WCN Opto Group Co., Limited

Company Name	
Date	2025-8-6
Part No.	WCN653MT-C1
Product Group Description	LED Display
Customer Part No.	BK100(带红外接收器)
Approval Date	

试用水印

Customer Confirmation	Approved by	Checked by	Prepared By
	William 2025-8-6	Athena 2025-8-6	Liu 2025-8-6

Country of Origin: China

WCN Opto Group Co., Limited

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DISPLAY SPECIFICATION

PART : WCN653MT-C1

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试用水印

REVISION RECORD

MARKER	Matter for revision / Reason for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
A0	P# WCN653MT-C1 / New Version issued	WHOLE SHEET	2024-10-10	Yu	Athena	William
A1	Change Overlay type/Outer Dimension and Circuit Diagram / Customer demanded	Page.4/5/6/7	2024-11-20	Yu	Athena	William
A2	Change Overlay type / Customer demanded	Page.4	2025-8-6	Liu	Athena	William

试用水印

1. Type No./Manufacture`s Name

WCN653MT-C1 WCN Opto Group Co., Limited.

2. Outer Dimension :Ø76*10.3mm

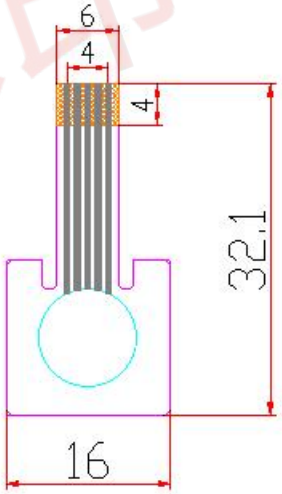
3. Material and Finish of Lead Terminals:

APPEARANCE			CHIP TECHNOLOGY	AlGaInP/InGaN
FACE	SEGMENT	PIN	SOURCE COLOR	Red / Ice Blue / White
			DRIVER MODE	Com. Cathode
Black	Black	Connector	PACKING	

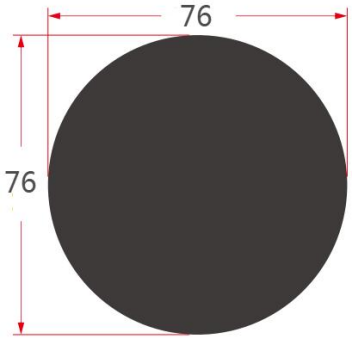
4、 Display Overlay:（73*72.4mm,tolerance is ±0.25mm）



5、Touched Overlay

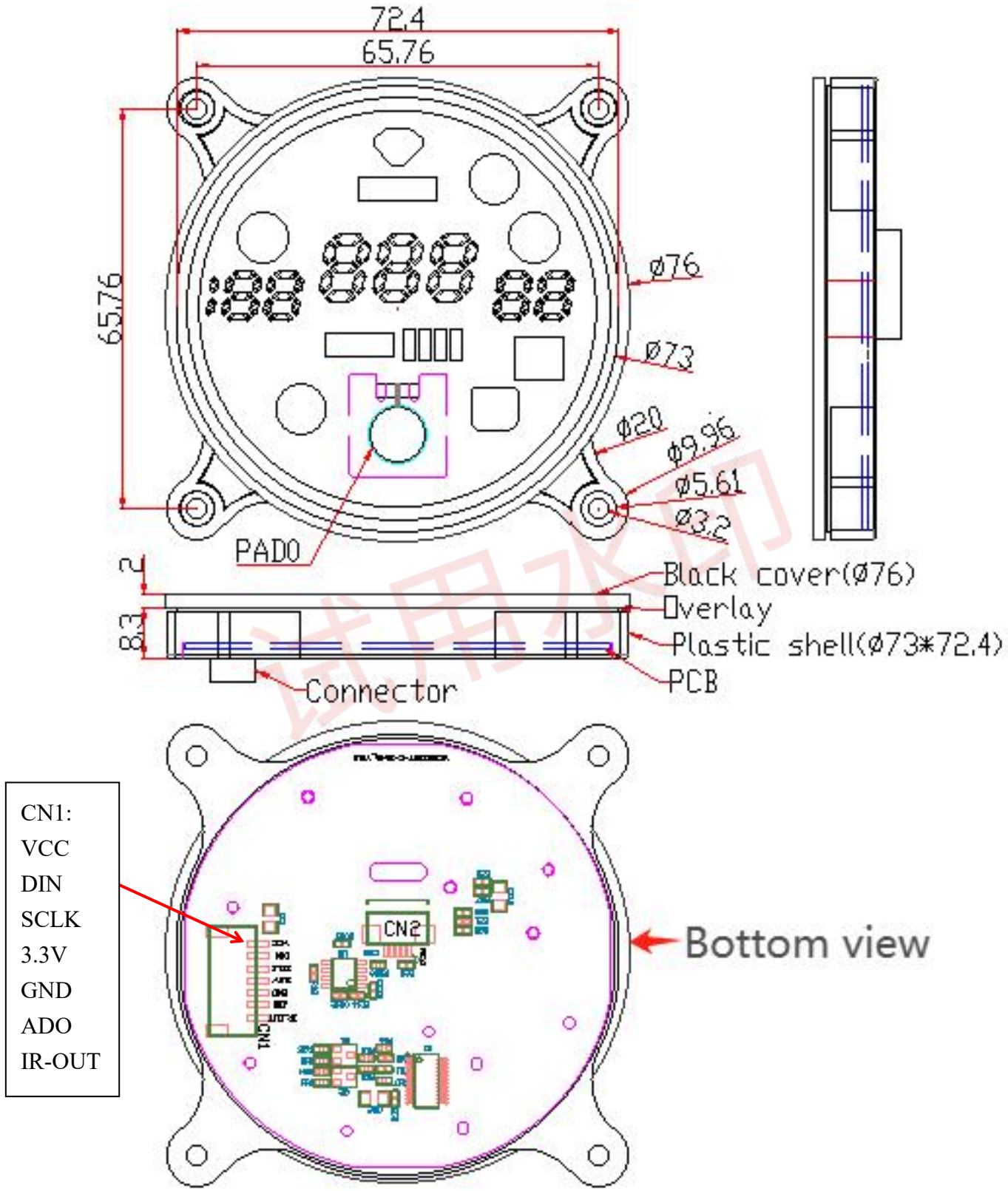


7、PMMA Cover thickness is 2mm.（Tolerance is ±0.2mm）:



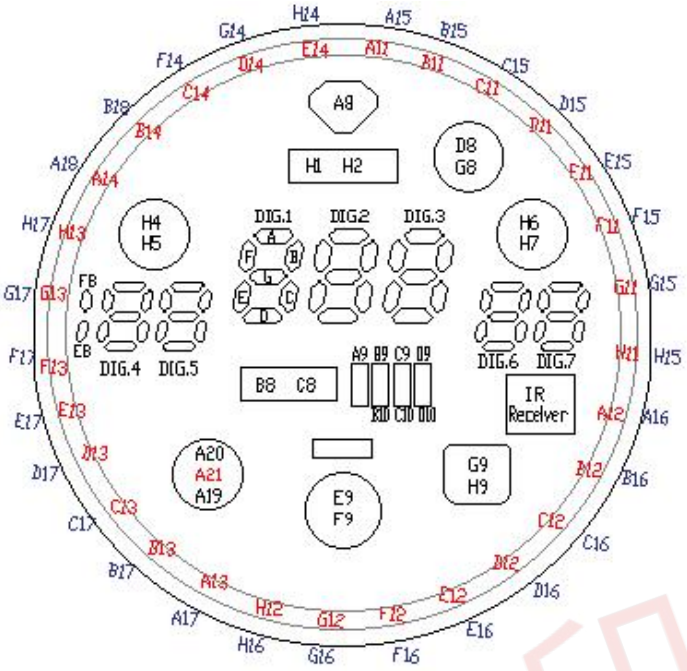
试用水印

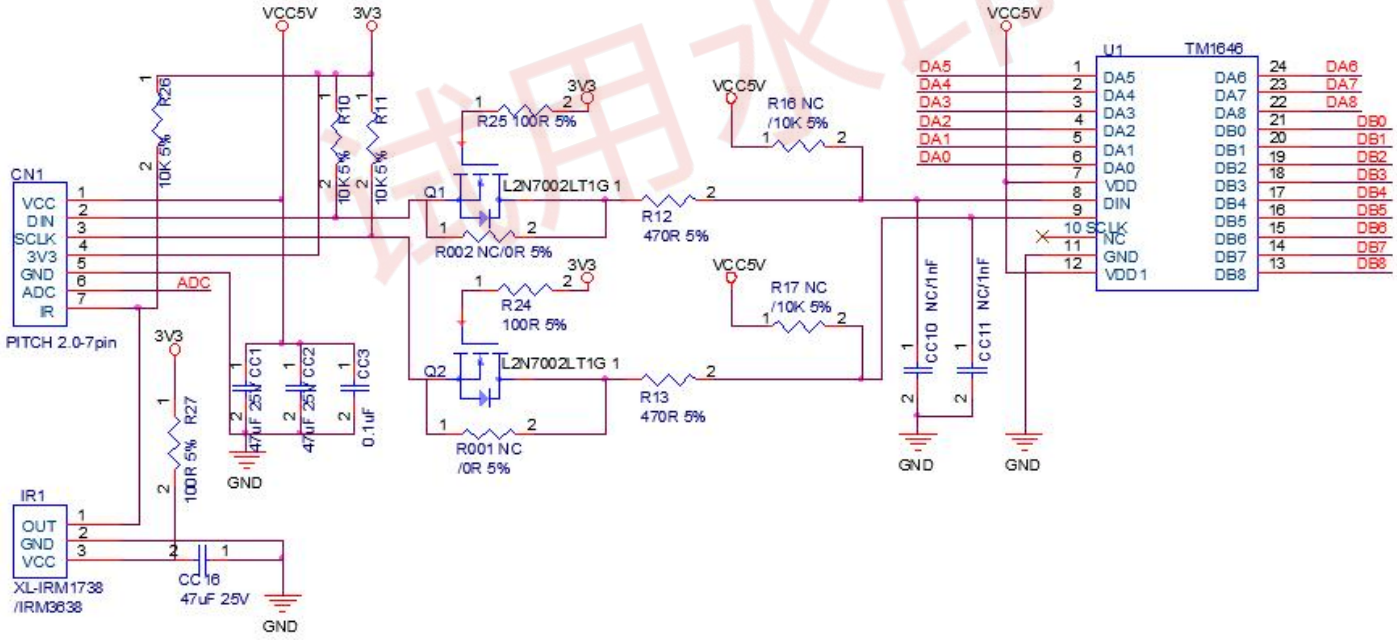
■ **Outer Dimension:**

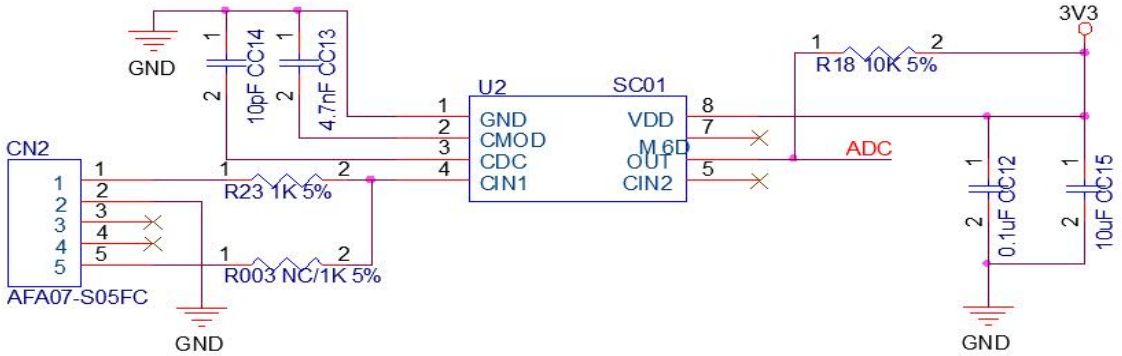


Notes: Unless otherwise stated, the tolerance is ±0.25mm.

