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LEDTECH ELECTRONICS CORP.

# SPECIFICATION

*PART NO. : LT18W3-86-URE4*

*5.0MM ROUND LED LAMP*

Approved by	Checked by	Prepared by
<i>Jack</i>	<i>Jang</i>	<i>Bao Min</i>



**5.0MM ROUND LED LAMP  
PART NO. : LT18W3-86-URE4**

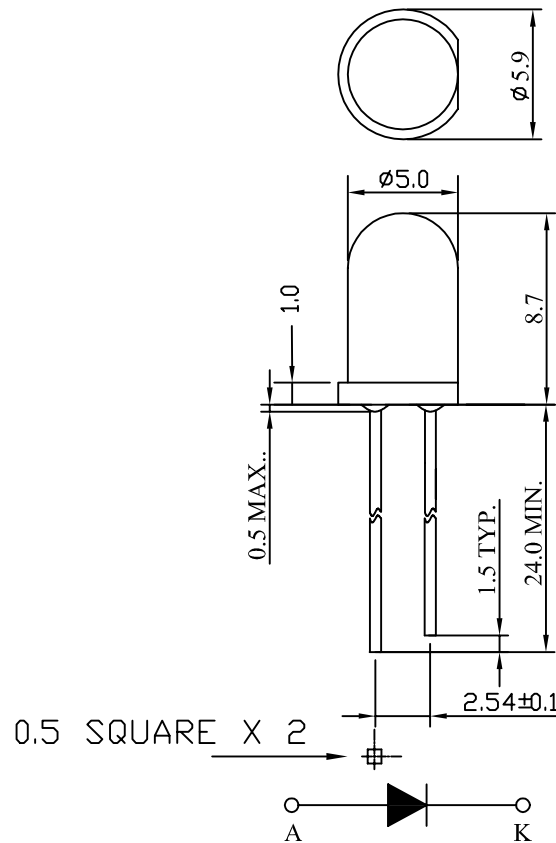
**Features**

- \* High intensity
- \* Reliable and rugged
- \* Low current requirement
- \* IC compatible

**Description**

The White lamp are made with InGaN chip and water clear epoxy resin.

**Package Dimensions**



Notes:

- 1.All dimensions are in millimeters.
- 2.Tolerance is  $\pm 0.25$ mm unless otherwise noted.

Part No.	Led Chip		Lens Color
	Material	Emitting Color	
LT18W3-86-URE4	InGaN	White	Water clear



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**Absolute Maximum Ratings at Ta=25°C :**

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	70	mW
Reverse Voltage	Vr	5	V
D.C. Forward Current	If	20	mA
Peak Current (1/10 Duty Cycle , 0.1 ms Pulse Width)	If(Peak)	100	mA
Operating Temperature Range	Topr	-25 to +85	°C
Storage Temperature Range	Tstg	-40 to +100	°C
Lead Soldering Temp.(1.6mm from body) for 5 seconds		260	°C
Electrostatic discharge (ESD)		300	V

**Electrical and Optical Characteristics :**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	If=20mA	1800	3000		mcd
Forward Voltage	Vf	If=20mA		3.2	3.5	V
CIE Chronaticity coordinates: X Axis	X	If=20mA		0.290		
CIE Chronaticity coordinates: Y Axis	Y	If=20mA		0.300		
Reverse Current	Ir	Vr=5V			50	μ A
Viewing Angle	2θ 1/2	If=20mA		12		deg



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## Typical Electrical/Optical Characteristic Curves (25°C Ambient Temperature Unless Otherwise Noted)

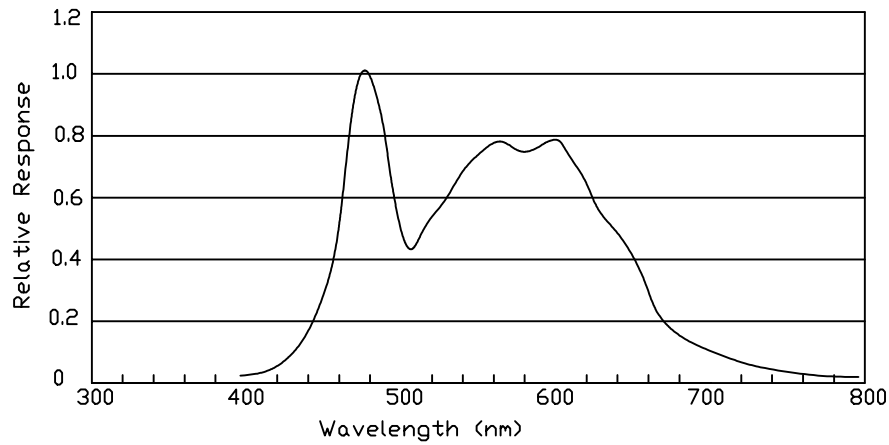
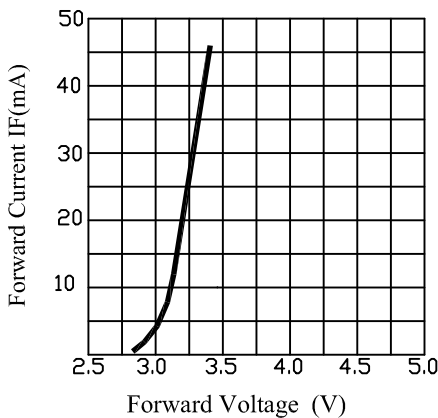
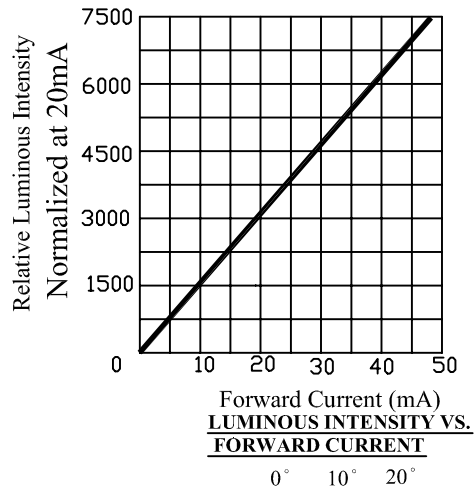


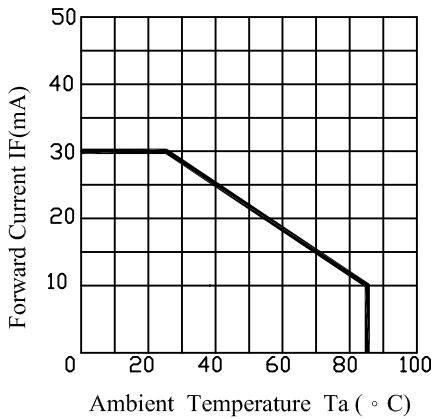
Fig.1 WHITE LED Spectrum VS. WAVELENGTH



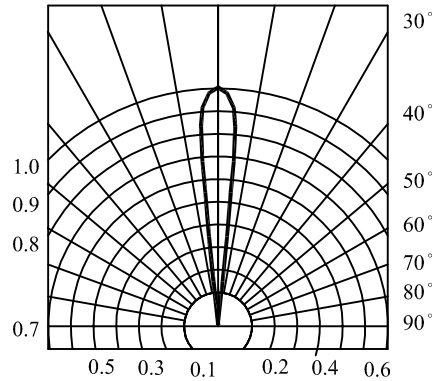
FORWARD CURRENT VS. APPLIED VOLTAGE



LUMINOUS INTENSITY VS. FORWARD CURRENT



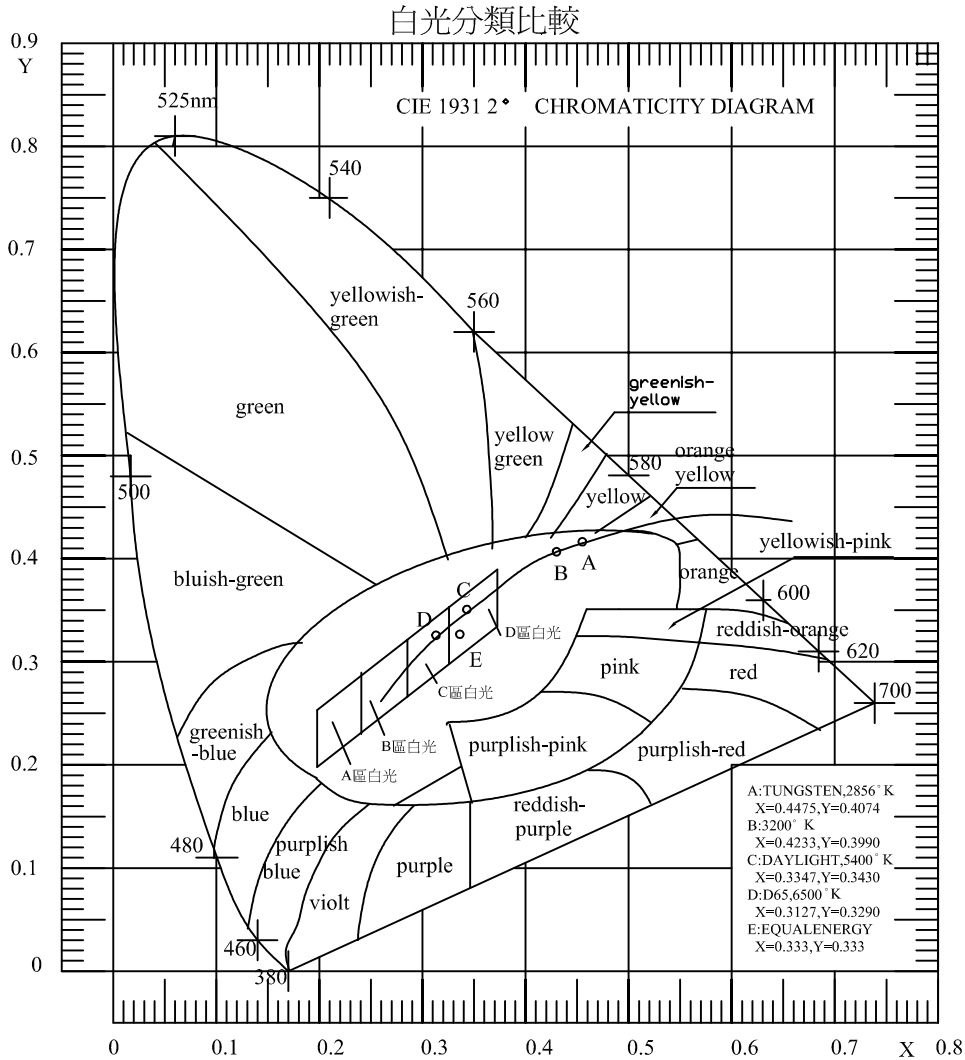
FORWARD CURRENT VS. AMBIENT TEMPERATURE



RELATIVE INTENSITY VS. WAVELENGTH



**5.0MM ROUND LED LAMP**  
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Rank	Chromaticity Coordinates(Ledtech Preliminary)								
	X	Y	Z	u'	v'				
A	X	0.22	0.22	0.26	0.26				
	Y	0.22	0.28	0.31	0.25				
B	X	0.26	0.26	0.29	0.29				
	Y	0.25	0.31	0.33	0.27				
C	X	0.29	0.29	0.32	0.32				
	Y	0.27	0.33	0.35	0.29				
D	X	0.32	0.32	0.36	0.36				
	Y	0.29	0.35	0.38	0.32				
Tolerance		X= ± 0.02		Y= ± 0.02					



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**Reliability Test Method :**

<b>Test Item</b>	<b>Test Condition</b>	<b>Duration Time</b>
<b>Operation Life</b>	<b>If=20mA / Ta=25°C</b>	<b>168hrs</b>
<b>Storage at High Temperature</b>	<b>Ta=100°C</b>	<b>168hrs</b>
<b>Storage at Low Temperature</b>	<b>Ta=-40°C</b>	<b>168hrs</b>
<b>Storage at High Temperature/High Humidity</b>	<b>Ta=85°C /RH=85%</b>	<b>168hrs</b>
<b>Operating at High Temperature</b>	<b>Ta=85°C / If=20mA</b>	<b>168hrs</b>
