



T-1³/₄ (5mm) Modified Ultra Bright AlGaAs Red LED Lamps

LTL-353URKR

LTL-353CKR

Features

- Ultra brightness.
- New sturdy leads.
- Versatile mounting on P.C. board or panel.
- I.C. compatible/low current requirements.
- Reliable and rugged.

Description

The source color devices are made with Aluminum Gallium Arsenide light emitting diode.

LTL-353URKR is made with high performance AlGaAs dice.

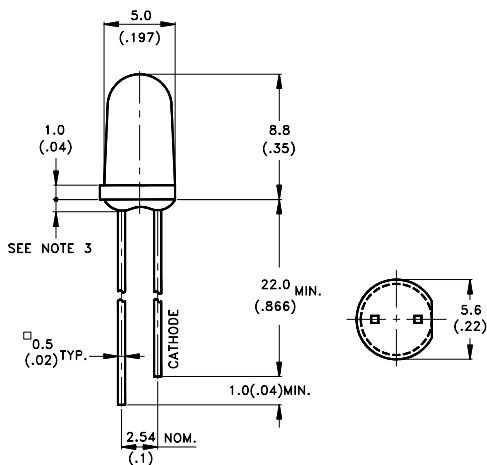
LTL-353CKR is made with DH AlGaAs dice.

The devices are made with water clear epoxy package, and with 12 degrees of viewing angle.

These Ultra bright lamps out perform convential LED lamps.

By utilizing new higher intensity material, we achieve superior product performance.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.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.

Devices

Part No. LTL-	Lens	Source Color
353URKR	Water Clear	AlGaAs Red
353CKR	Water Clear	AlGaAs Red

Absolute Maximum Ratings at Ta=25°C

Parameter	Maximum Rating	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	200	mA
Continuous Forward Current	40	mA
Derating Linear From 50°C	0.5	mA/°C
Reverse Voltage	4	V
Operating Temperature Range	-40°C to +100°C	
Storage Temperature Range	-55°C to +100°C	
Lead Soldering Temperature [1.6mm (.063") From Body]	260°C for 5 Seconds	

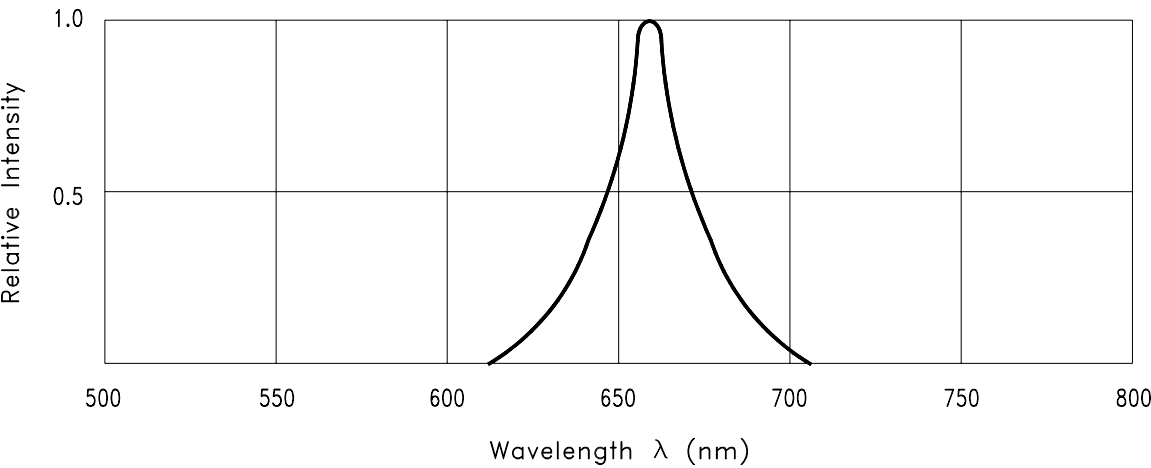


Fig.1 Relative Intensity vs. Wavelength

Electrical /Optical Characteristics and Curves at Ta=25°C

Parameter	Symbol	Part No. LTL-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	353URKR	1000	2300		mcd	If=20mA Note 1,2
		353CKR-H4 353CKR-H3	700 400	1000 700		mcd	If=20mA Note 1
Viewing Angle	2θ ^{1/2}			12		deg	Note 3 (Fig. 5)
Peak Emission Wavelength	λ P			660		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d			638		nm	Note 6
Spectral Line Half-Width	Δλ			20		nm	
Forward Voltage	V _F			1.8	2.4	V	If=20mA
Reverse Current	I _R				100	μA	V _R =4V
Capacitance	C			30		pF	V _F =0, f=1MHz

Notes:1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

2. Luminous intensity rank classified products support two ranks.

3. θ^{1/2} is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

4. Iv classification code is marked on each packing bag.

5. The Iv guarantee should be added ± 15%.

6. The dominant wavelength, λ d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

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

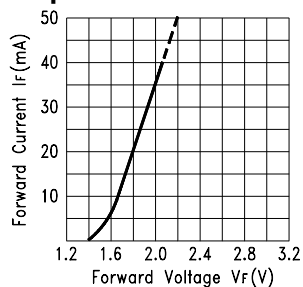


Fig.2 Forward Current vs.
Forward Voltage

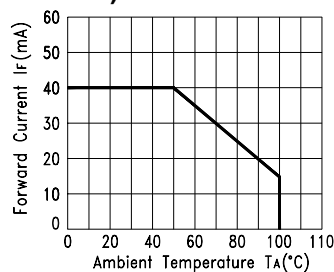


Fig.3 Forward Current
Derating Curve

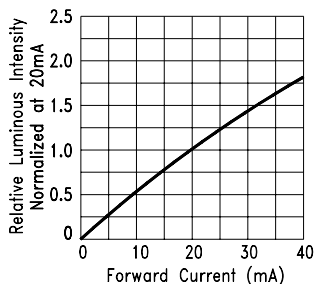


Fig.4 Relative Luminous Intensity
vs. Forward Current

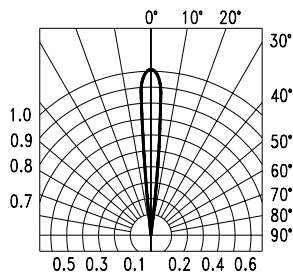


Fig.5 Spatial Distribution