



ULTRA BRIGHT RED SOLID STATE LAMPS T-1 3/4 MODIFIED 1" LEAD

LTL-353CK (NEW IMPROVED PART TO REPLACE LTL-283CK SERIES)

T-41-21

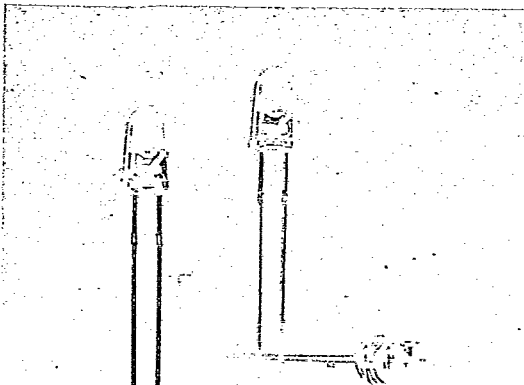
FEATURES

- ULTRA-BRIGHTNESS.
- NEW STURDY LEADS.
- IC COMPATIBLE/LOW CURRENT CAPABILITY.
- RELIABLE AND RUGGED

DESCRIPTION

The LTL-353CK is Gallium Aluminum Arsenide red light emitting diodes.

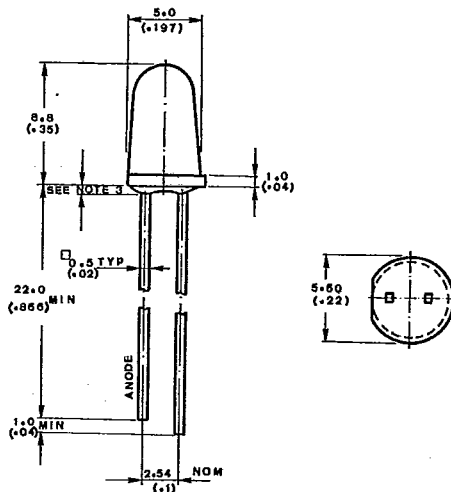
These clear, non-diffused Ultra Bright lamps but perform conventional LED lamps, by utilizing new ultra intensity material. We achieve superior product performance.



DEVICES

PART NO. LTL-	LENS		SOURCE COLOR
	COLOR	DIFFUSION	
353CK	Water Clear	Non-diffused	GaAlAs Red

PACKAGE DIMENSION



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 1.5mm (.059") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

T-41-21

ABSOLUTE MAXIMUM RATINGS AT $T_A = 25^\circ\text{C}$

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 ms Pulse Width)	200	mA
Continuous Forward Current	40	mA
Derating Linear From 25°C	0.5	mA/ $^\circ\text{C}$
Reverse Voltage	4	V
Operating Temperature Range	-55°C to $+100^\circ\text{C}$	
Storage Temperature Range	-55°C to $+100^\circ\text{C}$	
Lead Soldering Temperature [1.6mm (0.063 in) From Body]	260 $^\circ\text{C}$ for 5 Seconds	

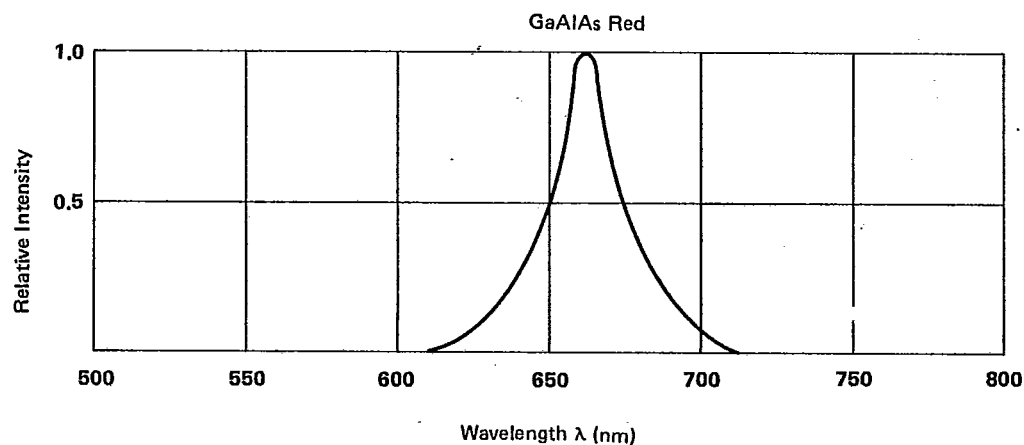


FIG. 1 RELATIVE INTENSITY VS. WAVELENGTH

T-41-21

ELECTRICAL OPTICAL CHARACTERISTICS AND CURVES AT $T_A = 25^\circ\text{C}$

PARAMETER	SYMBOL	PART NO. LTL-	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	I_V	353CK L2 353CK H3 353CK H4	150 400 700	300 500 1000		mcd	$I_F = 20\text{ mA}$ Note 1
Viewing Angle	$2\theta_{1/2}$			12		deg	Note 2 (Fig. 6)
Peak Emission Wavelength	λ_{PEAK}			660		nm	Measurement @ peak (Fig. 1)
Spectral Line Half-Width	$\Delta\lambda$			20		nm	
Forward Voltage	V_F			1.8	2.4	V	$I_F = 20\text{ MA}$
Reverse Current	I_R				100	μA	$V_R = 4\text{ V}$
Capactance	C			30		PF	$V_F = 0$ $f = 1\text{ MHZ}$

NOTES: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.

2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

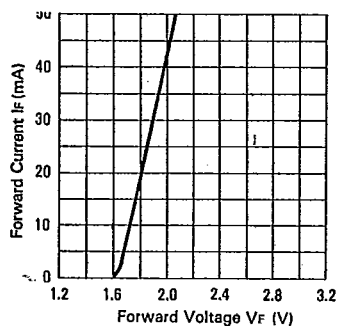


FIG. 2 FORWARD CURRENT VS. FORWARD VOLTAGE

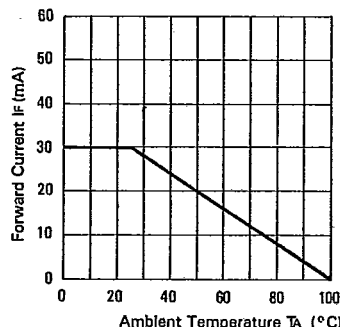


FIG. 3 FORWARD CURRENT VS. DERATING CURVE

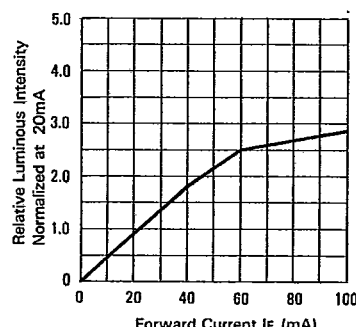


FIG. 4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

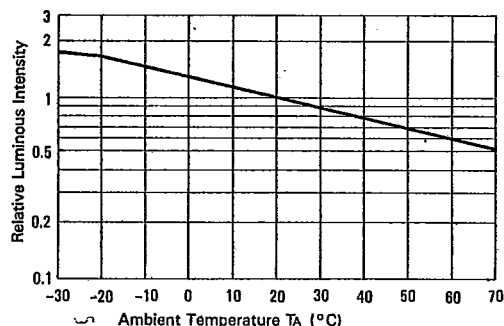


FIG. 5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE CHARACTERISTICS

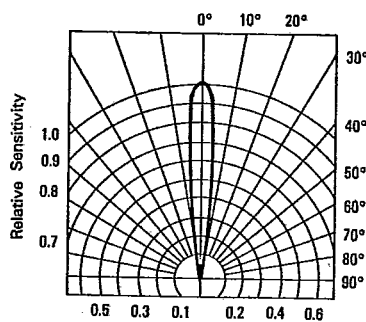


FIG. 6 SPATIAL DISTRIBUTION



2-84

363