**MODEL NO:BL-8511**



## ■Features

- ●High Performance
- ●Free Design
- ●Longer Life and Low Power Consumption
- ●Various Color :Blue,Green,Yellow Green(Standard),Orange,Amber,Red

## ■Descriptions

LED back light provides uniform ,high output backlighting with low power than CCFL and EL's.There are two back light method are available :

(1)Bottom Backlight

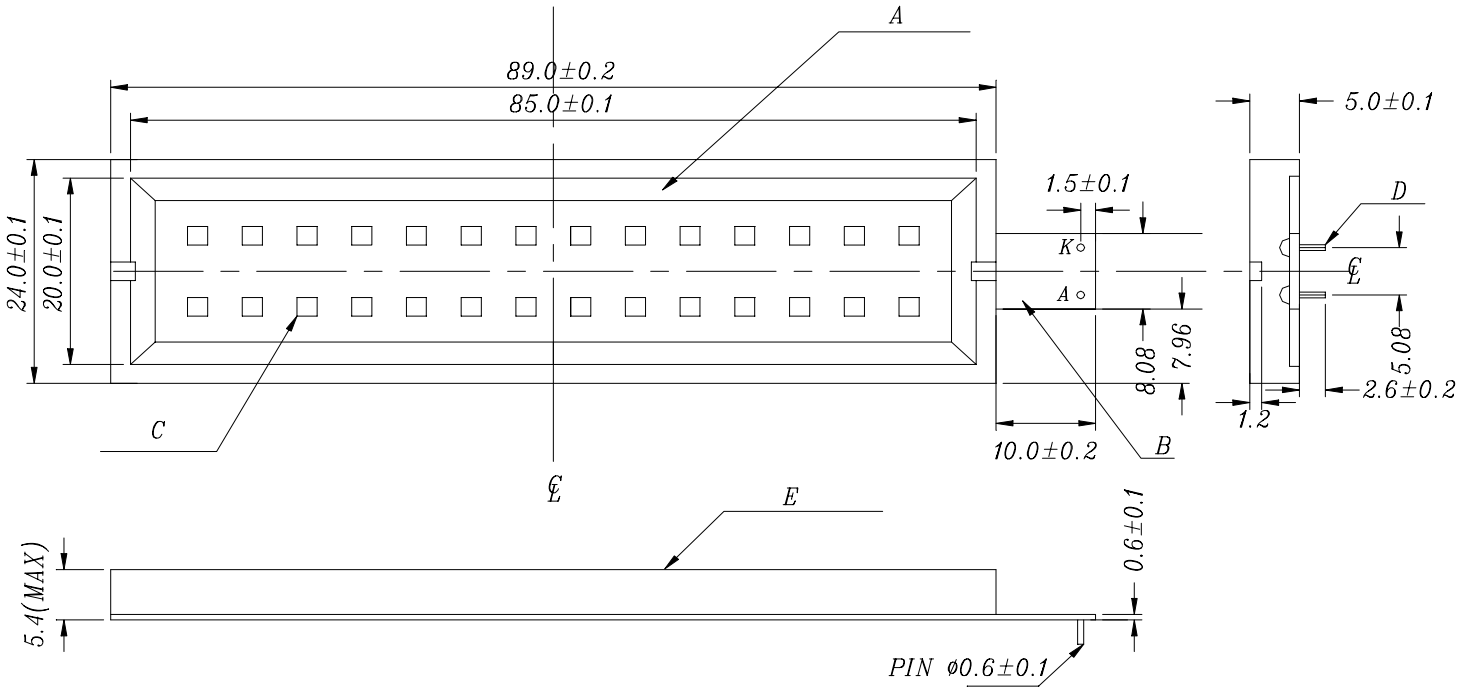
(2)Edge Backlight

## ■Applications

- ●LCD Backlight:
  - Medical Instruments
  - Cellular Phone
  - Viedo, Audio Equipment
  - PDA
- ●Office Automation Equipment
- ●Measuring Device Illumination

OFFICE : NO 25,Lane 76,Chung Yang Rd,Sec.3 Tucheng, Taipei 236, Taiwan, R.O.C.
TEL : 886-2-2267-2000,2266-9936 ( 22 Lines )
FAX : 886-2-2267-6189
http://www.everlight.com

## ■Package Dimensions



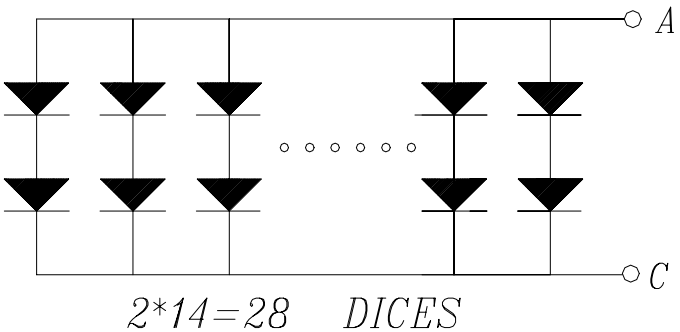

| NO. | PART | MATERIAL |
|---|---|---|
| A | Reflector | PC |
| B | PCB | FR4 |
| C | Chips | GaP |
| D | Pins | Cu+Sn |
| E | Diffusive | PE |

## ■Notes

1.All dimensions are in millimeters.

2.Tolerance is ±0.2mm unless otherwise noted.

## ■Circuit Diagram



## ■Absolute Maximum Ratings(Ta=25℃)

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Forward Current | $I_F$ | 280 | mA |
| Reverse Voltage | $V_R$ | 8 | V |
| Power Dissipation | $P_D$ | 1.2 | W |
| Operating Temperature | $T_{opr}$ | -20 to + 70 | ℃ |
| Storage Temperature | $T_{stg}$ | -30 to + 80 | ℃ |
| Soldering Temperature | $^{*1}T_{sol}$ | 260 | ℃ |

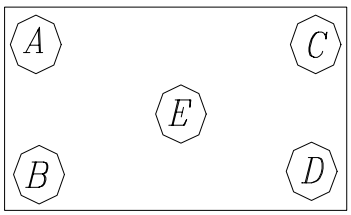
*1: Soldering time ≦ 5seconds.

## ■Electro-Optical Characteristics (Ta=25℃)

**Emitting Color : Yellow Green**

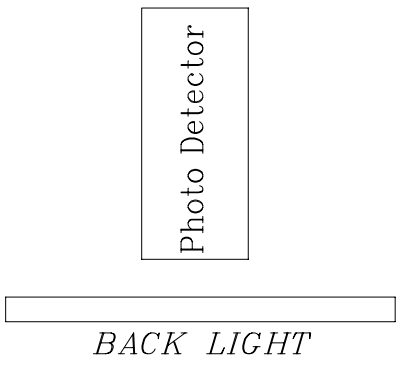
| Parameter | Symbol | Condition | Min | Typ | Max | Unit | Remark |
|---|---|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=140mA | -- | 4.2 | 4.6 | V | |
| Reverse Current | $I_R$ | $V_R$=8V | -- | -- | 0.1 | mA | |
| Luminous Intensity | $I_V$ | $I_F$=140mA | 30 | 50 | -- | cd/m$^2$ | ＊1,2 |
| Emission Wavelength | $\lambda_P$ | $I_F$=140mA | -- | 570 | -- | nm | ＊2 |
| Spectral Line Half Width | $\Delta\lambda$ | $I_F$=140mA | -- | 30 | -- | nm | |
| Illuminance Power Deviation | ΔEH | $I_F$=140mA | -- | -- | 25 | % | ＊3 |

1.The test position of luminous intensity is Fig1.
2.The test equipment is Photo Research PR650.
3.The defination of luminous intensity deviation.




$$\Delta EH\% = \frac{B(MAX) - B(MIN)}{B(MAX)} * 100\%$$

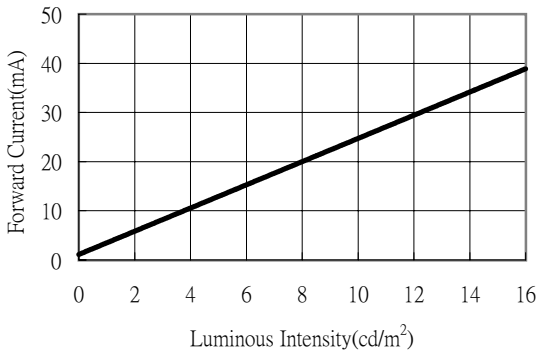
Figure 1 :Point for testing deviation→A,B,C,D,E



