LT18W3-86-UAF1-P22

5.0MM ROUND LAMP WHITE

Features

- FLUORESCENCE TYPE WHITE LIGHT
- HIGH LUMINOUS OUTPUT
- HIGH EFFICIENCY
- TYPICAL EMISSION COLOR[(2)]:
  X=0.29, Y=0.30

Absolute Maximum Ratings at T_A=25℃

REVERSE VOLTAGE (<50 μ A)	5.0V
D.C. FORWARD CURRENT	20mA
PULSE CURRENT (1/10 DUTY CYCLE,0.1 ms PULSE WIDTH)	100 mA
OPERATING TEMPERATURE RANGE	-25℃ TO +85℃
STORAGE TEMPERATURE RANGE	-25℃ TO +100℃
LEAD SOLDERING TEMP. (1.6mm FROM BODY)	260℃ FOR 5 SEC.
ELECTROSTATIC DISCHARGE THRESHOLD (HBM)	300 V

Precautions:

These products are sensitive to static electricity; high standard of care must be fully taken when handling them. Particularly if an over-voltage that exceeds the Absolute Maximum Rating of these products were applied, the overflow energy will cause damage to and possibly result in destruction of these products. Buyer shall take absolute secure countermeasures against static electricity and surge when handling these products. Ledtech give no other assurance regarding the ability of product to withstand ESD.

Eye Safety Information

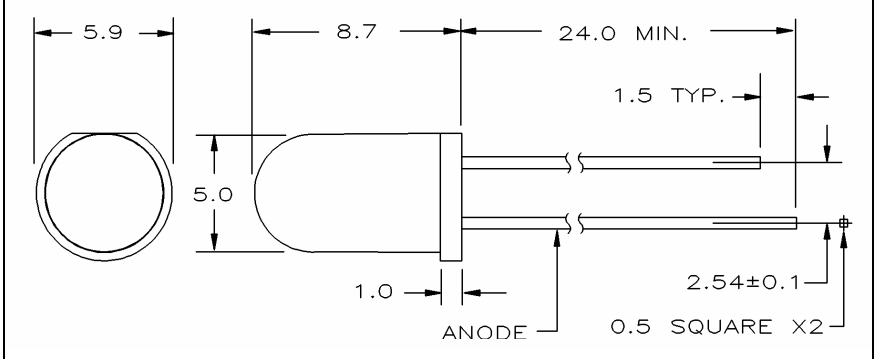
These LED devices are measured to be AEL Class 2 LED Products per IEC 825-1 and CENELEC EN60825-1 Standards when operated at the maximum data sheet dc drive current. For eye safety, do not stare into the light beam of these LED devices at close range.

Electrical/Optical Characteristics at T_A=25℃

PART NUMBER	LED CHIP		LENS COLOR	CHROMATICITY COORDINATES[(2)] @10 mA		FORWARD VOLTAGE @20mA(V)		LUMINOUS INTENSITY @20mA(mcd)		VIEW ANGLE $2\theta_{1/2}$ (deg)
	MATERIAL	EMITTING COLOR		X	Y	TYP.	MAX.	MIN.	TYP.	
LT18W3-86-UAF1-P22	InGaN	WHITE	W.C.	0.29	0.30	3.6	4.0	1700	2900	25

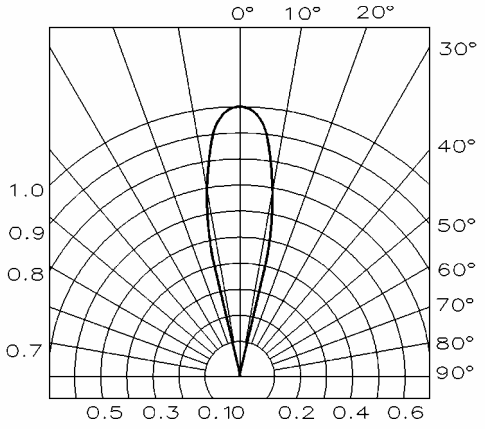
(1) Lens Color:
W.C….Water Clear
(2) CIE 1931 Standard
(3) Specifications are subject to change without notice.
(4) All above components are considered; deviations from stated specifications will require a new part number to be assigned.

