



**WINSTAR Display Co.,Ltd.**  
**華凌光電股份有限公司**



## SPECIFICATION

**CUSTOMER :** \_\_\_\_\_

**MODULE NO.:** **WDB0033-C-#00**

<b>APPROVED BY:</b> ( FOR CUSTOMER USE ONLY )	<b>PCB VERSION:</b>	<b>DATA:</b>
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SALES BY	APPROVED BY	CHECKED BY	PREPARED BY

VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2022/07/25		First issue



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RECORDS OF REVISION			DOC. FIRST ISSUE
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# 1. Module Classification Information

W	D	B	0033	-	C	-	#	00
①	②	③	④		⑤		⑥	

① Brand : WINSTAR DISPLAY CORPORATION

② Custom : D

③ Display Type : B→ Backlight

④ Model serials no.0000 - ZZZZ

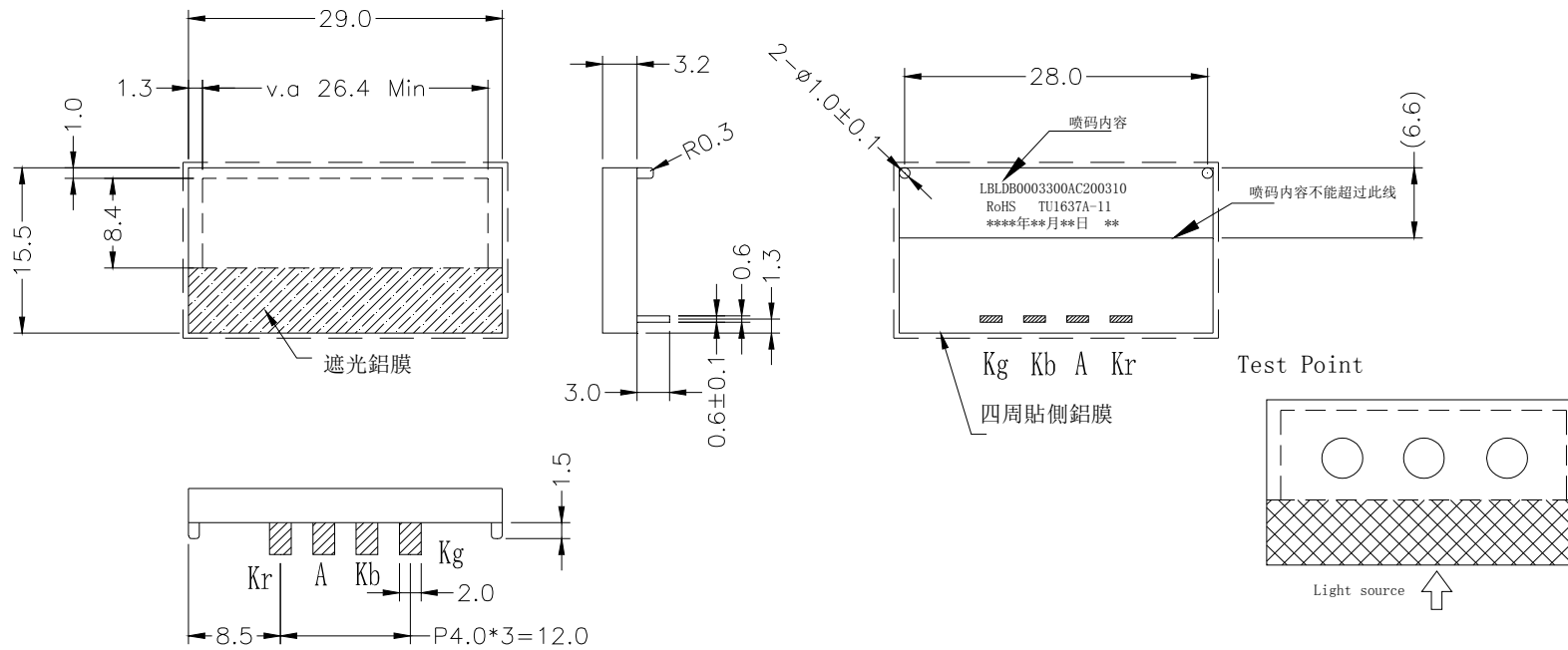
⑤ Backlight Type :

B→EL, Blue green	T→LED, White	L→LED, Full color
D→EL, Green	A→LED, Amber	J→DIP LED, Blue
W→EL, White	R→LED, Red	K→DIP LED, White
M→EL, Yellow Green	O→LED, Orange	E→DIP LED, Yellow Green
F→CCFL, White	P→LED, Blue	H→DIP LED, Amber
Y→LED, Yellow Green	X→LED, Dual color	I→DIP LED, Red
G→LED, Green	C→LED, Full color	

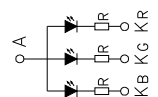
⑥ Special Code #:Fit in with the ROHS Directions and regulations  
0:Sales code 0:Version

# 2. Contour Drawing

1. Mechanical Outline (Unspecified Tolerances is .XX±0.2 )  
 .X±0.2 )



Circuit Diagram (LED RGB:1x1=1 SMT)Color: RED/GREEN/BLUE



### **3. Absolute Maximum Ratings**

<b>Item</b>	<b>Symbol</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Unit</b>
Operating Temperature	T <sub>OP</sub>	-20	—	+85	°C
Storage Temperature	T <sub>ST</sub>	-30	—	+100	°C

# 4.Backlight Information

## Specification

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Forward Voltage	VF	1.8	2.0	2.4	V	If=20mA
Reverse Voltage	VR	—	—	5	V	—
Luminance	Lv Sub	120	140	—	CD/M <sup>2</sup>	If=20mA
Wavelength	$\lambda$ P	—	625	630	nm	If=20mA
LED Life Time (For Reference only)	—	50000	—	—	Hr.	If=20mA 25°C,50-60% RH, (Note 1)
Color	RED					

Note: The LED of B/L is drive by current only, drive voltage is for reference only.  
drive voltage can make driving current under safety area (current between minimum and maximum).

Note1 :50K hours is only an estimate for reference.

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Forward Voltage	VF	2.8	3.2	4.0	V	If=20mA
Reverse Voltage	VR	—	—	5	V	—
Luminance	Lv Sub	130	220	—	CD/M <sup>2</sup>	If=20mA
Wavelength	$\lambda$ P	—	515	525	nm	If=20mA
LED Life Time (For Reference only)	—	50000	—	—	Hr.	If=20mA 25°C,50-60% RH, (Note 1)
Color	GREEN					

Note: The LED of B/L is drive by current only, drive voltage is for reference only.  
drive voltage can make driving current under safety area (current between minimum and maximum).

Note1 :50K hours is only an estimate for reference.



PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Forward Voltage	VF	2.8	3.2	4.0	V	If=20mA
Reverse Voltage	VR	—	—	5	V	—
Luminance	Lv Sub	50	75	—	CD/M <sup>2</sup>	If=20mA
Wavelength	$\lambda$ P	—	465	475	nm	If=20mA
LED Life Time (For Reference only)	—	50000	—	—	Hr.	If=20mA 25°C,50-60% RH, (Note 1)
Color	BLUE					

**Note:** The LED of B/L is drive by current only, drive voltage is for reference only. drive voltage can make driving current under safety area (current between minimum and maximum).

**Note1 :**50K hours is only an estimate for reference.

## 5. Inspection specification

Inspection Items	Main defects	Measurement
Size	Not meet the specification	Calipers
Appearance	1. Damage of LGP or Housing 2. Not well filled up of LGP or Housing 3. LGP or Housing is distorted $\leq 0.15\text{mm}$ 4. Location of LGP or Housing is not match the drawing.	Visual inspection
Rough edges	1. Rejected if affect Assembly, or particle was generated when assembly. 2. Rejected if exceed 2 point with $0.05\text{mm} < \text{protrusion} < 0.1\text{mm}$ Rejected if protrusion $> 0.1\text{mm}$	Calipers
LED	LED without damaged or not lighting.	Visual inspection
Package	Package is not according to the part number, or package was damaged.	Visual inspection