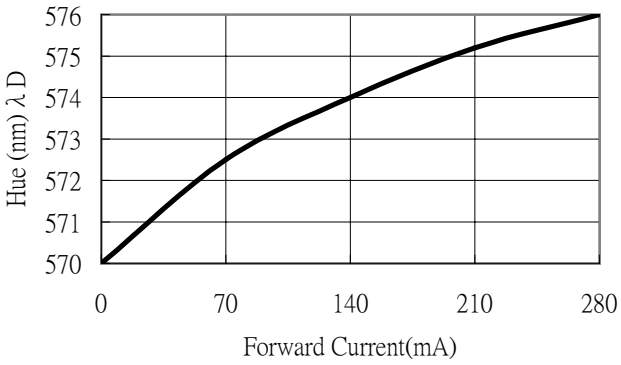

Measuring Method: (Ta=25℃,65%RH)
(Measured by our equipment)

# ■Typical Electro-Optical Characteristics Curves

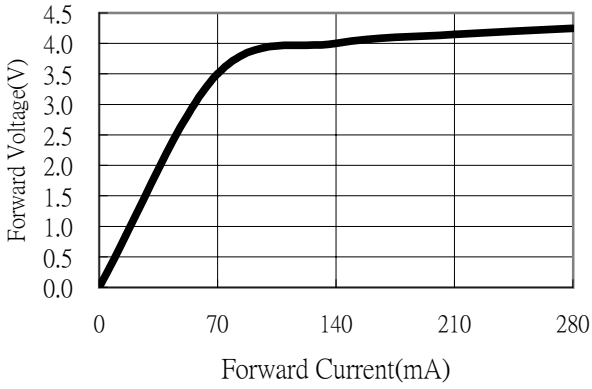
●Forward Voltage vs. Forward Current (Ta=25℃)



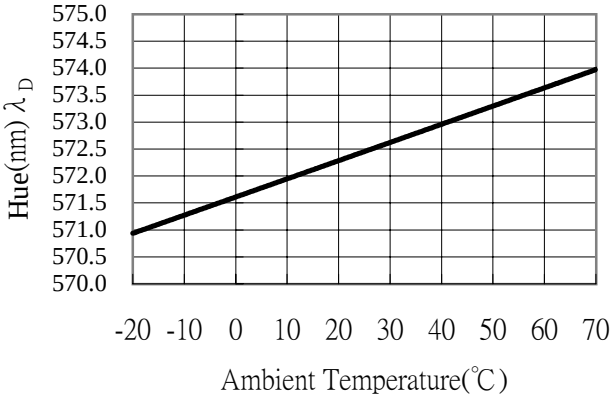

●Emission Wavelength vs. Forward Current(Ta=25℃)



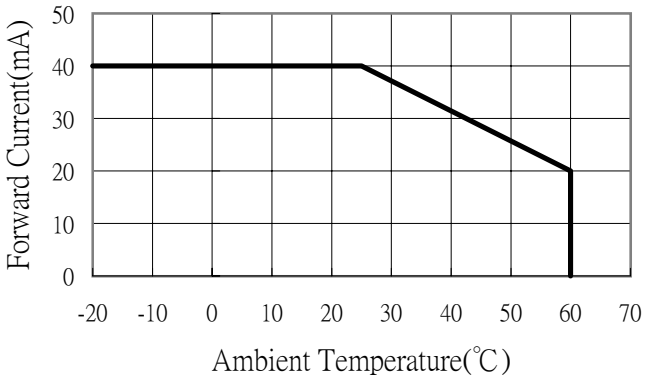

●Forward Current vs. Luminous Intensity(Ta=25℃)




●Wavelength vs. Ambient Temperature(If=20mA)




●Forward Current vs. Ambient Temperature



## ■Reliability Test

| Items | Conditions | Jusification Criteria | Quantity |
|---|---|---|---|
| High Temperature/ High Humidity Test | 85℃,85%RH,1000hr | A,B,C | 24dies*4pcs =96dies |
| High Temperature Storage | 85℃,1000hr | A,B,C | 24dies*4pcs =96dies |
| Low Temperature Storage | -30℃,1000hr | A,B,C | 24dies*4pcs =96dies |
| Room Temperature DC Operating Life | 25℃,60±10%RH, 1000hr/140mA | A,B,C | 24dies*4pcs =96dies |

＊Justification criteria:

A: Not one of LED is failed.

B: Not allowed to have warpage, scraping,discoloration , distortion, separation.

C: The variation of brightness must not to be over 30% of initial value luminous intensity.

## ■Circuit Diagram