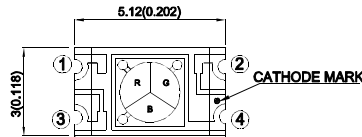


## RGB Color Sensor

## KPS-5130PD7C

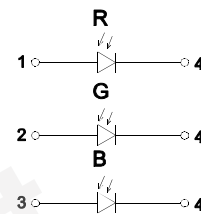
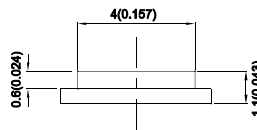
### Description

•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.

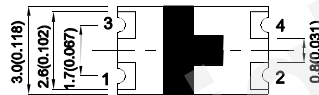


### Features

- \*Lead-free package.
- \*Component in accordance with RoHS.
- \*SMD style package on PCB technology.
- \*Integral Color Filter in Blue, Green, or Red.
- \* Package:1500 pcs/Reel.
- \*Moisture sensitivity level : level 3.
- \* RoHS Compliant.



4. Cathode  
1.2.3. Anode



### \*Applications

The devices are suitable for :

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

UNIT : MM[INCH]

TOLERANCE : ±0.25[± 0.01"] UNLESS OTHERWISE NOTED.

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

Parameter	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	10	V
Operating Temperature	Topr	-40~+85	°C
Storage Temperature	Tsto	-40~+85	°C
Soldering Temperature	Tsd	260	°C



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

Parameter	Symbol	Condition	Value			Unit	
			Min.	Typ	Max.		
Peak Sensitivity Wavelength	$\lambda_p$	Red	-	620	-	nm	
		Green	-	550	-		
		Blue	-	470	-		
Light Current(1)	$I_{L1}$	100Lux <sup>[1]</sup> VR = 5V	Red	-	0.039	-	uA
			Green	-	0.042	-	
			Blue	-	0.022	-	
Light Current(2)	$I_{L2}$	1000Lux <sup>[1]</sup> VR = 5V	Red	-	0.427	-	uA
			Green	-	0.498	-	
			Blue	-	0.262	-	
Diameter of the irradiation sensitive area	D		-	2.0	-	mm	
Irradiation sensitive area per element	A		-	0.85	-	mm <sup>2</sup>	
Photo sensibility of the single color areas	$S_{Max}$	$\lambda_R=620\text{ nm}$ $\lambda_G=550\text{ nm}$ $\lambda_B=470\text{ nm}$	-	0.33 0.25 0.18	-	A/W	
Reverse Dark Current	$I_D$	VR=5V	-	-	10	nA	

Note:

1. White fluorescent light (Color Temperature = 6500K) is used as light source.

Fig.1 Dark Current vs. Ambient Temperature

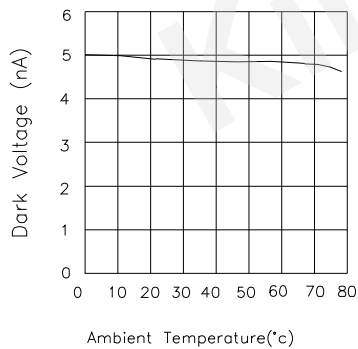


Fig.2 Spectral Response

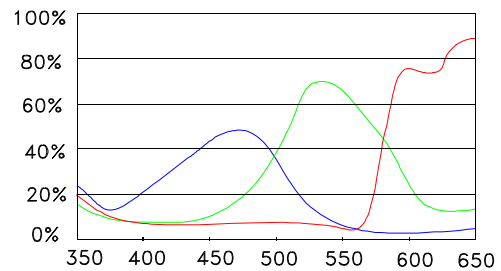
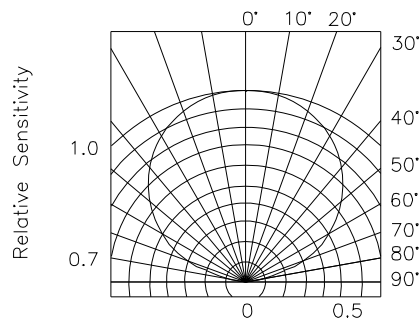


