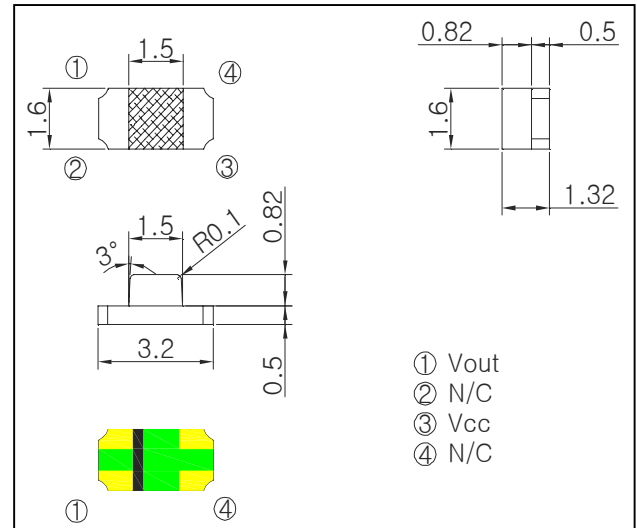
- Miniature Surface Mounted Package.  
- 1.6mm(L) X 3.2mm(W) X 1.32mm(H)
- RoHS compliant and Lead-Free Packsge.
- Excellent output Linearity of illumination.

### 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	$\Omega$
Operating Temperature	$T_{opr.}$	-30	85	°C
Operating Temperature	$T_{opr.}$	-30	85	°C
Storage Temperature	$T_{stg.}$	-40	100	°C
Soldering Temperature <sup>*1</sup>	$T_{sol}$	260		°C

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

## ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Light Current	$I_{L1}$	V <sub>CC</sub> =3V, Ev=10Lx [2][4]	-	22	-	μA
Light Current	$I_{L2}$	V <sub>CC</sub> =3V, Ev=100Lx [2][4]	-	220	-	μA
Light Current	$I_{L3}$	V <sub>CC</sub> =3V, Ev=100Lx [1][4]	-	220	-	μA
Dark Current	$I_D$	V <sub>CC</sub> =3V, Ev=0Lx	-	0.1	0.4	μA
Light Current Ratio	$I_{L3} / I_{L2}$	-	-	1	1.5	
Saturation Output Voltage	V <sub>OUT</sub>	V <sub>CC</sub> =3V, Ev=1000Lx R <sub>LOAD</sub> =7.5K [2][4]	-	2.1	-	V
Switching speeds	Rise time	V <sub>CC</sub> =3V, Ev=100Lx R <sub>LOAD</sub> =1K [4]	-	2	-	mS
	Fall time		-	3	-	mS
Peak wavelength	$\lambda_p$	I <sub>F</sub> =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.