Package Dimensions



1. ALL DIMENSIONS ARE IN mm, TOLERANCE IS ± 0.25mm UNLESS OTHERWISE NOTED.
2. AN EPOXY MENISCUS MAY EXTEND ABOUT 1.0mm DOWN THE LEADS.
3. BURR AROUND BOTTOM OF EPOXY BODY MAY BE 0.5mm MAX.

Radiation Pattern



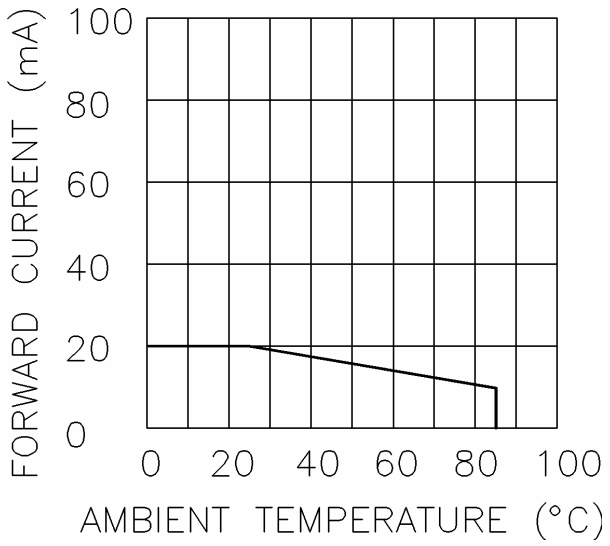
Applications

- **Backlighting (LCD, switches, keys, displays, illuminated ads, general lighting)**
- **Substitution of micro incandescent lamps**
- **Reading lamps**
- **Emergency lighting**
- **Signal and symbol luminaries**
- **Marker lights (e.g. steps, exits, etc…)**

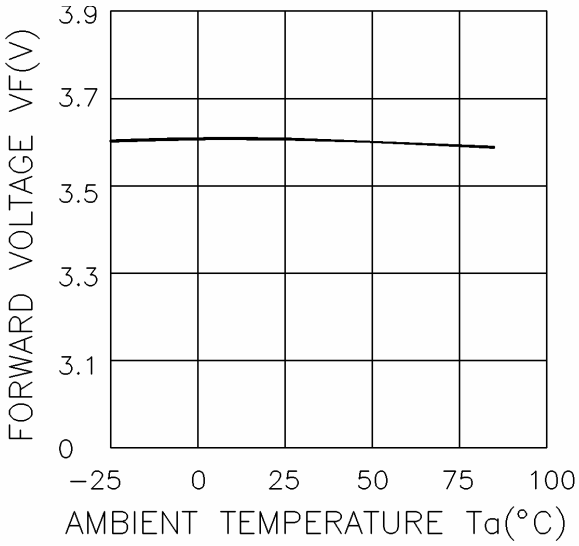
Reliability Tests Passed

	TEST ITEM	TEST CONDITION	TEST DURATION	SAMPLE SIZE	AC/RE
1	Room Temperature DC Operating Life	Ta=25℃ • I_F=20mA	1000 hrs	76	0/1
2	Thermal Shock	-25℃(5min) →(10sec) →+85℃(5min)	100 cycles	76	0/1
3	Temperature Cycle	-25℃(30min) →(5min) →+85℃(30min)	100 cycles	76	0/1
4	High Temperature / High Humidity Test	85℃/85% RH	1000 hrs	76	0/1
5	High Temperature Storage	Ta=100℃	1000 hrs	76	0/1
6	Low Temperature Storage	Ta=-25℃	1000 hrs	76	0/1
7	Solder Heat	260℃± 5℃	5 seconds	76	0/1

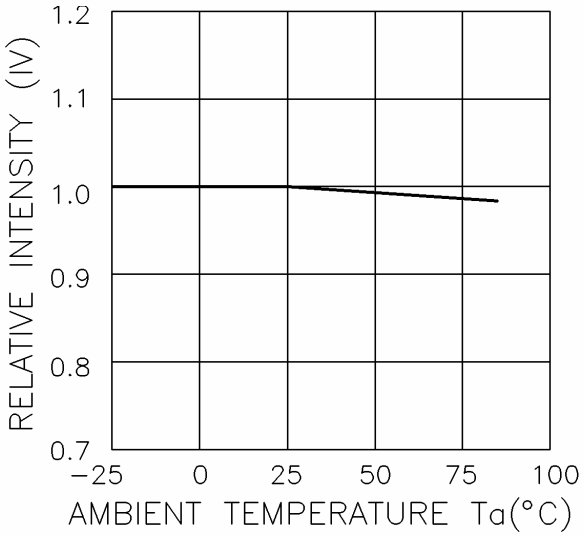
Forward Current vs. Ambient Temperature



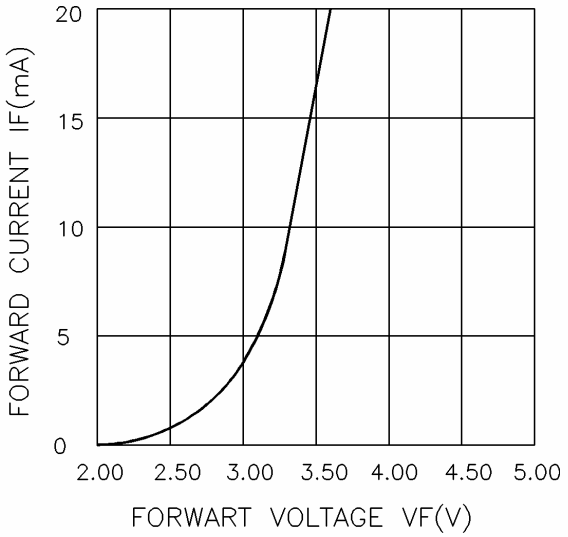
Forward Voltage vs. Ambient Temperature



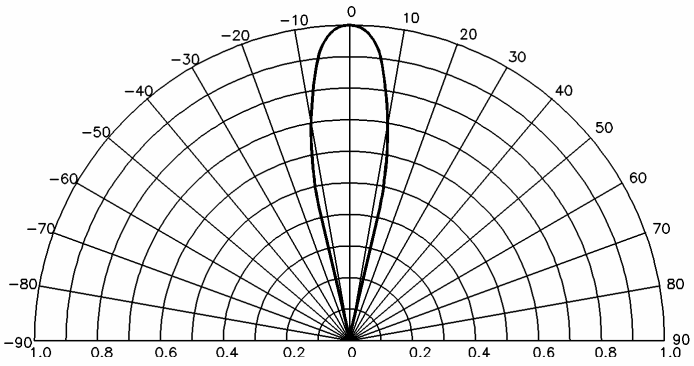
Relative Intensity vs. Ambient Temperature



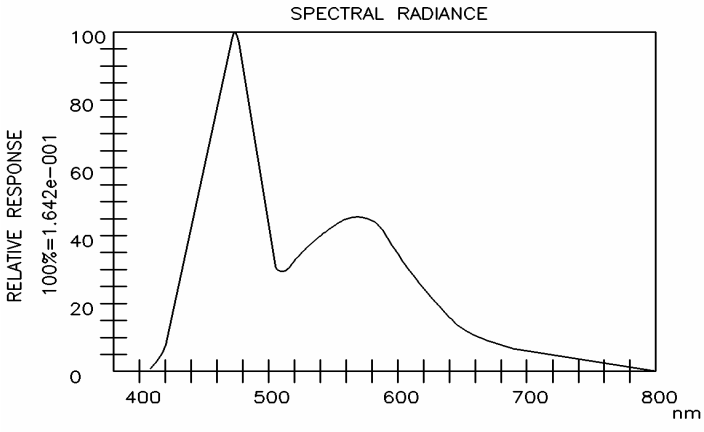
Forward Current vs. Forward Voltage



Directivity vs. Angle: 25degree (Typ.)



Luminous Spectrum (Ta=25℃)



Chromaticity Coordinates Specifications for Bin Grading

Bin	Chromaticity Coordinates (CIE 1931)					
A	x	0.220	0.220	0.260	0.260	
	y	0.220	0.280	0.310	0.250	
B	x	0.260	0.260	0.290	0.290	
	y	0.250	0.310	0.330	0.280	
C	x	0.290	0.290	0.320	0.320	
	y	0.270	0.330	0.350	0.290	
D	x	0.320	0.320	0.350	0.360	
	y	0.290	0.350	0.380	0.320	
Tolerance	x ± 0.02			y ± 0.02		

CIE Chromaticity Coordinates & Bin grading Diagram