<b>Operating at Low Temperature</b>	<b>Ta=25°C / If=20mA</b>	<b>168hrs</b>
<b>Thermal Shock</b>	<b>Ta/T=100°C/30min~ -40°C/30min</b>	<b>10 cycles</b>
<b>Solderability</b>	<b>Tsol=230°C</b>	<b>5 sec</b>

**Criteria for Judging The Damage:**

<b>Item</b>	<b>Symbol</b>	<b>Test Condition</b>	<b>Criteria for Judgment</b>	
			<b>Min.</b>	<b>Max.</b>
<b>Forward Voltage</b>	<b>Vf</b>	<b>If=20mA</b>	<b>-----</b>	<b>Initial Data x1.1</b>
<b>Reverse Current</b>	<b>Ir</b>	<b>Vr=5V</b>	<b>-----</b>	<b>50 μ A</b>
<b>Luminous Intensity</b>	<b>Iv</b>	<b>If=20mA</b>	<b>Initial Data x0.8</b>	<b>-----</b>

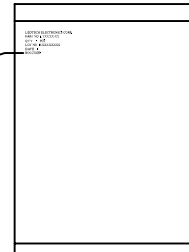


**5.0MM ROUND LED LAMP  
PART NO. : LT18W3-86-URE4**

ENCASED TYPE

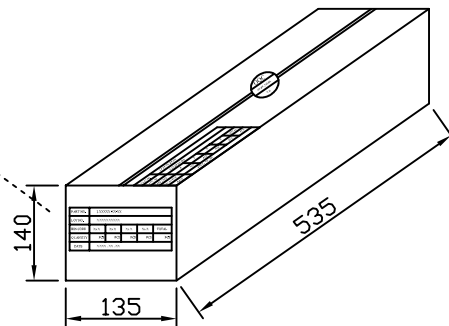
PLASTIC PACKAGE  
QUANTITY: 200 PCS

LEDTECH ELECTRONICS CORP.	
PART NO :LTXXXX-XX	
Q'TY	: PCS
LOT NO	:XXXXXXXXXX
DATE	:
BIN CODE:	



INNER BOX  
QUANTITY: 30 PACKETS  
TOTAL: 6,000 PCS

PART NO.	LXXXXX-XX-XX				
LOT NO.	XXXXXXXXXX				
BIN CODE	Xx X	Xx X	Xx X	Xx X	TOTAL
QUANTITY	PCS	PCS	PCS	PCS	PCS
DATE	XXXX, XX, XX				



OUTER CARTON  
QUANTITY: 4 BOX  
TOTAL: 24,000 PCS

C/T NO. 箱 號	XX
PART NO. 料 號	LXXXXX-XX-XX
QUANTITY 數 量	PCS
N.W. 淨 重	KGS
G.W. 毛 重	KGS
REMARK 備 註	

