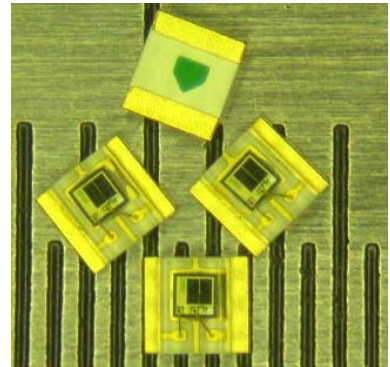Ambient Light Sensor

KOE1615

Description

The KOE1615 is an analog-output ambient light photo sensor. This device is an advance ambient light sensor which incorporates photo diode and current amplifier in a single chip.

This device is ideal for applications in which the measurement of ambient light is used to control display backlighting.

Features

- Spectral responsivity close to that of human eye
- Miniature chip LED lead-free surface mount package.

  (L1.6㎜ × W1.5㎜ × H0.55mm)

- Excellent output linearity of illumination.
- High sensitivity in visible light.

Applications

- Mobile phone
- Notebooks, Web pads
- TVs, Video Cameras, Digital Still Cameras

Absolute Maximum Ratings   (T_A=25℃)

Parameter	Symbol	Rating	Unit
Supply Voltage	Vcc	2.4 ~ 5.5	mA
Output Voltage	Vout	≤Vcc	V
Operating Temperature	Topr.	-35 ~ +85	
Storage Temperature	Tstg.	-40 ~ +100	
Soldering Temperature*1	Tsol.	260	
Parameter	Symbol	Rating	Unit

*1. Distance from end of the package =2mm, Soldering time=3 seconds. Max.

The contents of this data sheet are subject to change without advance notice for the purpose of improvement. When using this product, would you please refer to the latest specifications.
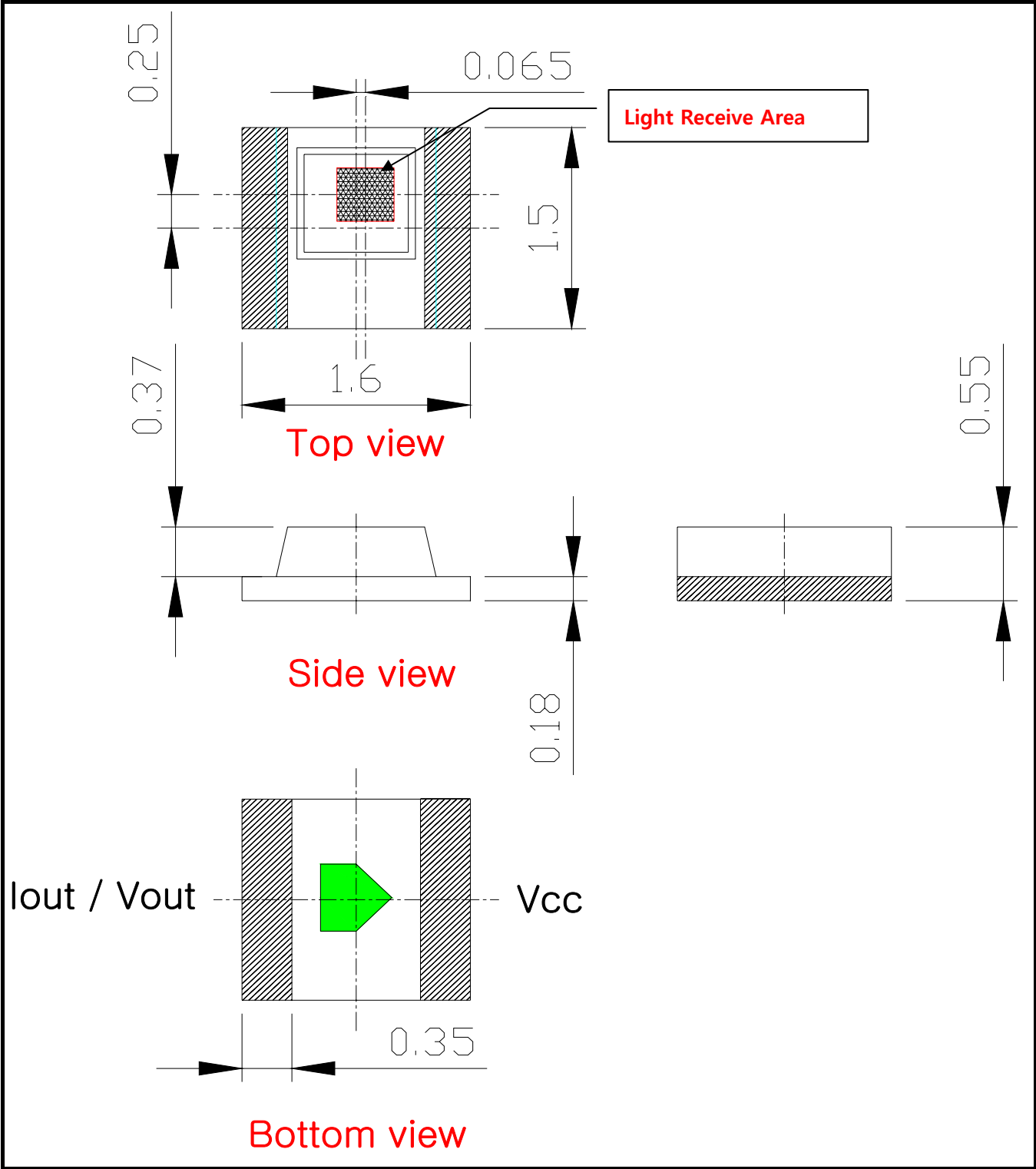
Electrical Characteristics (T$_a$=25℃)

Description	Symbol	Condition	Min.	Typ.	Max.	Unit
Light Current	I$_{L1}$	Vcc = 3V Ev = 100Lux[1][3]	10	-	60	uA
Light Current	I$_{L2}$	Vcc = 3V Ev = 1000Lux[1][3]	100	-	600	uA
Light Current	I$_{L3}$	Vcc = 3V Ev = 100Lux[2][3]	15	-	65	uA
Light Current	I$_{L4}$	Vcc = 3V Ev = 1000Lux[2][3]	150	-	600	uA
Dark Current	I$_D$	Vcc = 3V Ev = 0Lux	0	50	200	nA
Saturation Output Voltage	Vout	Vcc=3V, Ev=1000Lux, RLOAD=7.5K [1][3]	0	2.0	-	V
Rise time	tr	Vcc=3V, Ev=100Lx RLOAD=1K [3]	-	-	2	ms
Fall Time	tf			-	3	ms
Peak Wavelength	λp	I$_F$=20 ㎃	-	520	-	nm
Half Angle	ΔΘ	-	-	±70	-	deg.

Ordering Information

Part Number	Marking Code	Package	Packaging
KOE1615	-	COB	Reel

Package Outline Dimensions

Top view

Dimensions shown: 0.25, 0.065, 1.5, 1.6

Light Receive Area

Side view

Dimensions shown: 0.37, 0.18, 0.55

Bottom view

Iout / Vout — Vcc

Dimension shown: 0.35

Notes : 1. All dimension are in millimeters
2. General Tolerance is ±0.1mnm.