

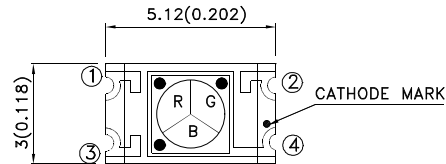
PRELIMINARY SPEC

RGB Color Sensor

KPS-5130PD7C

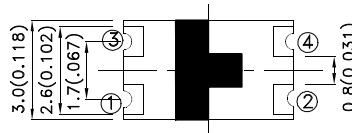
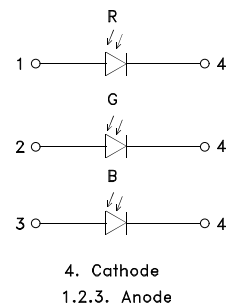
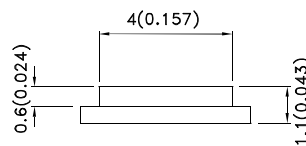
### Description

•The KPS-5130PD7C Color Sensor Device, consisting of 3-Channel/1Chip (R, G, B) Si photodiode, is a good effective solution to color balance of display backlighting appliances.



### Features

- \*Lead-free package.
- \*Component in accordance with RoHS.
- \*SMD style package on PCB technology.
- \*Integral Color Filter in Blue, Green, or Red.
- \* Package: 1.5KPCS/Reel.
- \* RoHS Compliant.



### \*Applications

The devices are suitable for :

- \*colorimetry.
- \*printing process control.
- \*display color correction.

UNIT : MM[INCH]

TOLERANCE : ±0.1[± 0.004] UNLESS OTHERWISE NOTED.

### \*Absolute Maximum Ratings(Ta=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	10	V
Operating Temperature	$T_{opr}$	-40~+85	°C
Storage Temperature	$T_{sto}$	-40~+85	°C
Soldering Temperature	$T_{sd}$	260	°C



**\*Electro-optical Characteristics(Ta=25°C unless otherwise specified)**

Parameter	Symbol	R			G			B			Condition
		Min.	Typ	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward Voltage	V <sub>F</sub>	0.5V	-	1.3V	0.5V	-	1.3V	0.5V	-	1.3V	I <sub>F</sub> = 10mA, H=0
Reverse Dark Current	I <sub>D</sub>	-	-	10nA	-	-	10nA	-	-	10nA	V <sub>R</sub> = 10V, H=0
Reverse Breakdown Voltage	V <sub>BR</sub>	35V (Min.)			35V (Min.)			35V (Min.)			I <sub>R</sub> = 100uA, H=0
light Current	I <sub>L</sub>	0.35uA (Typ.)			-			-			λ <sub>p</sub> =630nm E <sub>v</sub> =100 lx, V <sub>R</sub> =5V
		-			0.05uA (Typ.)			-			λ <sub>p</sub> =560nm E <sub>v</sub> =100 lx, V <sub>R</sub> =5V
		-			-			0.30uA (Typ.)			λ <sub>p</sub> =470nm E <sub>v</sub> =100 lx, V <sub>R</sub> =5V

Fig.1 Dark Current vs. Ambient Temperature

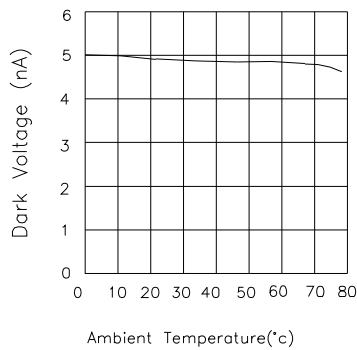


Fig.2 Relative Spectral Responsivity vs. Wavelength

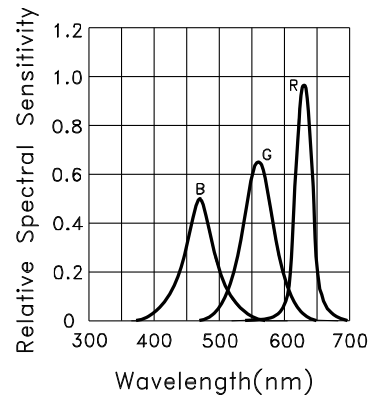
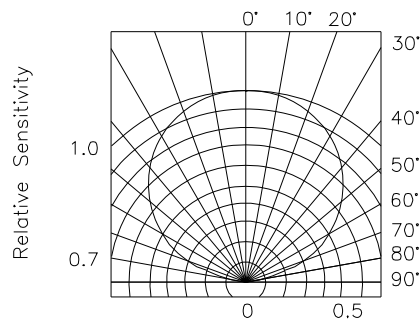
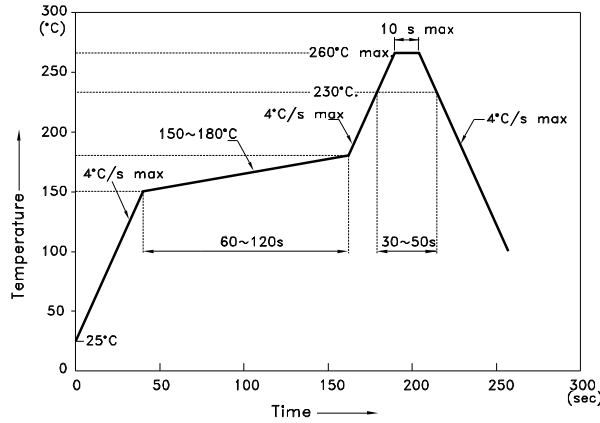


