



EVERLIGHT ELECTRONICS CO.,LTD.

DATA SHEET

MODEL NO : BLB-12796F-W

DATE : 1999/9/27

DEPARTMENT : R&D CENTER

REVISION : 1.0

RECEIVED			
☒ MASS PRODUCTION			
☐ PRELIMINARY			
☐ CUSTOMER DESIGN			
DEVICE NUMBER : DEA-851-001			
PAGE :5			
CUSTOMER	DESIGNER	CHECKER	APPROVER

REV	DESCRIPTION	RELEASE DATE

OFFICE : NO 25,Lane 76,Chung Yang Rd,Sec.3 Tucheng, Taipei 236, Taiwan, R.O.C.

TEL : 886-2-2267-2000, 2267-9936

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<http://www.everlight.com>



BACK LIGHT

MODEL NO:BLB-12796F-W

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■ Features:

- Long Life and Low Power Consumption than CCFL
- Free selection of color chromaticity with four white type
- Free Design

■ Descriptions:

The white LED light source which was fabricated using a blue LED and a phosphor, and the phosphor is excited by blue light and emits yellow fluorescence. The mixture of blue light and yellow light results in a white light emission.

■ Applications:

- Backlighting for LCD
- Illumination source for instrumental panel
- Other types of displays, decorating lights

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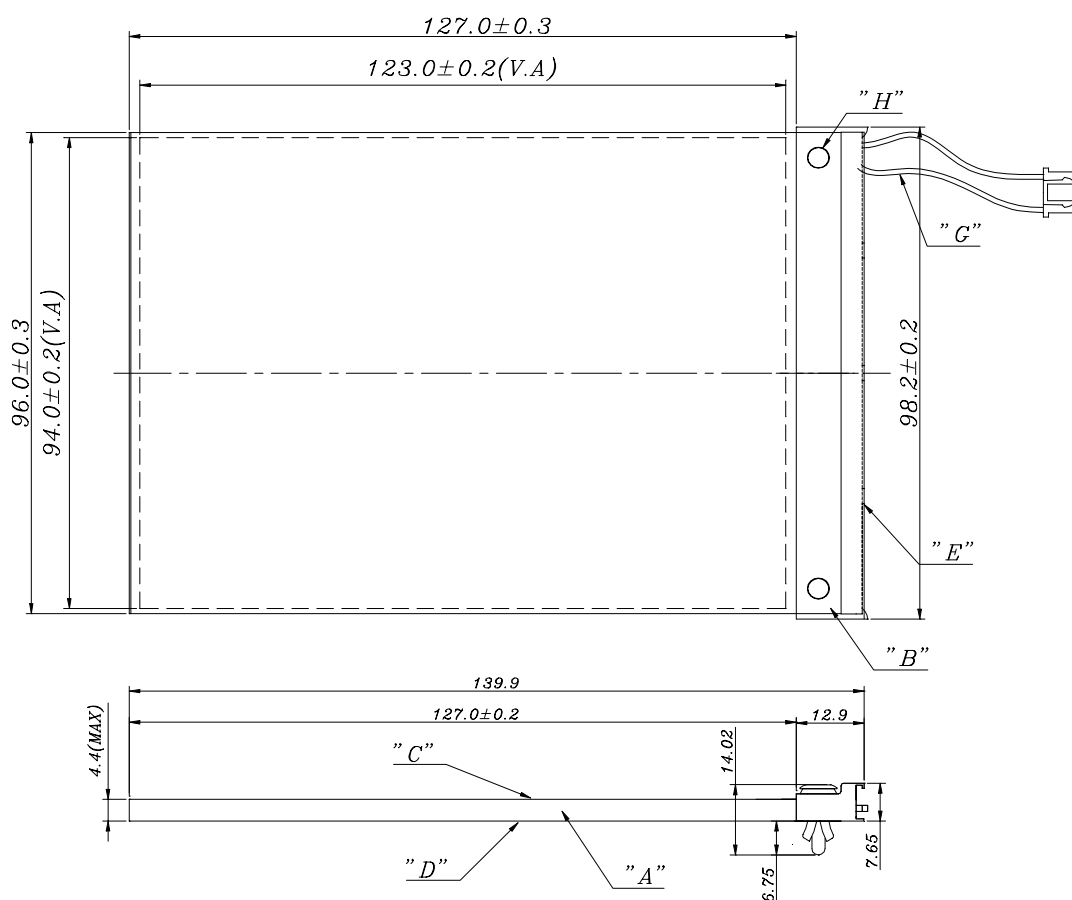
BACK LIGHT

MODEL NO: **BLB-12796F-W**

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■ Package Dimensions:



NO.	PART	MATERIAL
A	Light Guide	Acrylic
B	Holder	90%PC+10%Fiber Glasses
C	Diffusive Film	PE
D	Reflective Film	PE
E	PCB	FR4
F	LED	67-21UWC/1B
G	Connector	UL 1571 26AWG
H	Rivet	NYLON 6

1. All dimensions are in millimeters.

2. Tolerance is ±0.1mm unless otherwise noted.

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■ Absolute Maximum Ratings(Ta=25°C):

Parameter	Symbol	Rating	Unit
Forward Current	I _F	200	mA
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	0.8	W
Operating Temperature	T _{opr}	− 20 to +60	°C
Storage Temperature	T _{stg}	− 30 to +70	°C
Soldering Temperature * ¹	T _{sol}	260	°C

*1: Soldering time ≤ 5 seconds.

■ Electro-Optical Characteristics (Ta=25°C):

Parameter	Symbol	Condition	Min	Typ	Max	Unit	Remark
Forward Voltage	V _F	I _F =160mA	--	3.5	4	V	*1
Reverse Current	I _R	V _R =5V	--	--	10	mA	
Luminous Intensity	I _V	I _F =160mA	--	80	--	cd/m ²	
Illuminance Power Deviation		I _F =160mA	--	--	35	%	*3
Chromaticity	x	I _F =160mA	--	0.28	--		*2,*3
Coordinates	y		--	0.29	--		

*1. The Led is sensitive to static electricity and care must be fully taken when handling products.

Electrostatic Discharge Threshold (200V).

*2. The chromaticity coordinates tolerance is + 0.03 unless otherwise noted.

*3. The test position and method below:

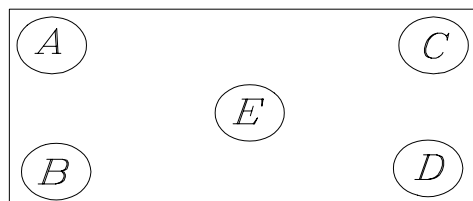


Photo Detector

BACK LIGHT

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

Measuring Method: (Ta=25°C, 65%RH)



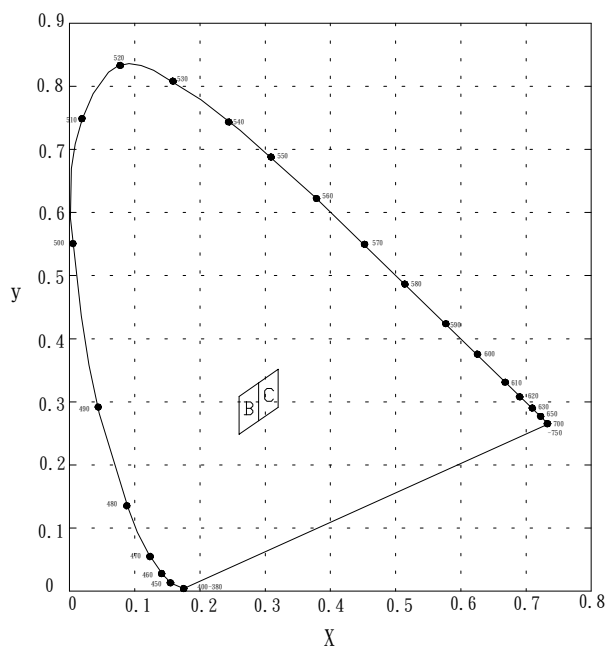
BACK LIGHT

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■ CIE Chromaticity Diagram:



* The C.I.E. 1931 chromaticity diagram

■ Chromaticity Coordinates Specifications for Bin Grating:

Rank			Chromaticity Coordinates			
B	B1	x	0.260	0.260	0.275	0.275
		y	0.250	0.310	0.320	0.260
	B2	x	0.275	0.275	0.290	0.290
		y	0.260	0.320	0.330	0.270
C	C1	x	0.290	0.290	0.305	0.305
		y	0.270	0.330	0.340	0.280
	C2	x	0.305	0.305	0.320	0.320
		y	0.280	0.340	0.350	0.290
Tolerance			±0.03			



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■Reliability Test:

Item	Conditions	Jusification Criteria
High Temperature/ High Humidity Storage	70℃,85%RH,1000hr	A,B,C
High Temperature Storage	70℃,1000hr	A,B,C
Low Temperature Storage	-30℃,1000hr	A,B,C
Room Temperature DC Operating Life	25℃,60±10%RH, 1000hr/160mA	A,B,C

* Justification criteria:

A: Not one of LED is failed.

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

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

■Circuit Diagram:

