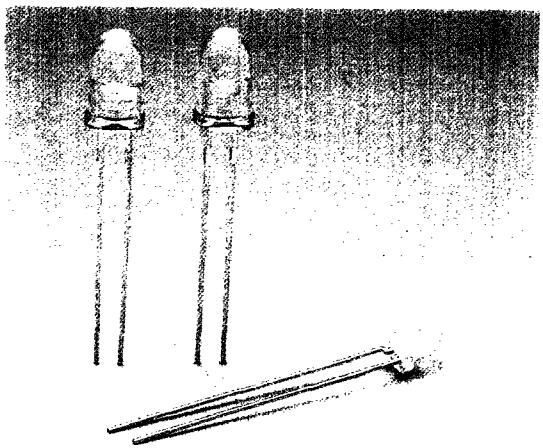
BLUE LED LAMPS

LTL-42B5/42B6

LTL-353BJ/353BK

FEATURES

- BLUE LIGHT SOURCE.
- I.C. COMPATIBLE/LOW CURRENT CAPABILITY.
- RELIABLE AND RUGGED.

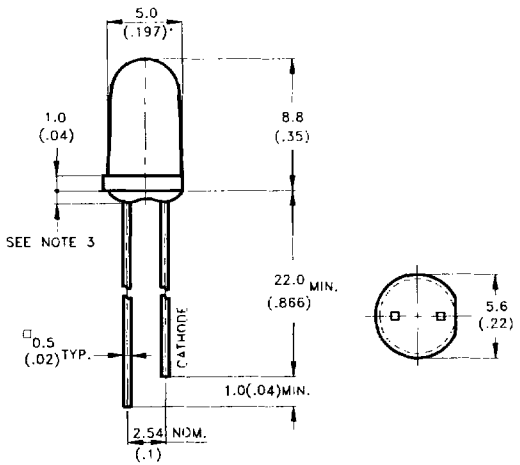


DESCRIPTION

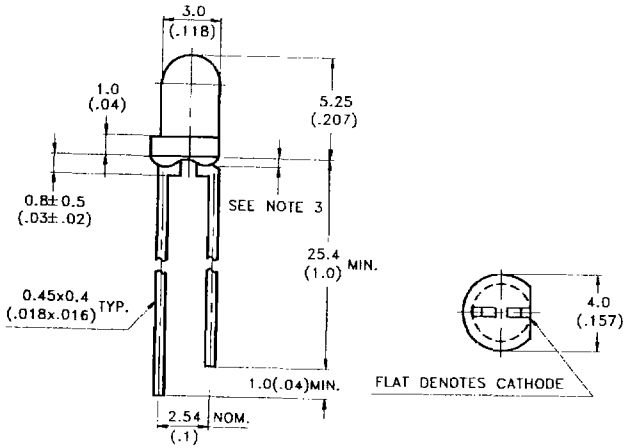
The product series consists of silicon carbide blue chips with a 470nm peak wavelength.

PACKAGE DIMENSIONS

LTL-353BJ/353BK



LTL-42B5/42B6



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (.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
	COLOR	DIFFUSION	
42B5	White	Diffused	Blue
42B6	Water Clear	Non-diffused	Blue
353BJ	White	Diffused	Blue
353BK	Water Clear	Non-diffused	Blue

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

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	150	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100 (REF)	mA
Continuous Forward Current	50	mA
Derating Linear From 25 °C	0.8	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	–20 °C to +85 °C	
Storage Temperature Range	–55 °C to +85 °C	
Lead Soldering Temperature [1.6mm (0.063in) From Body]	260 °C for 5 Seconds	

