

# LD200CWR4KF-15D

Ultra Red

5mm, Domed, 8.6mm Height  
20° viewing angle

DWG BY:  
LL / GP  
04-09-12

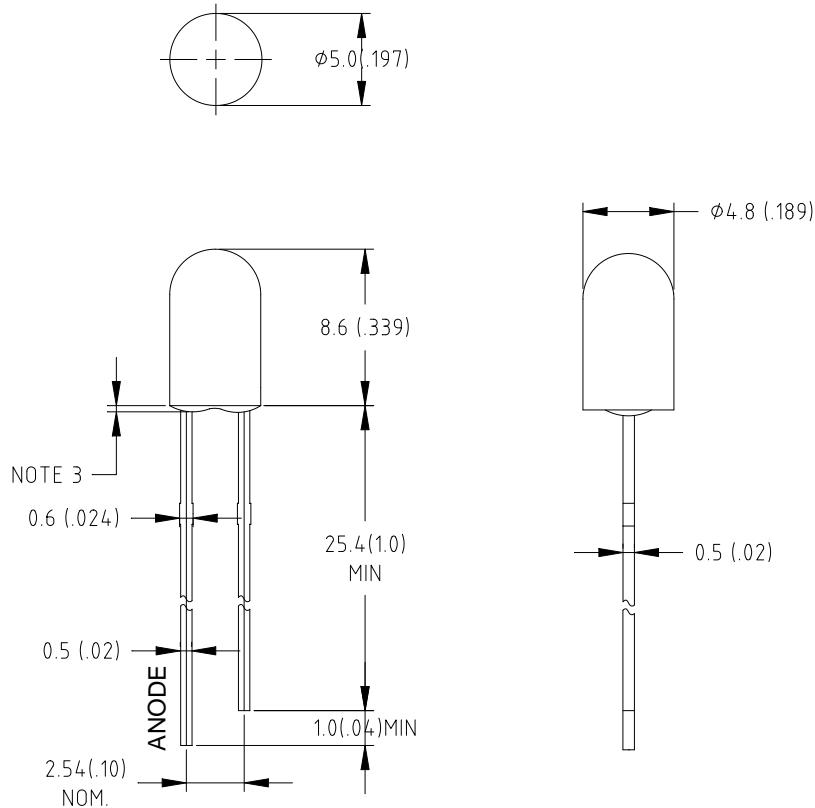
CHK BY:  
PL  
04-10-12

REVISION LTR: -  
  
04-09-12

**Features:**

- High intensity
- 5mm diameter no flange package
- Tinned leads
- Pb-free

**Package Dimensions:**



Chip Material	Lens Color	Emission Color
AlGaInP	Water Clear	Ultra Red

**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25$ mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm (.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

### Absolute Maximum Ratings at Ta=25°C

Parameter	MAX	Unit
Power Dissipation	84	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	35	mA
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-30°C to +80°C	
Storage Temperature Range	-40°C to +100°C	
Lead Soldering Temperature [4mm(.157") From Body]	255±5°C for 5 Seconds	
Wave Soldering Temperature	Peak Temperature 245°C ~260°C for 10 Seconds	

### Electrical Optical Characteristics at Ta=25°C

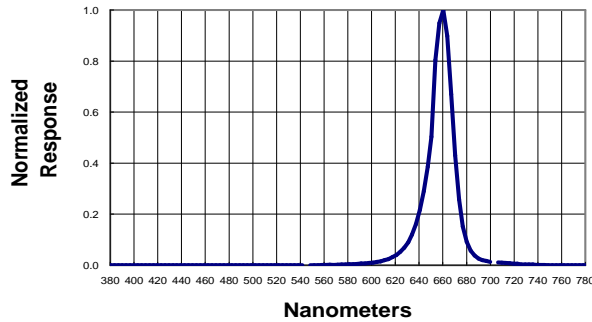
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	$I_V$	1000	1800	---	mcd	$I_F=20mA$ (Note 1)
Viewing Angle	$2\theta_{1/2}$	---	20	---	Deg	(Note 2)
Peak Emission Wavelength	$\lambda_p$	---	659	---	nm	$I_F=20mA$
Dominant Wavelength	$\lambda_d$	---	642	---	nm	$I_F=20mA$ (Note 3)
Spectral Line Half-Width	$\Delta\lambda$	---	20	---	nm	$I_F=20mA$
Forward Voltage	$V_F$	---	2.0	2.4	V	$I_F=20mA$
Reverse Current	$I_R$	---	---	10	$\mu A$	$V_R=5V$
Radiant Intensity	---	---	28400	---	$\mu W/sr$	$I_F=20mA$
Chromaticity Coordinates	x: ~0.72 y:~ 0.28					$I_F=20mA$

#### Notes:

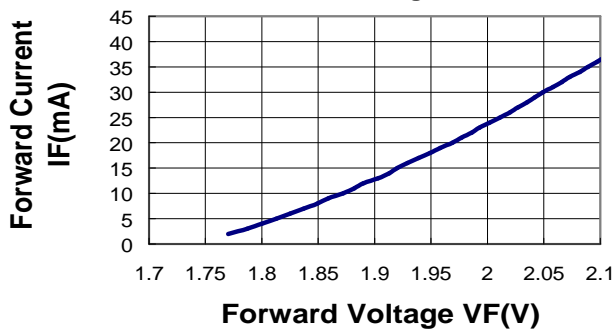
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
- The dominant wavelength ( $\lambda_d$ ) is derived from the CIE chromaticity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

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

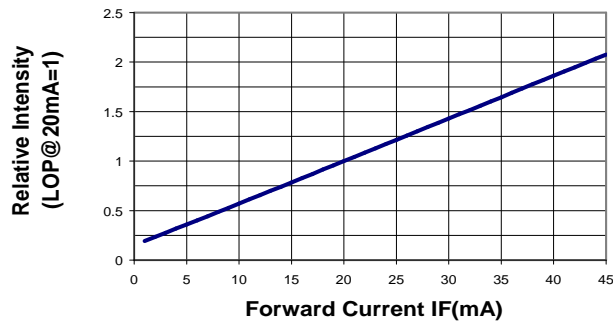
**Spectral Radiance (Peak @ 660nm)**



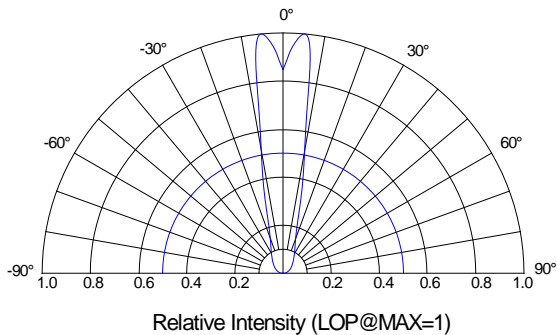
**Forward Current vs Forward Voltage**



**Relative Luminous Intensity vs Forward Current**



**Beam Pattern**



**Forward Current Derating Curve**

