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L120-0CW-30D-LL

Cool White

(3mm) Flanged Cylindrical; 5.3mm Height
37° Viewing Angle

DWG BY:
LL / GP / HF
03-30-09

R&D:
PL
09-22-22

QA:
LUV
09-22-22

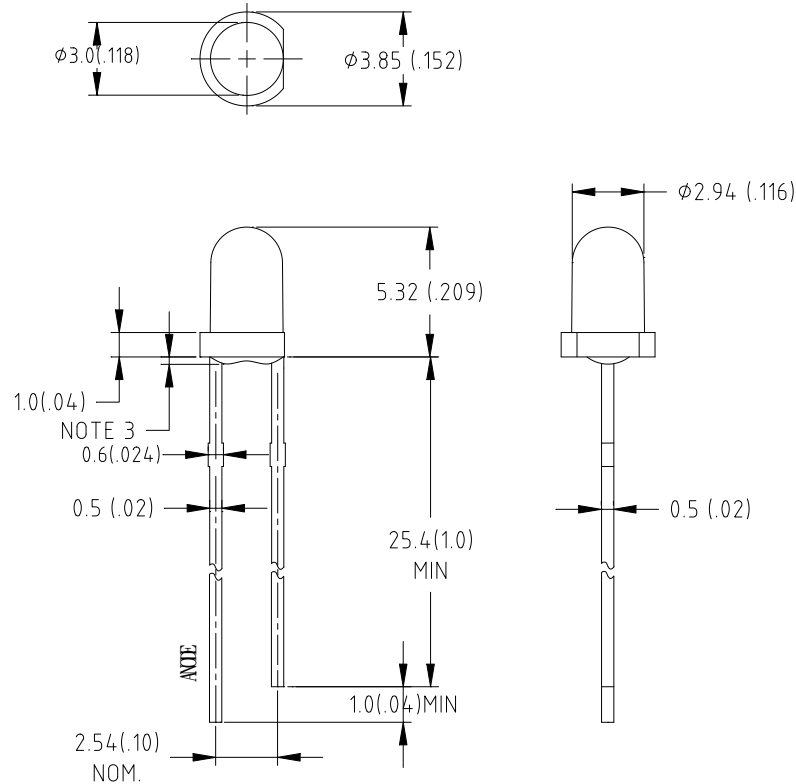
MFG:
LD
09-22-22

REVISION LTR: A
ECR#: 091922-HF01
09-19-22

Features:

- ◆ High intensity
- ◆ Standard 3mm diameter package
- ◆ Tinned plated copper leads
- ◆ Pb-free

Package Dimensions:



Chip Material	Lens Color	Emission Color
InGaN	Water Clear	Cool White

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0 mm (.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. Precautions for ESD: Static electricity and surge can damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

Absolute Maximum Ratings at Ta=25°C

Parameter	MAX.	Unit
Power Dissipation	80	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	20	mA
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Electrostatic Discharge (ESD)	600	V
Operating Temperature Range	-20°C to +80°C	
Storage Temperature Range	-30°C to +100°C	
Lead Soldering Temperature[4mm(.157") From Body]	280°C for 5 Seconds	

Electrical Optical Characteristics at Ta=25°C

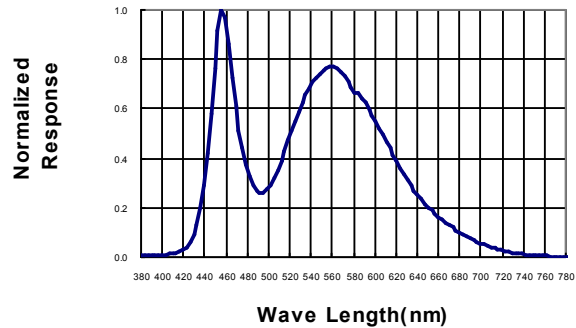
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	4700	21250	---	mcd	I _F =20mA (Note 1)
Viewing Angle	2θ _{1/2}	---	37	---	Deg	Note 2
Forward Voltage	V _F	---	2.96	3.8	V	I _F =20mA
Reverse Current	I _R	---	---	10	μA	V _R =5V
SCP	---	---	0.30	---	---	I _F =20mA
Lumens	---	---	4.0	---	lm	I _F =20mA
Radiant Intensity	---	---	71895	---	μW/sr	I _F =20mA
Color Rendering Index	CRI	79	---	83	---	---