Fig.3 Relative radiant sensitivity vs. Angular displacement



## Typical Electro - Optical Characteristics Curves

Fig.4 R,G,B LED Test vs. Output Photocurrent

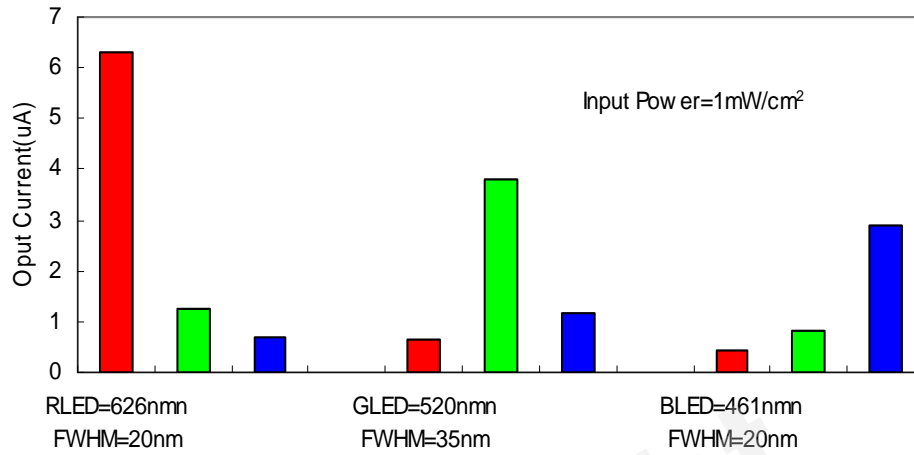
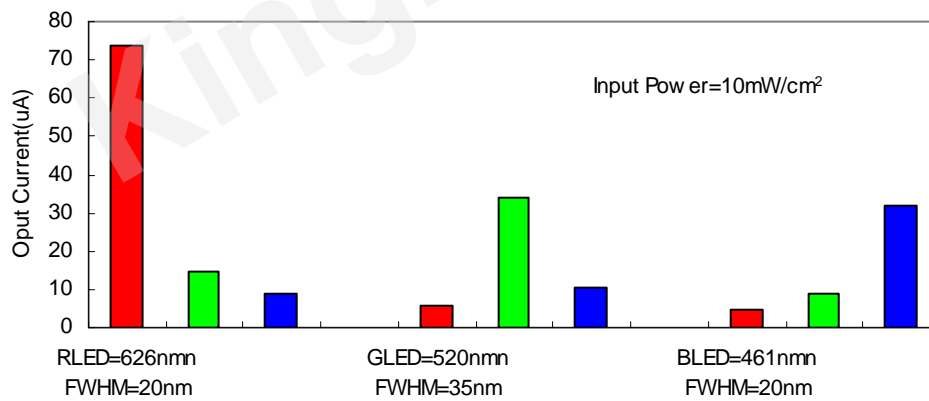
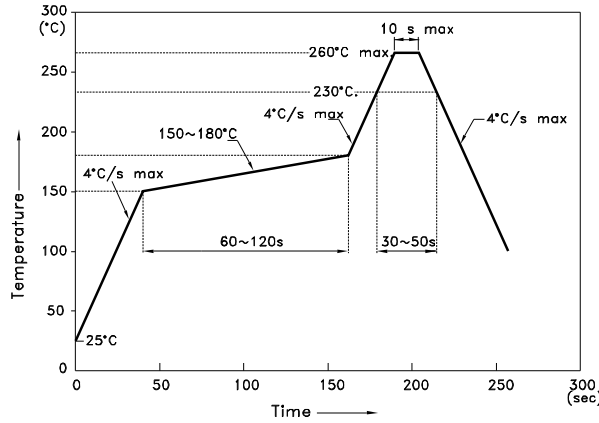


Fig.5 R,G,B LED Test vs. Output Photocurrent



**KPS-5130PD7C**

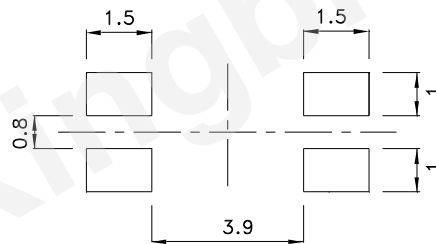
Reflow Soldering Profile For Lead-free SMT Process.



