

**玄豐電子有限公司**

**CYCLONE LIGHT ELECTRONICS CO., LTD.**

TEL:886-2-2293-7117 (REP.) FAX:886-2-2293-7118(REP.)

**規格承認書**

**APPROVED SHEET**

Part No:CL-L10213XXXXX

客戶名稱 / CUSTOMER NAME :

產品型號 / PRODUCT NUMBER :

客戶料號 / CUSTOMER P/N :



<b>CUSTOMER ENGINEERING DEPARTMENT</b>	<b>CYCLONE LIGHT ELECTRONICS CO., LTD. ENGINEERING DEPARTMENT</b>
<hr/> (Authorized Signature)	<hr/>

## 1. Package Size: 10mm Round

## 2. Color and Luminous Intensity:

Part No.	Emitted Color	Resin Color	Luminous Intensity (mcd)		Test Current
			MIN.	TYP.	
CL-L10213CRFD	Red	DIFFUSED	50	100	20mA
CL-L10213AMBD	Amber	DIFFUSED	50	100	
CL-L10213YGF	Yellow Green	DIFFUSED	10	20	
CL-L10213CYF	Yellow	DIFFUSED	50	100	
CL-L10213TGD	Ultra Green	DIFFUSED	1300	1500	
CL-L10213TBD	Blue	DIFFUSED	250	450	
CL-L10213BWD	White	DIFFUSED	400	800	

※1 Luminous intensity : 1chips

## 3. Absolute Maximum Ratings:

Item	Symbol	Absolute Maximum Ratings							Unit	
		CRF	AMB	YGF	CYF	TG	TB	BW		
Power Dissipation	$P_d$	70	70	70	70	70	70	70	mW	
Forward Current	$I_F$	30	30	30	30	30	30	30	mA	
Pulse Forward Current <sup>※</sup>	$I_{FRM}$	60	60	60	60	60	60	60	mA	
Reverse Voltage	$V_R$	5	5	5	5	5	5	5	V	
Operating Temperature	$T_{opr}$	- 40 ~ + 85								°C
Storage Temperature	$T_{stg}$	- 40 ~ + 85								°C

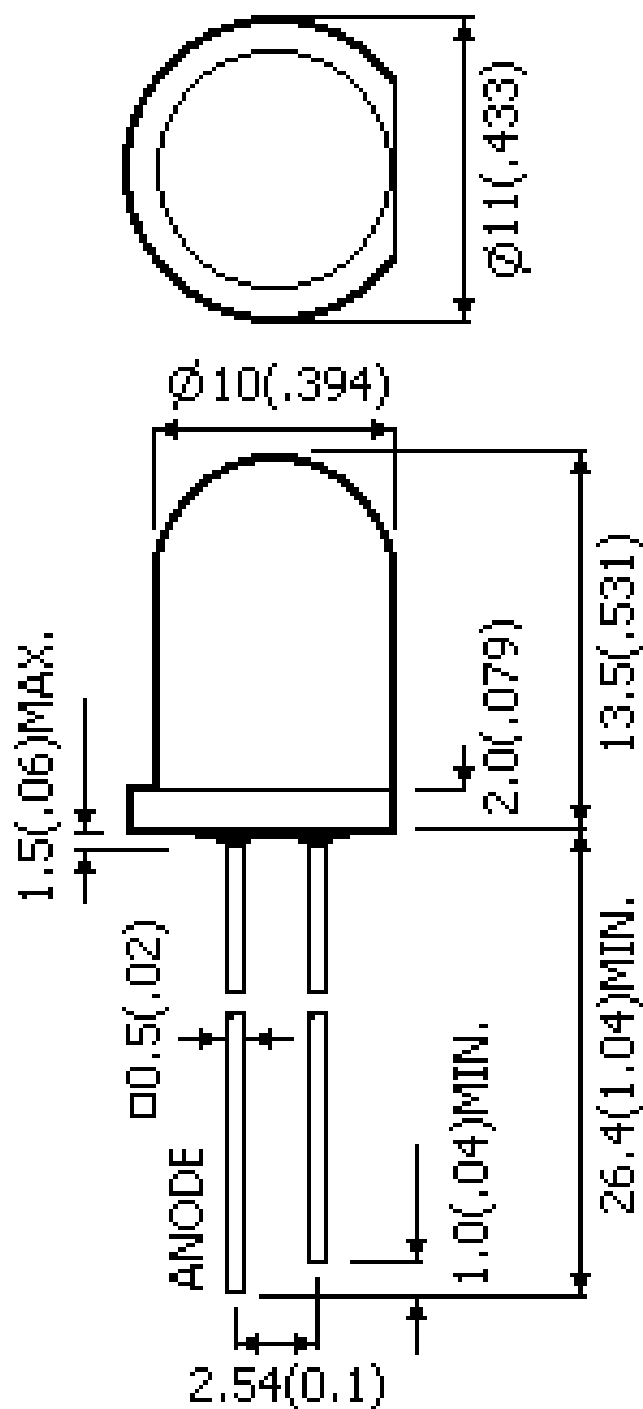
※2 Power Dissipation : 1chips

※3  $I_{FRM}$  Measurement condition : Pulse Width  $\leq$  2ms, Duty  $\leq$  1/5

## 4. Electro-Optical Characteristics

Item	Conditions	Symbol	Characteristics							Unit	
				CRF	AMB	YGF	CYF	TG	TB		BW
Forward Voltage	IF=20mA	$V_F$	TYP.	1.8	1.8	1.8	1.8	2.8	2.8	2.8	V
			MAX.	2.3	2.5	2.5	2.5	3.5	3.5	3.5	
Dominant Wavelength	IF=20mA	$\lambda_d$	TYP.	625	605	570	590	525	460	8000k	nm

## PACKAGE DIMENSIONS



### Notes

1. Dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$ mm without noted.

## Precautions For Use LED

### 1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

### 2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package: The LEDs should be kept at 30°C or less and 90%RH or less.

2.3 After opening the package: The LED's floor life is 168 Hrs under 30°C or less and 60% RH or less. If unused

LEDs remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment: 60±5°C for 24 hours.

### 3. Soldering Condition

Pb-free solder temperature profile

