



# Technical Data Sheet

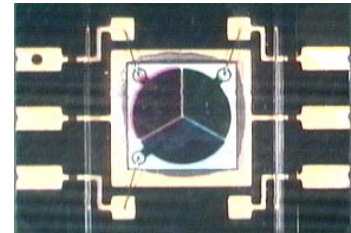
## RGB Color Sensor SMD Device

*Preliminary*

**CLS9032C/L214/TR8**

### Features

- Package in 12mm tape on 7" diameter reel.
- Surface-mount plastic package.
- Good stable output with temperature shift
- External dimensions 7.0(L)\*5.0(W)\*1.0(H)mm<sup>3</sup>.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Built in 3-Channel/1Chip (R, G, B) Si photodiode.
- Active area: 3-Segment (RGB) circular active area of 3 mm<sup>2</sup>
- Pb free
- The product itself will remain within RoHS compliant version.



### Descriptions

CLS9032C/L214 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, such as the LCD TV and projector. The color sensor sensitive are Red ( $\lambda_p=620\text{nm}$ ), Green ( $\lambda_p=550\text{nm}$ ) and Blue ( $\lambda_p=470\text{nm}$ ) regions of the spectrum.

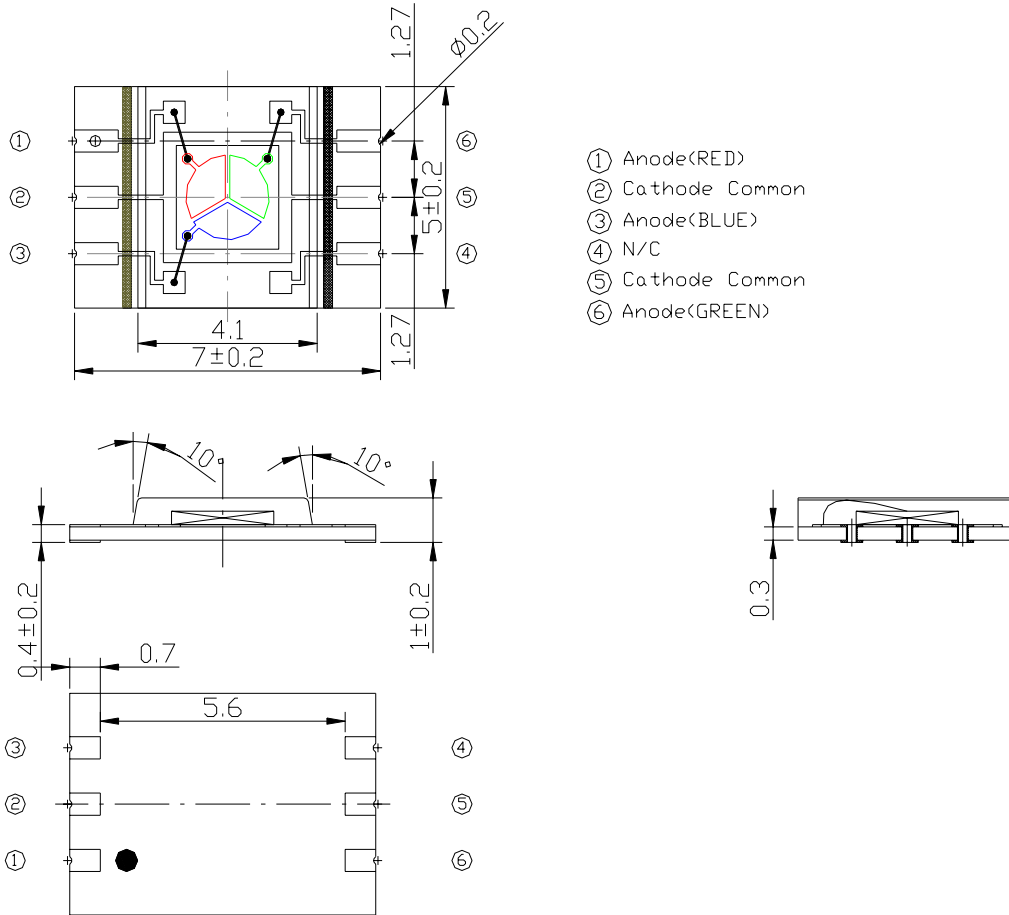
### Applications

- Color adjustment for LED back light system for LCD.
- Color adjustment for LCD projector
- Color tester and Color temperature detection.
- White balance : Camera

### Device Selection Guide

PART	MATERIAL	COLOR
Chip	Silicon	---
Package	Epoxy	Clear

**Package Dimensions**



- Notes:**
- 1.All dimensions are in millimeters
  - 2.Tolerances unless dimensions  $\pm 0.1$ mm

**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Condition	Rating	Units
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> = 100 μA	35	V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA	0.5~1.3	V
Operating Temperature	T <sub>opr</sub>	---	-25 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	---	-40 ~ +85	°C
Soldering Temperature	T <sub>sol</sub>	---	260	°C

**Notes:** \*1:Soldering time ≤ 5 seconds.

**Electro-Optical Characteristics(Ta=25°C, per element)**

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Peak Sensitivity Wavelength	λ <sub>p</sub>	Red	---	620	---	nm
		Green	---	550	---	
		Blue	---	470	---	
Light Current(1)	I <sub>PH1</sub>	100Lux <sup>[1]</sup> V <sub>R</sub> =5V	Red	---	0.031	μA
			Green	---	0.052	
			Blue	---	0.037	
Light Current(2)	I <sub>PH2</sub>	1000Lux <sup>[1]</sup> V <sub>R</sub> =5V	Red	---	0.322	μA
			Green	---	0.558	
			Blue	---	0.381	
Reverse Dark Current	I <sub>D</sub>	V <sub>R</sub> = 5V	---	---	10	nA

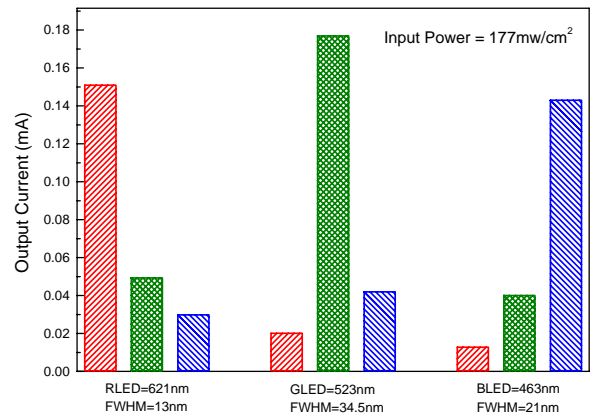
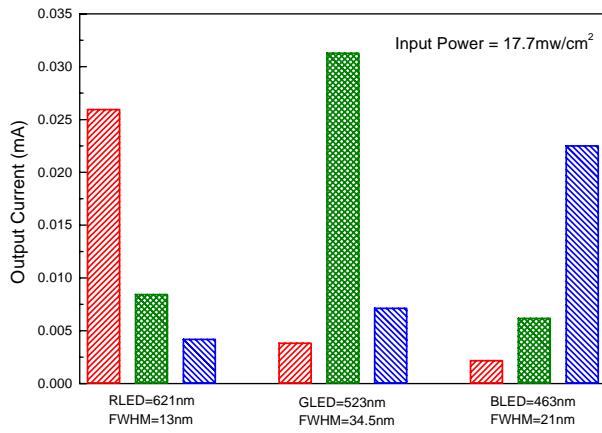
**Note:**

[1]: White Fluorescent light (Color Temperature = 6500K) is used as light source.

**Typical Electro-Optical Characteristics Curves**

Fig.-1 R,G, B LED Test vs. Output Phtocurrent

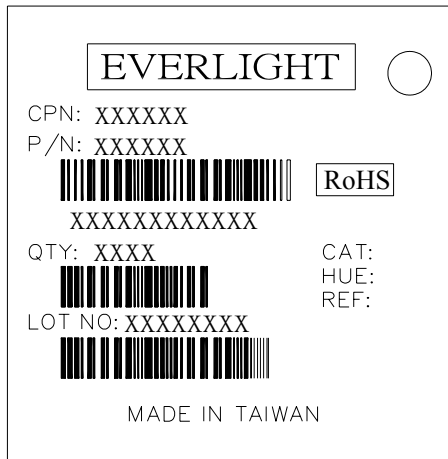
Fig.-2 R,G, B LED Test vs. Output Phtocurrent



**Packing Quantity Specification**

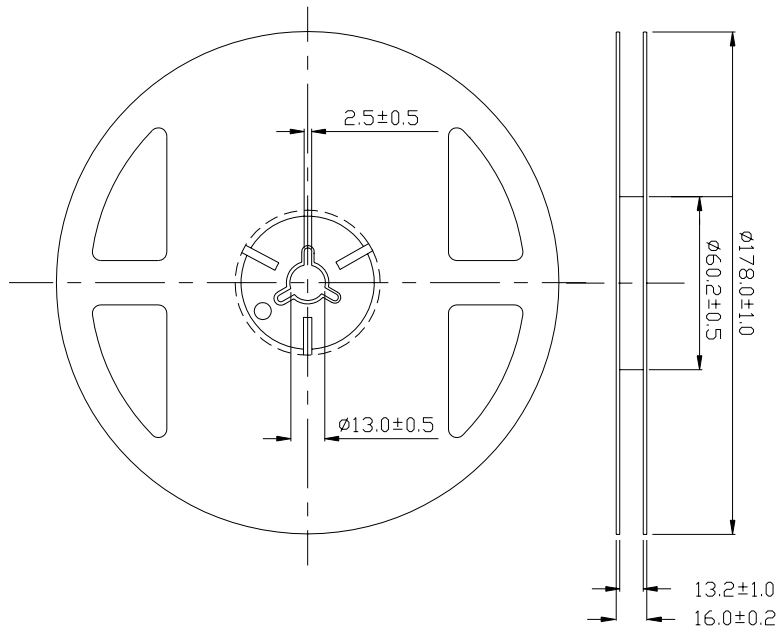
- 1. 1000 PCS/1 Reel
- 2. 10 Reel /1Carton