■ Circuit Diagram

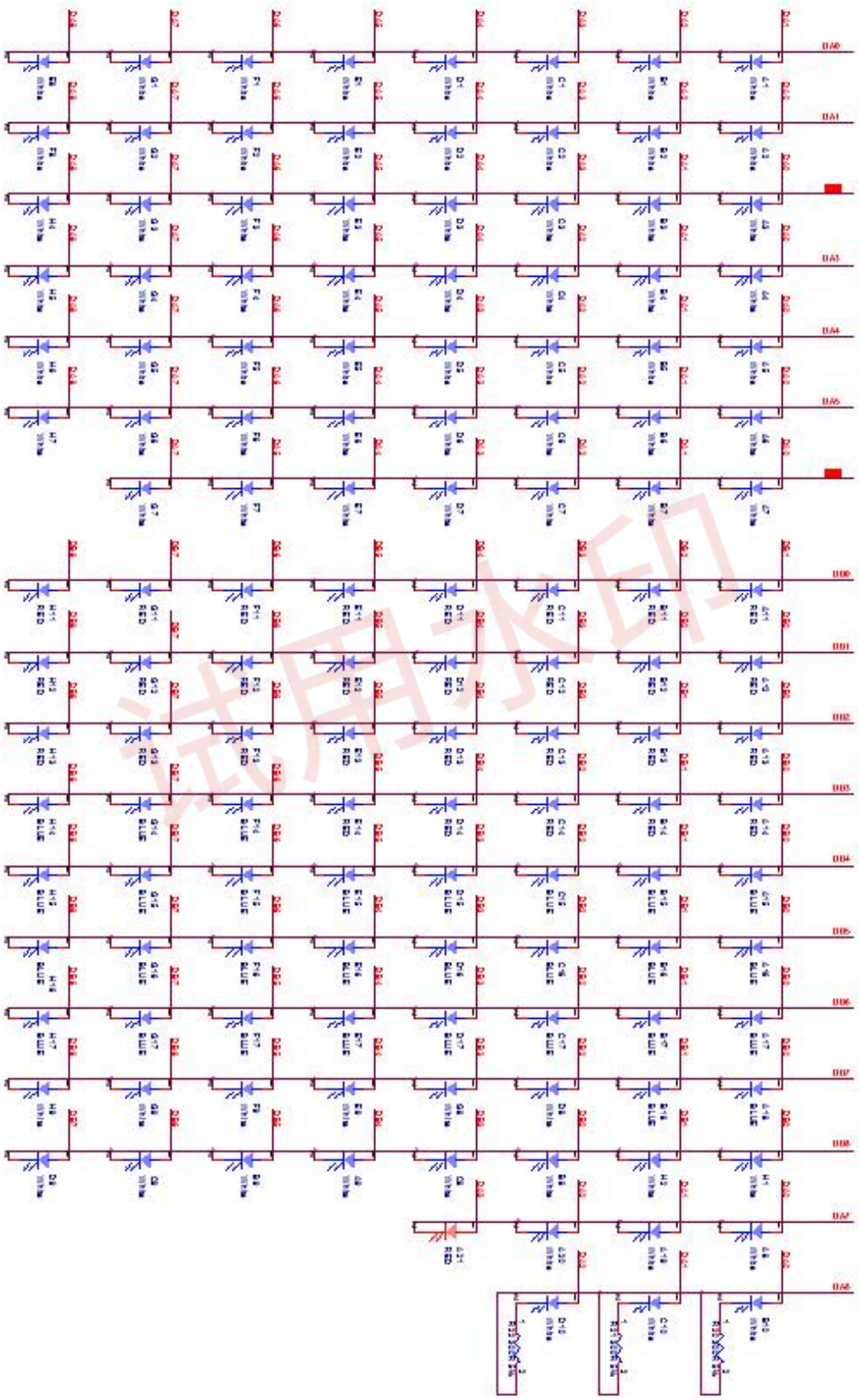






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■ Circuit Diagram



■ ABSOLUTE MAXIMUM RATINGS AT TA=25℃

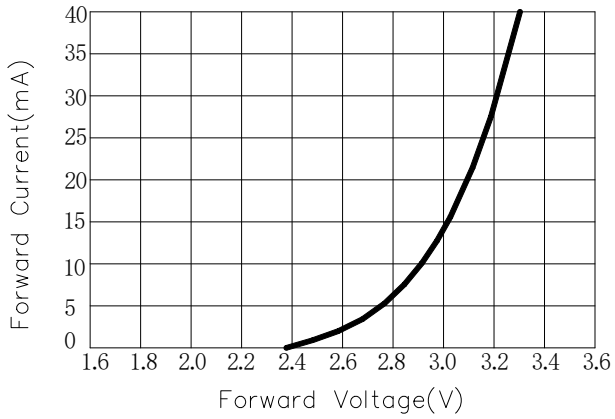
Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P_d	—	White / Ice Blue	90	mW
			Red	65	
Forward Current Per Segment	I_F	—	White /Ice Blue/Red	25	mA
Peak Forward Current Per Segment (1/10 Duty Cycle,0.1ms Pulse Width)	I_{FP}	1/10 Duty 10KHz	White /Ice Blue /Red	100	mA
Reverse Voltage Per Segment	V_R	—	White / Ice Blue /Red	5	V
Operating Temperature Range	Topr	—	—	-35~+85	℃
Storage Temperature Range	Tstg	—	—	-35~+85	℃

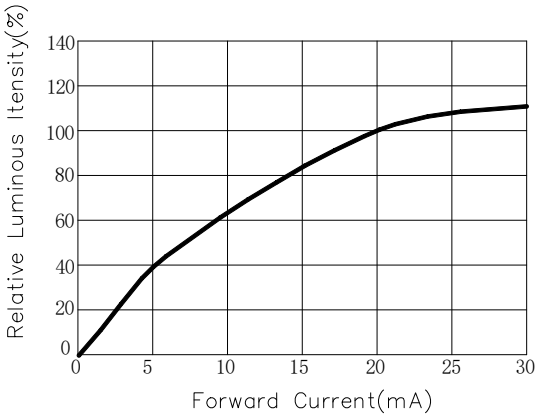
■ Electrical/Optical Characteristics Rating(Ta=25℃) / Per LED

Item	Symbol	Test conditions	Color	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=20mA	White	2.60	3.20	3.60	V
			Ice Blue				
			Red	1.60	2.00	2.60	
Reverse Current	I_R	V_R=5V	All Color	—	—	100	μA
Luminous Intensity	I_V	I_F=20mA	White	600	—	1400	mcd
			Ice Blue	600	—	1400	
			Red	100	—	180	
CIE Coordinate	X	I_F=20mA	White	—	0.28	—	—
	Y			—	0.28	—	
CIE Coordinate	X	I_F=20mA	Ice Blue	—	0.27	—	—
	Y			—	0.45	—	
Wave Length	λ_D	I_F=20mA	Red	620	—	625	nm
Luminous Intensity Matching Ratio (Segment to Segment)	I_{v-m}	I_F=20mA				1.2:1	

试用水印

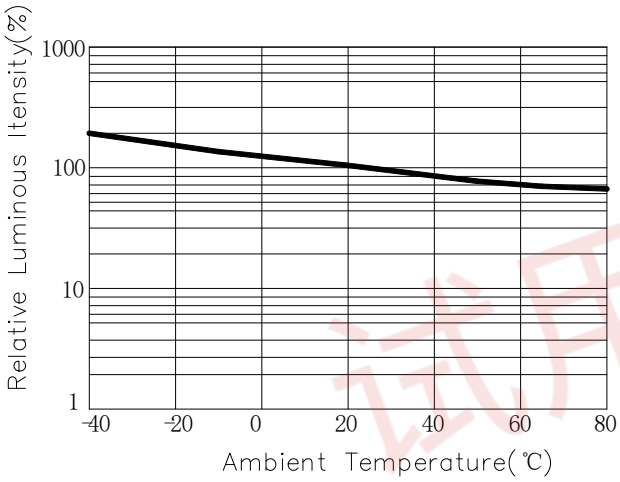
■ Typical Elector-Optical Characteristics Curve of White LED:

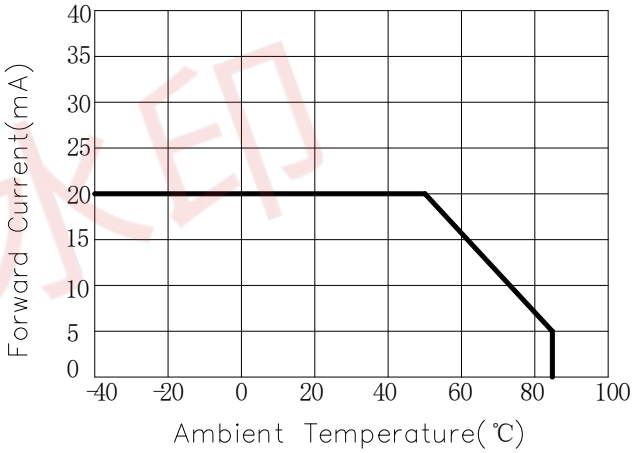




Relative Flux VS Ambient Temperature

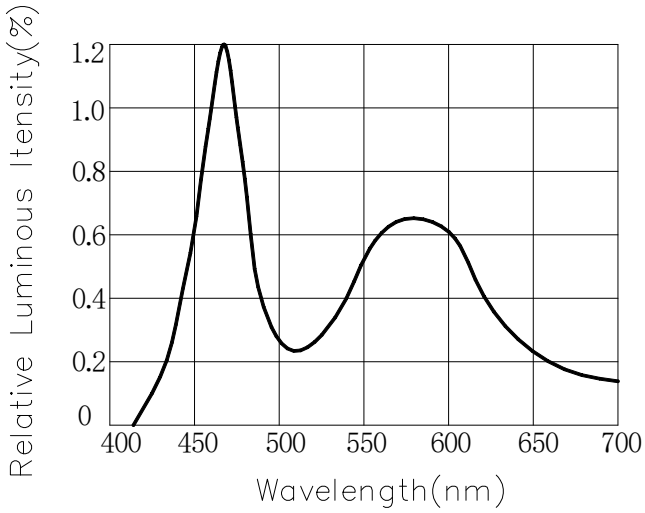
Forward Current VS Ambient Temperature





Relative Spectral Distribution

Typical Spectral Distribution



试用水印

■ Typical Elector-Optical Characteristics Curve of Ice Blue LED:

Fig.1-Forward Voltage vs.Forward Current

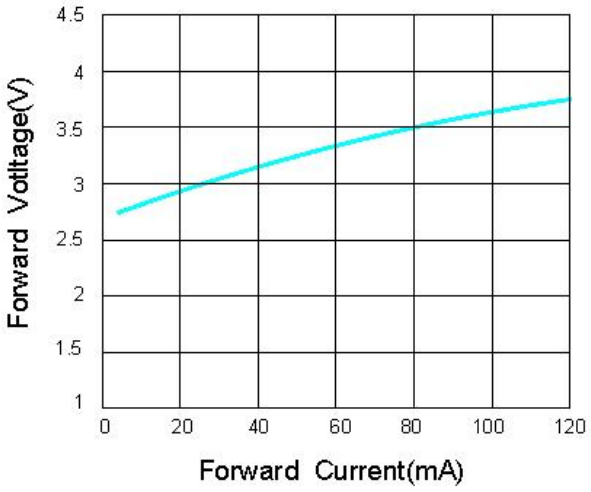


Fig.2-Relative Luminous Intensity vs.Forward Current

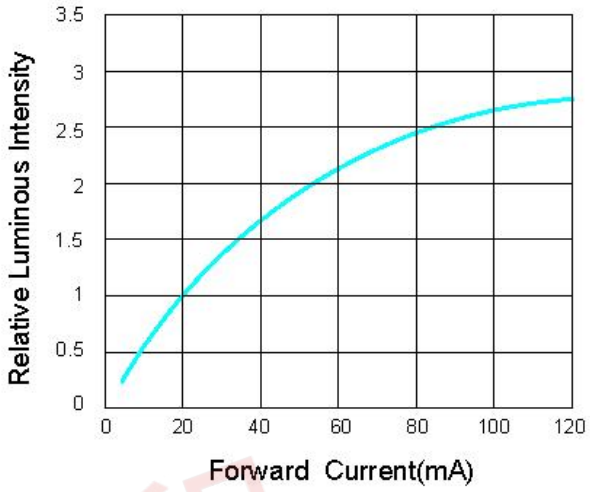


Fig.3-Relative Luminous Itensity vs.Ambient Temperature

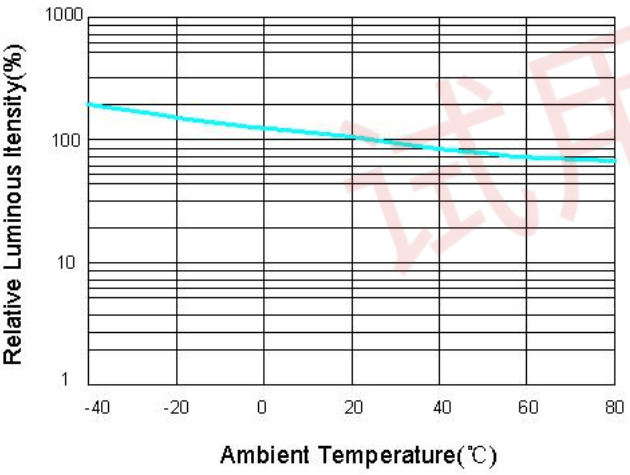


Fig.4-Forward Current vs.Ambient Temperature

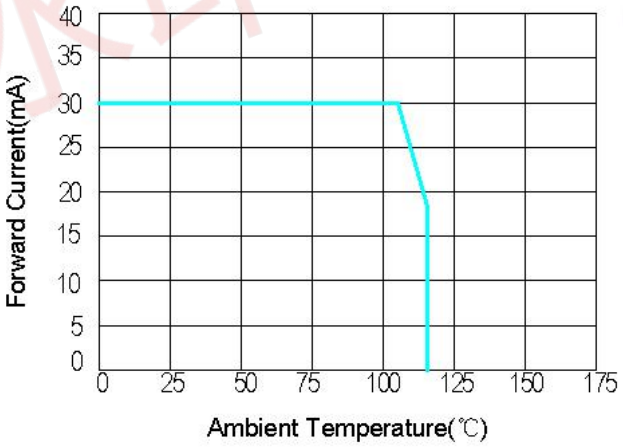
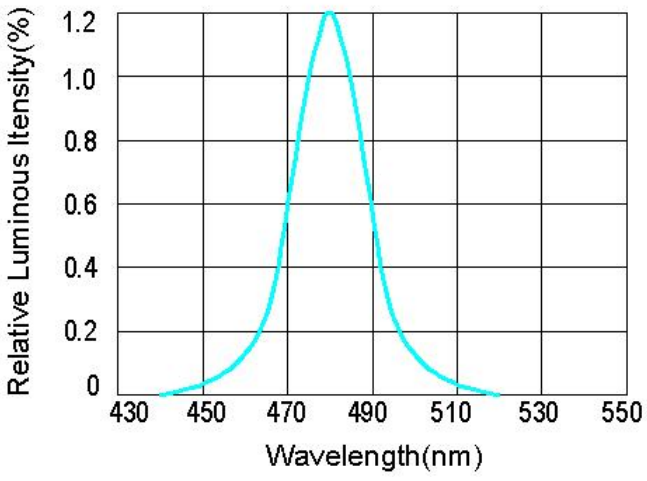


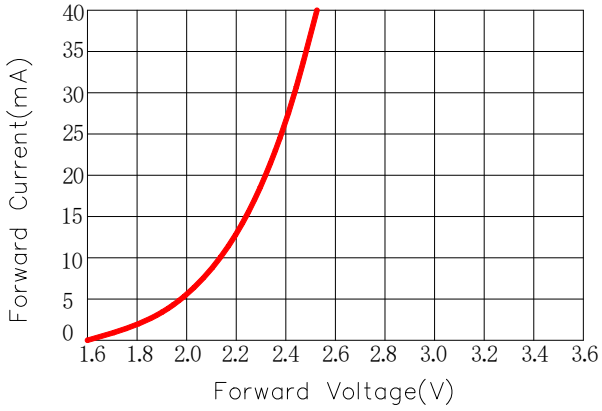
Fig.5-Relative Luminous Itensity vs.Wavelength