Fig.3 Relative radiant sensitivity vs. Angular displacement



**KPS-5130PD7C**

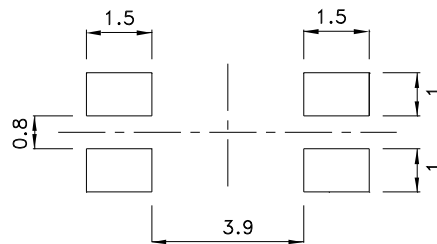
Reflow Soldering Profile For Lead-free SMT Process.



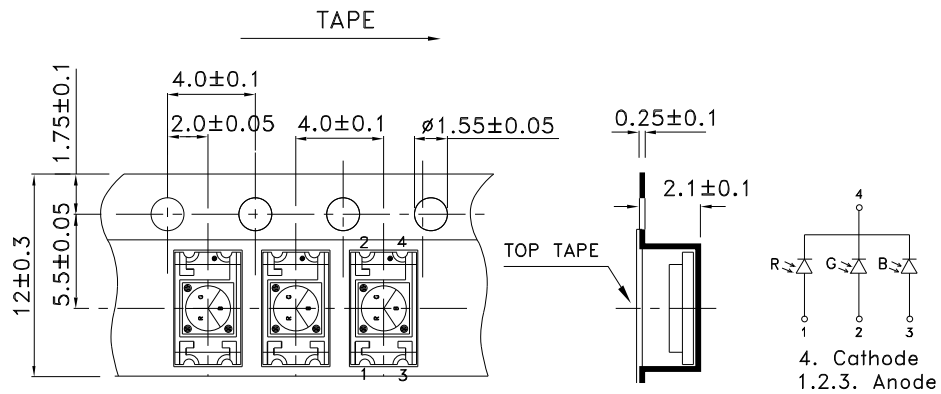
**NOTES:**

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

**Recommended Soldering Pattern  
(Units : mm; Tolerance: ± 0.1)**

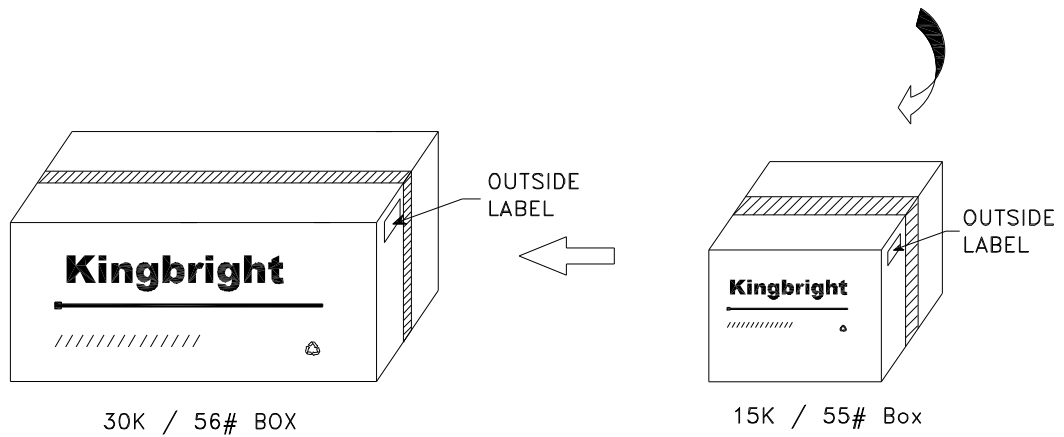
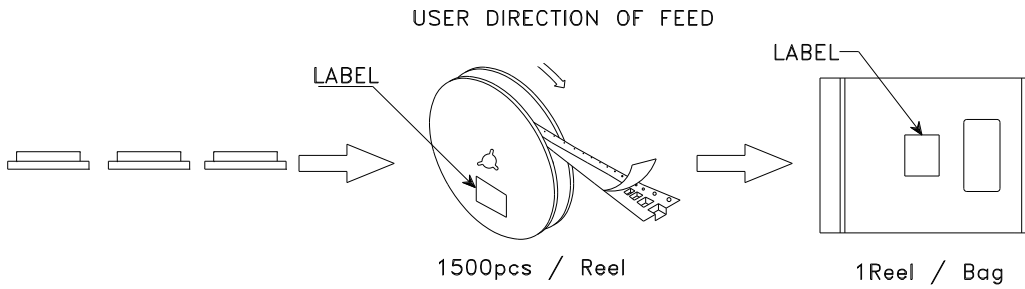



**Tape Specifications  
(Units : mm)**



**PACKING & LABEL SPECIFICATIONS**

**KPS-5130PD7C**



<h1>Kingbright</h1>	
P/NO: KPS-5130xxx	
QTY: 1.500 pcs	Q.C. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Q C XX XX XXXX PASSED</span>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

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