**Label explanation**



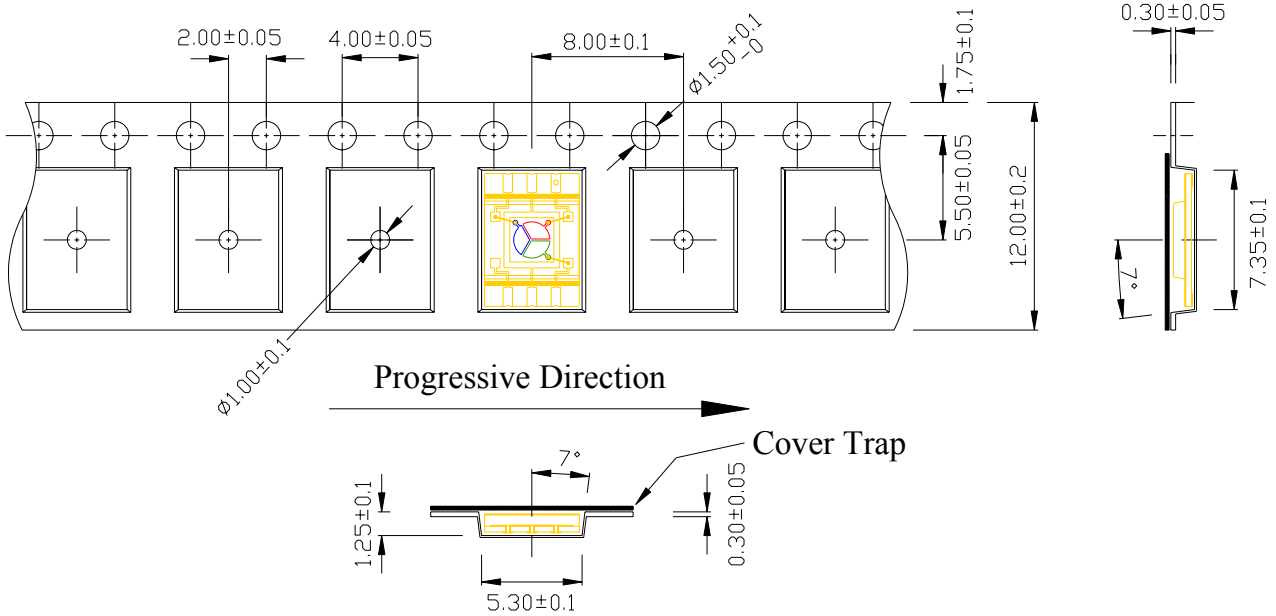
CPN: Customer's Production Number  
 P/N : Production Number  
 QTY: Packing Quantity  
 CAT: Ranks  
 HUE: None  
 REF: Reference  
 LOT No: Lot Number  
 MADE IN TAIWAN: Production Place

**Reel Dimensions**



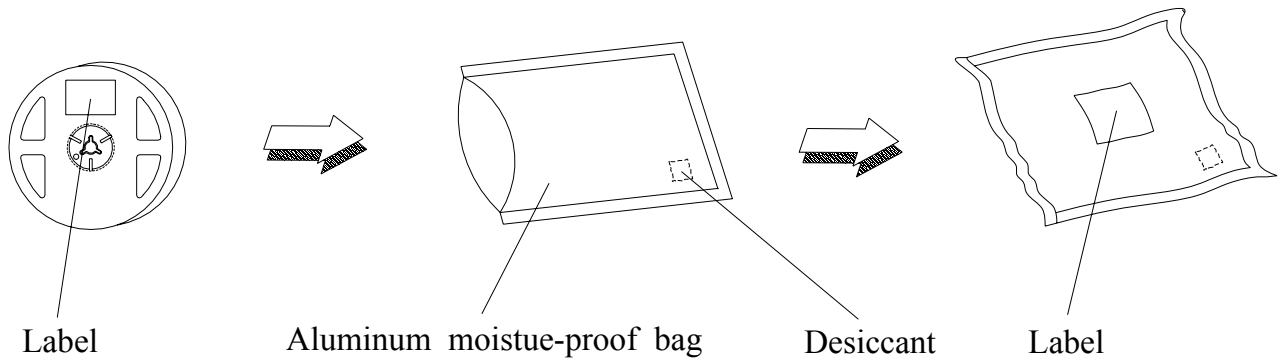
**Note:** The tolerances unless mentioned are  $\pm 0.1$ , Unit = mm.

**Carrier Tape Dimensions: Loaded quantity 1000 PCS per reel**



**Note:** Tolerances Unless Dimension is  $\pm 0.1$ mm , Unit = mm

**Moisture Resistant Packaging**



**Notes**

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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