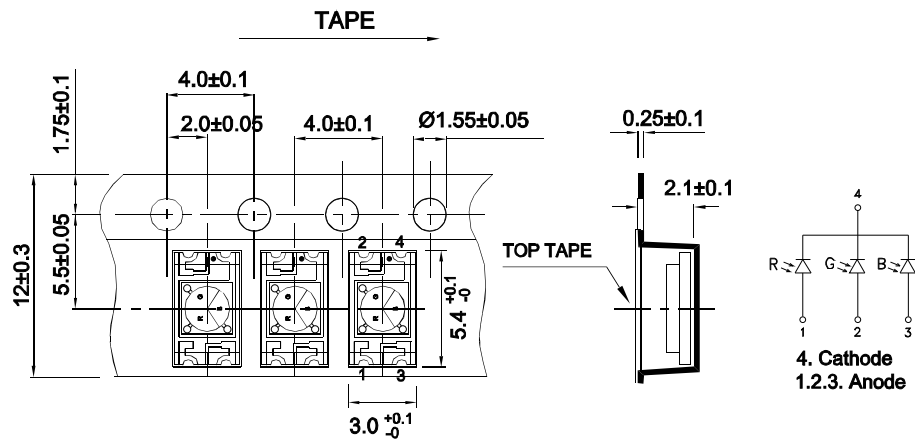
**NOTES:**

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)**

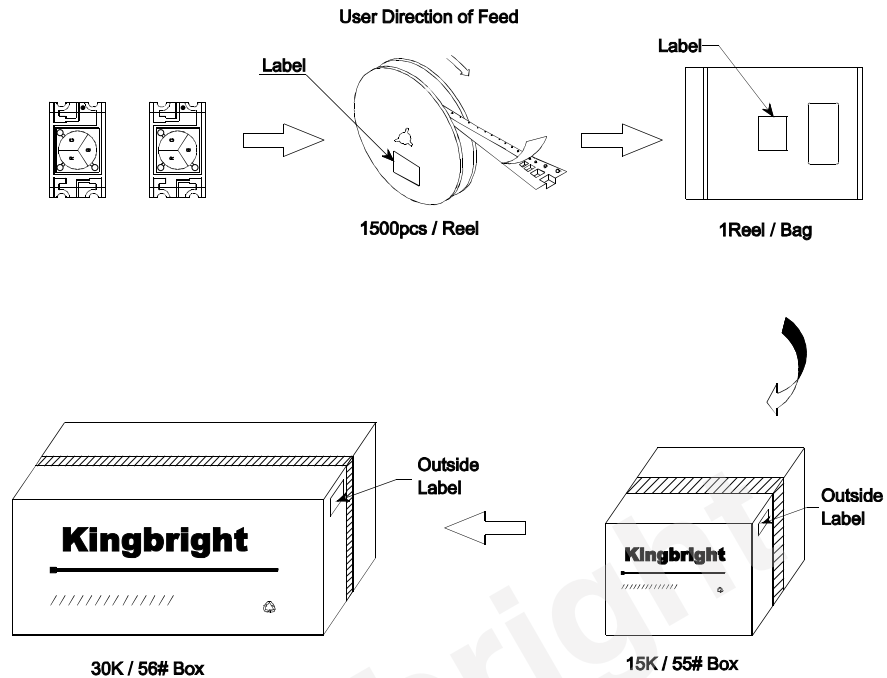



**Tape Specifications  
(Units : mm)**



**PACKING & LABEL SPECIFICATIONS**

**KPS-5130PD7C**



<b>Kingbright</b>	
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:	
	
RoHS Compliant	

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