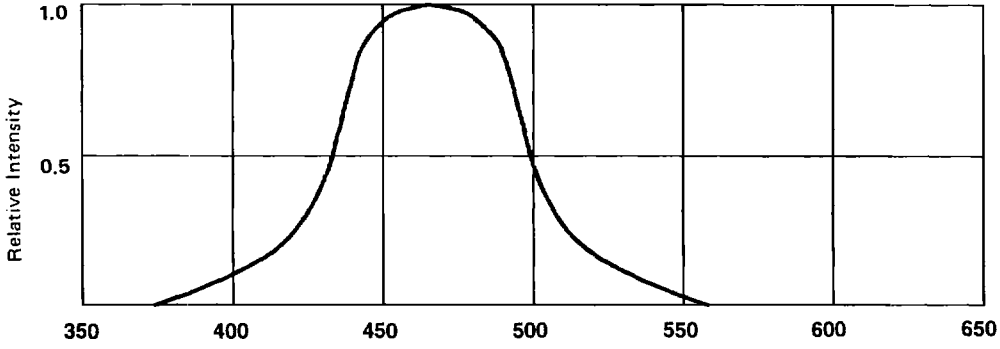


FIG. 1 RELATIVE INTENSITY VS. WAVELENGTH

LED LAMPS

ELECTRICAL/OPTICAL CHARACTERISTICS AND CURVES AT $T_A = 25^\circ C$

PARAMETER	SYMBOL	PART NO. LTL—	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	Iv	42B5 42B6	1.1 3.7	3.7 12.6		mcd	I_F=20 mA Note 1
Viewing Angle	2θ 1/2	42B5 42B6		60 25		deg	Note 2 (FIG.6)
Peak Emission Wavelength	λ PEAK			470		nm	Measurement @Peak (FIG.1)
Spectral Line Half Width	Δ λ			70		nm	
Forward Voltage	V_F		2.8	3.0	3.5	V	I_F=20 mA
Reverse Current	I_R				100	μA	V_R=5V
Capacitance	C			150		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. θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

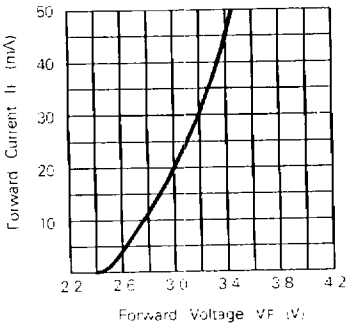


FIG 2 FORWARD CURRENT VS FORWARD VOLTAGE

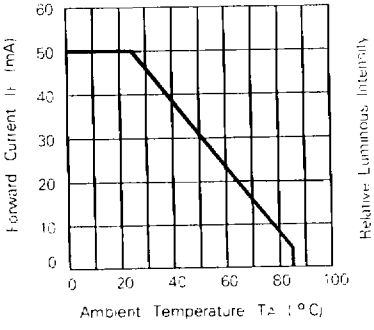


FIG.3 FORWARD CURRENT DERATING CURVE

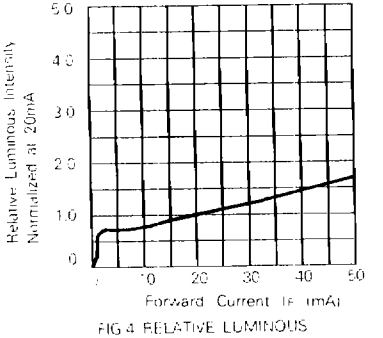


FIG.4 RELATIVE LUMINOUS INTENSITY VS FORWARD CURRENT

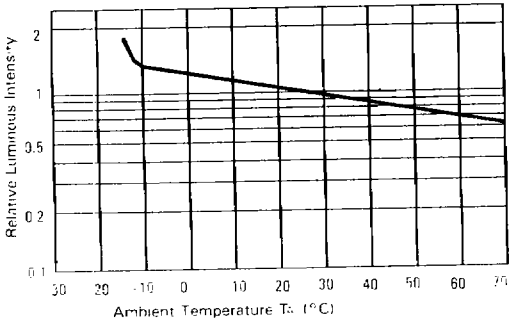


FIG 5 LUMINOUS INTENSITY VS AMBIENT TEMPERATURE

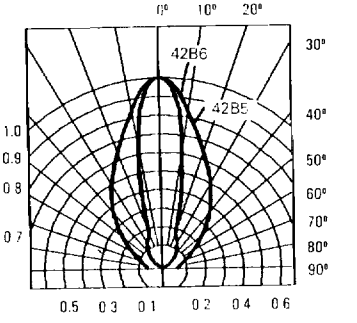


FIG 6 SPATIAL DISTRIBUTION

ELECTRICAL/OPTICAL CHARACTERISTICS AND CURVES AT $T_A = 25^\circ C$

PARAMETER	SYMBOL	PART NO. LTL—	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Luminous Intensity	Iv	353BJ 353BK	0.7 5.6	2.5 19		mcd	I_F=20 mA Note 1
Viewing Angle	2θ 1/2	353BJ 353BK		40 12		deg	Note 2 (FIG 6)
Peak Emission Wavelength	λ PEAK			470		nm	Measurement @Peak (FIG.1)
Spectral Line Half Width	Δ λ			70		nm	
Forward Voltage	V_F		2.8	3.0	3.5	V	I_F=20 mA
Reverse Current	I_R				100	μA	V_R=5V
Capacitance	C			150		PF	V_F=0 f=1MHZ

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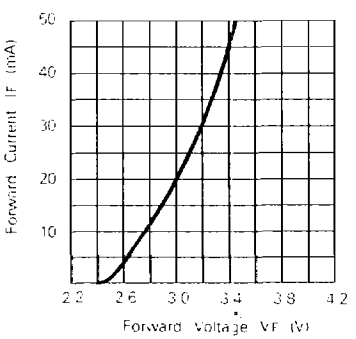

FIG 2 FORWARD CURRENT VS FORWARD VOLTAGE

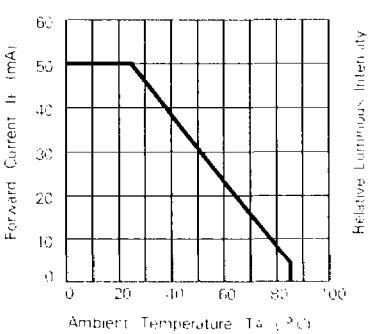

FIG 3 FORWARD CURRENT DERATING CURVE

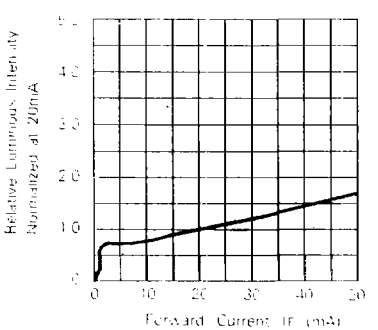

FIG 4 RELATIVE LUMINOUS INTENSITY VS FORWARD CURRENT

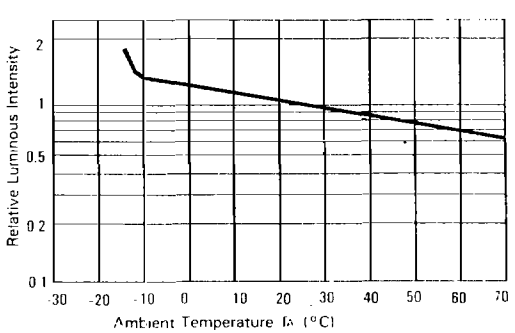

FIG 5 LUMINOUS INTENSITY VS AMBIENT TEMPERATURE

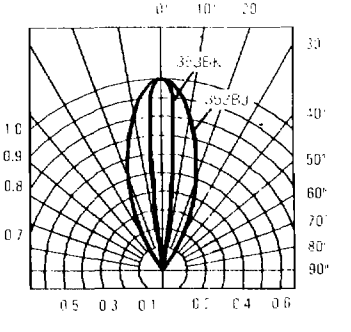

FIG 6 SPATIAL DISTRIBUTION

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