Note:

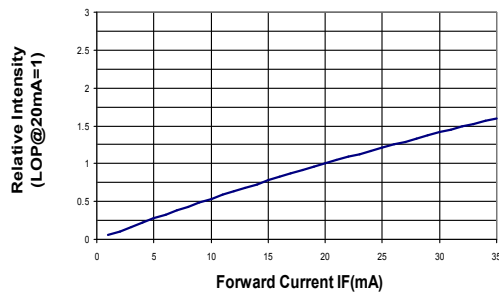
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. θ_{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength (λ_d) is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
4. Forward voltage measurement allowance is ±0.1V
5. Luminous Intensity Measurement Allowance is ±10%

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

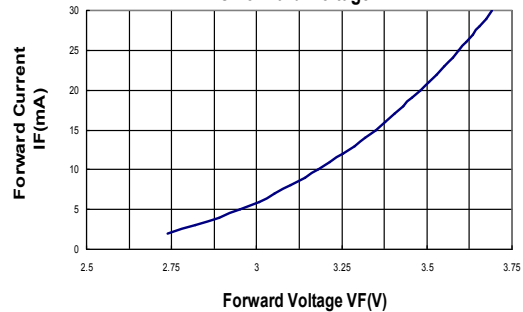
Spectral Radiance



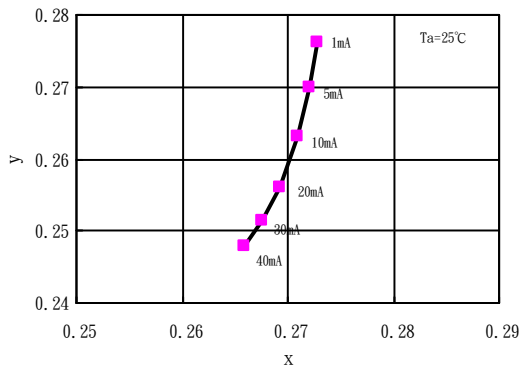
**Relative Luminous Intensity
vs Forward Current**



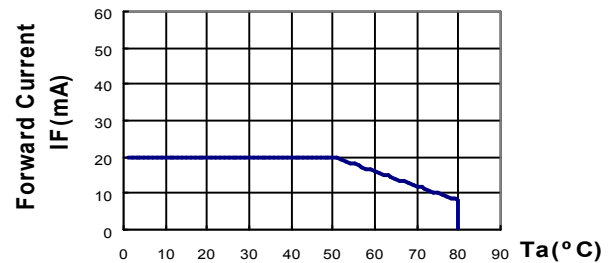
**Forward Current
vs Forward Voltage**



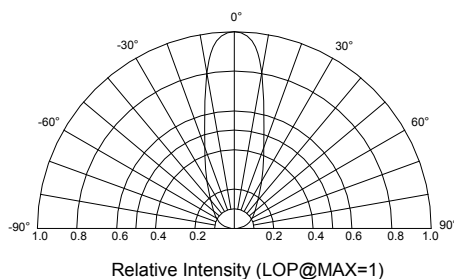
**Forward Current VS.
Chromaticity coordinate**

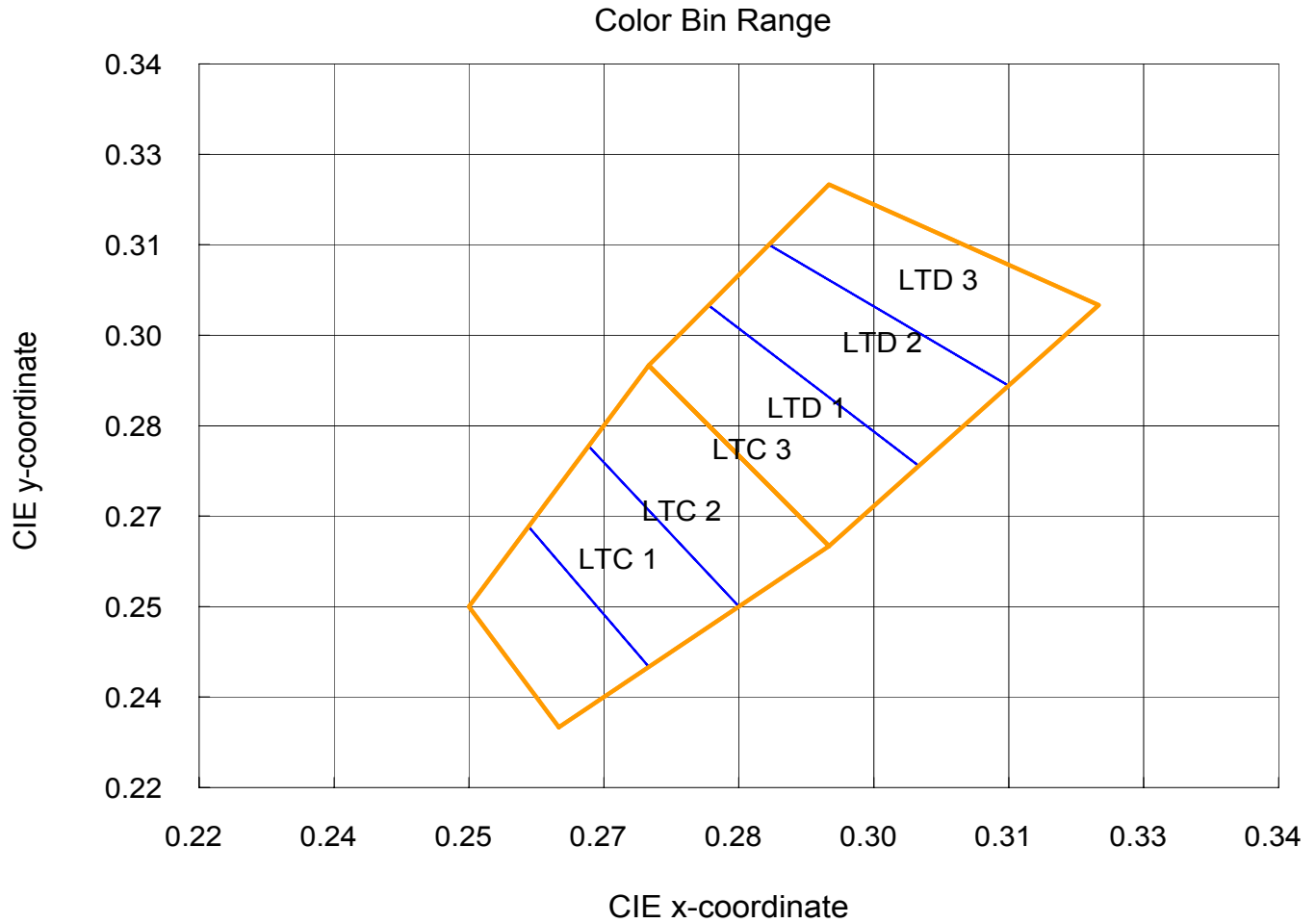


**Forward Current
Derating Curve**



Beam Pattern





Color Code	Bin Code					
0CW	LTC 1	X	0.260	0.270	0.257	0.250
		Y	0.230	0.240	0.263	0.250
	LTC 2	X	0.270	0.280	0.263	0.257
		Y	0.240	0.250	0.277	0.263
	LTC 3	X	0.280	0.290	0.270	0.263
		Y	0.250	0.260	0.290	0.277
	LTD 1	X	0.290	0.300	0.277	0.270
		Y	0.260	0.273	0.300	0.290
	LTD 2	X	0.300	0.310	0.283	0.277
		Y	0.273	0.287	0.310	0.300
	LTD 3	X	0.310	0.320	0.290	0.283
		Y	0.287	0.300	0.320	0.310