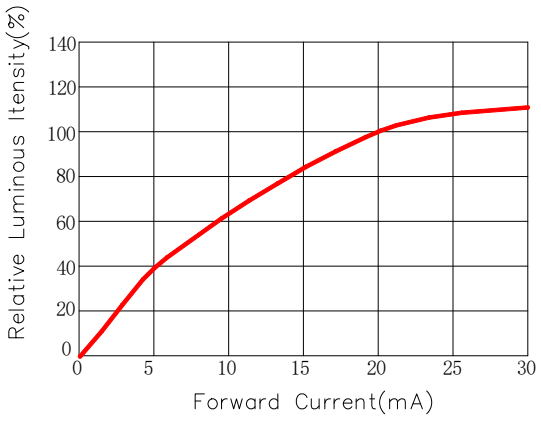
试用水印

■ Typical Elector-Optical Characteristics Curve of Red LED:

Forward Current VS Forward Voltage

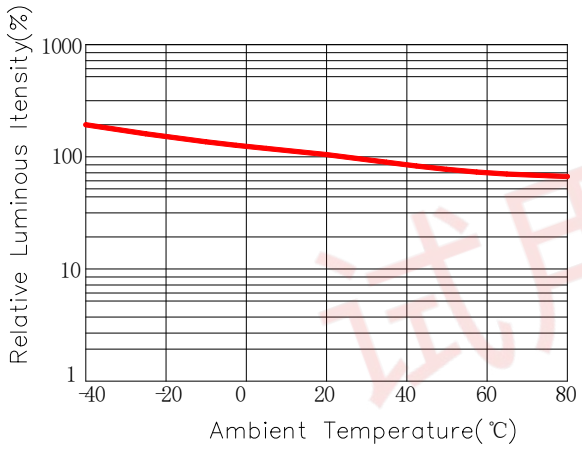


Relative Flux VS Forward Current

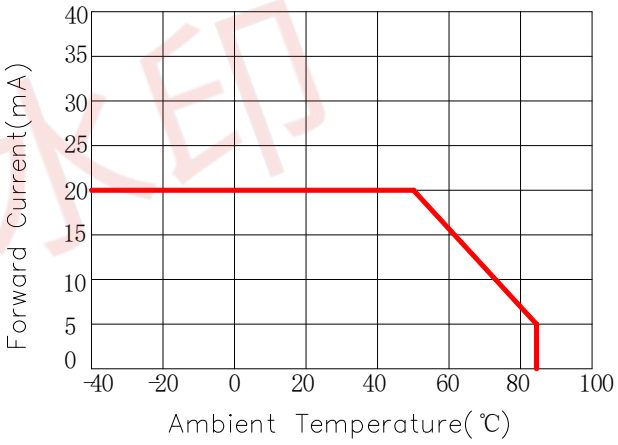


Relative Flux VS Ambient Temperature

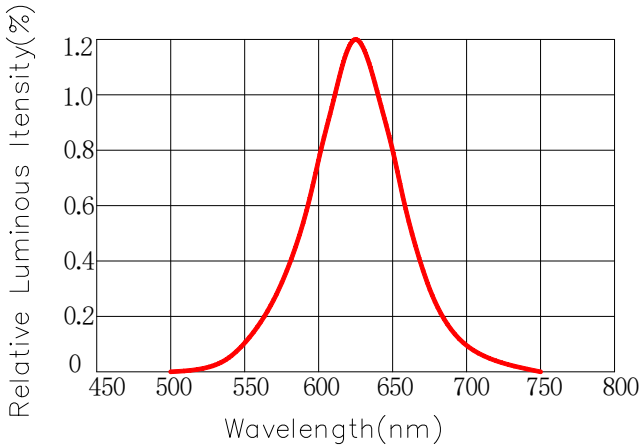
Temperature



Forward Current VS Ambient



Relative Spectral Distribution



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