



Backlight

MODEL NO: BLB-8021I-YG

Device Number: DEA-820-001 REV: 2.0

ECN: _____ Page: 1/5

■ **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

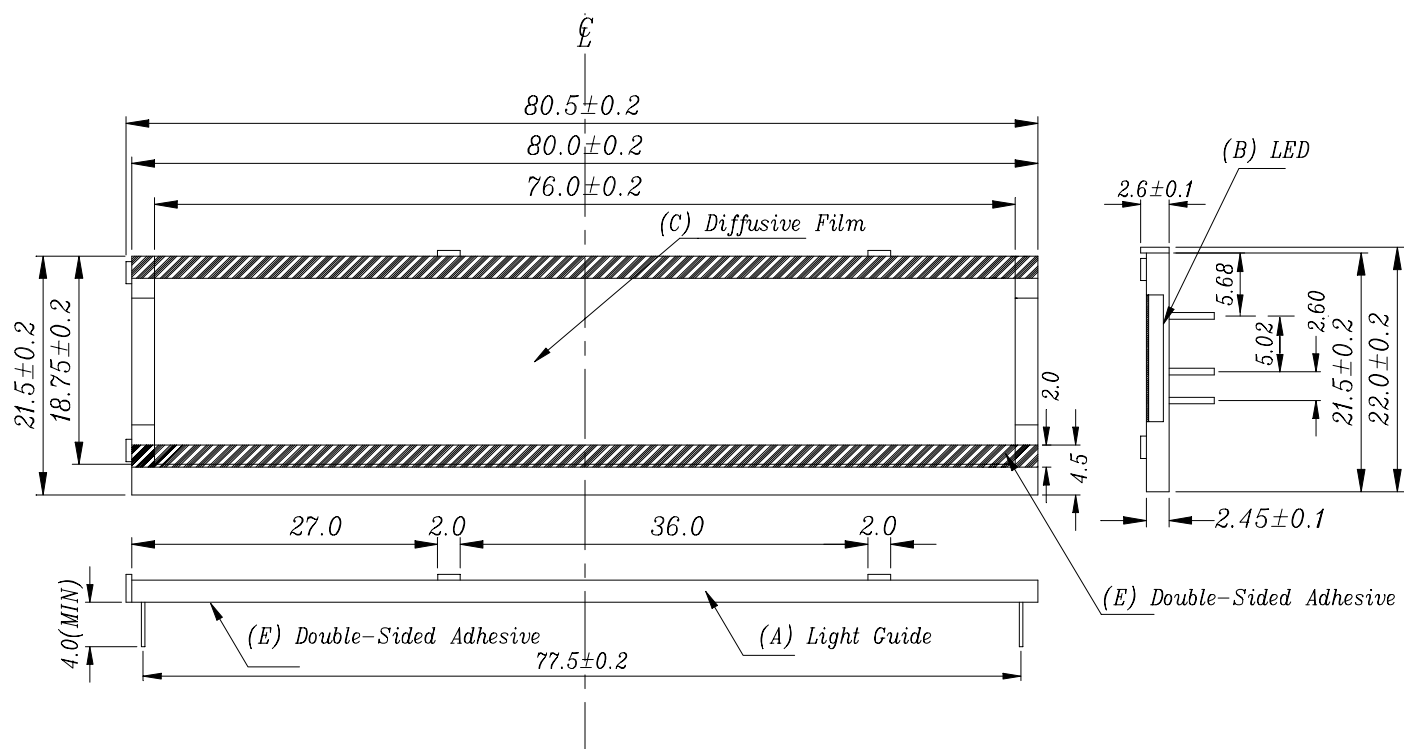
Backlight

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■ Package Dimensions:



NO	PART	MATERIAL
A	Light Guide	Acrylic
B	LED	97-22VGC/S56
C	Diffusive Film	PE
D	Reflective Film	PE
E	Double-Sided Adhesive	PE

Notes:

1. All dimensions are in millimeters.
2. Tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.

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■ Absolute Maximum Ratings(Ta=25℃):

Parameter	Symbol	Rating	Unit
Forward Current	^{*2} I _F	25	mA
Reverse Voltage	^{*2} V _R	5	V
Power Dissipation	P _D	0.06	W
Operating Temperature	T _{opr}	-20 to + 60	℃
Storage Temperature	T _{stg}	-30 to + 70	℃
Soldering Temperature * ¹	^{*1} T _{sol}	260	℃

*1: Soldering time ≤ 5seconds.

*2: One Circuit Operated

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

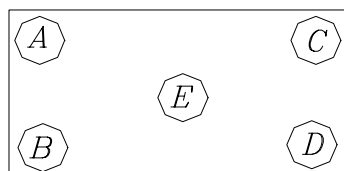
Emitting Color : Yellow Green

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Remark
Forward Voltage	V _F	I _F =20mA	--	2.1	2.4	V	
Reverse Current	I _R	V _R =5V	--	--	10	μA	
Luminous Intensity	I _V	I _F =20mA	12	--	--	cd/m ²	* 1,2
Emission Wavelength	λ _D	I _F =20mA	570	--	576	nm	* 2
Spectral Line Half Width	Δλ	I _F =20mA	--	30	--	nm	
Illuminance Power Deviation	ΔEH	I _F =20mA	--	--	25	%	* 3

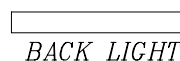
1.The test position of luminous intensity is shown in Fig1.

2.The test equipment is Photo Research PR650.

3.The definition of luminous intensity deviation.



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



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

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



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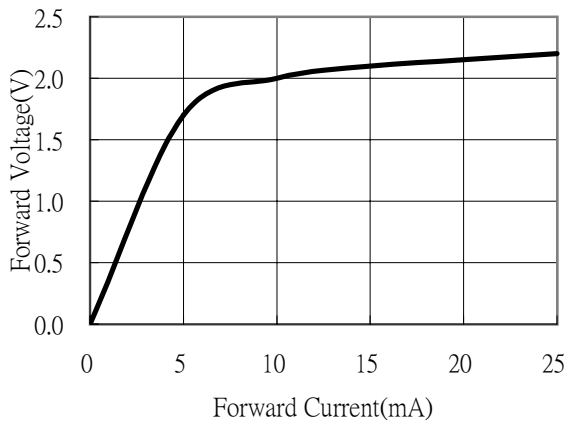
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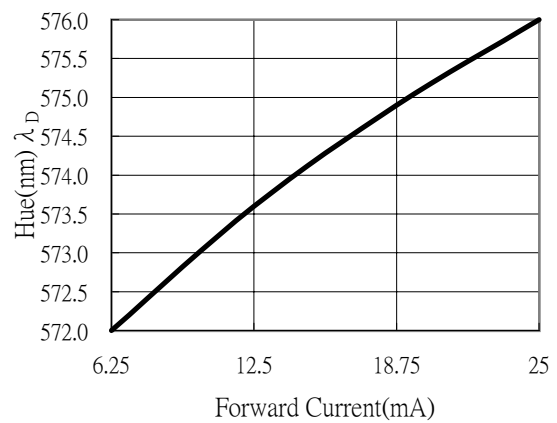
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■ Typical Electro-Optical Characteristics Curves:

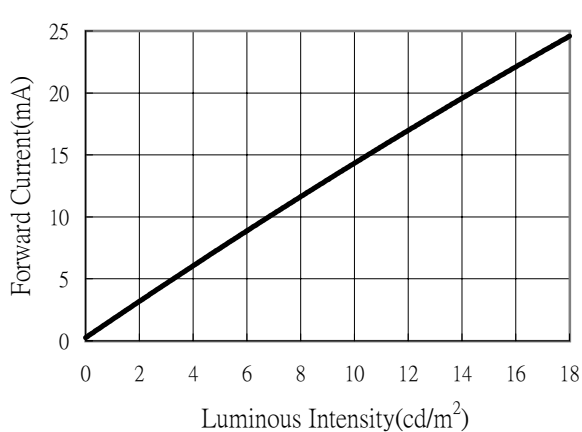
● Forward Voltage vs. Forward Current ($T_a=25^{\circ}\text{C}$)



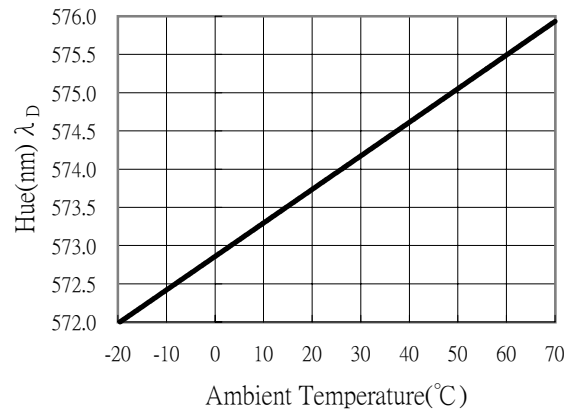
● Emission Wavelength vs. Forward Current ($T_a=25^{\circ}\text{C}$)



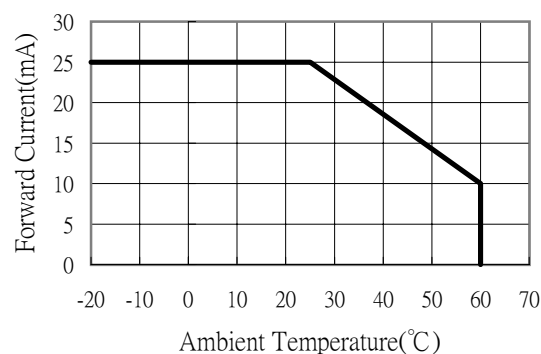
● Forward Current vs. Luminous Intensity ($T_a=25^{\circ}\text{C}$)



● Wavelength vs. Ambient Temperature ($I_f=20\text{mA}$)



● Forward Current vs. Ambient Temperature





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■ Specification for Bin Grading:

Rank	Emission Wavelength λ_D (nm)
A	570~572
B	572~574
C	574~576
* Tolerance	± 1.0

■ Reliability Test:

Items	Conditions	Jusification Criteria	Quantity
High Temperature/ High Humidity Test	70℃,85%RH,1000hrs	A,B,C	4dies*20PCS =80dies
High Temperature Storage	70℃,1000hrs	A,B,C	4dies*20PCS =80dies
Low Temperature Storage	-30℃,1000hrs	A,B,C	4dies*20PCS =80dies
Room Temperature DC Operating Life	25℃,60±10%RH, 1000hrs/20mA(one chip)	A,B,C	4dies*20PCS =80dies

* 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:

