Kingbright

T-1 3/4 (5mm) SOLID STATE LAMP

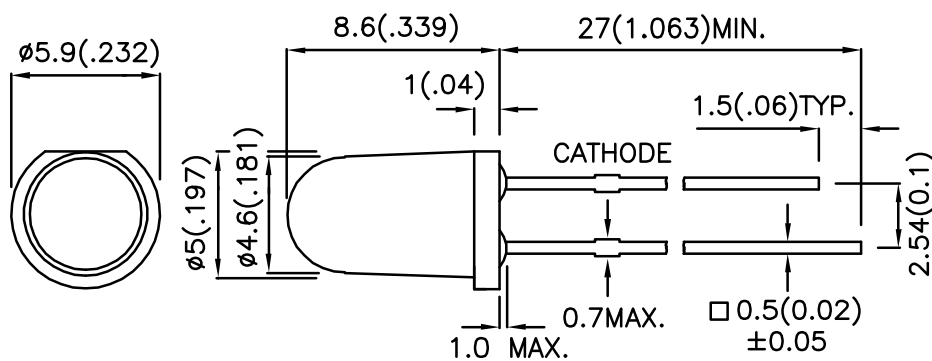L-1513GT   GREEN

Features

- LOW POWER CONSUMPTION.
- VERSATILE MOUNTING ON P.C. BOARD OR PANEL.
- T-1 3/4 DIAMETER PACKAGE, TAPERED TYPE.
- RELIABLE AND RUGGED.
- RoHS COMPLIANT.

Description

The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

Package Dimensions

ø5.9(.232)

8.6(.339)   27(1.063)MIN.

1(.04)

1.5(.06)TYP.

ø5(.197)

ø4.6(.181)

CATHODE

2.54(0.1)

0.7MAX.

□ 0.5(0.02)
±0.05

1.0 MAX.

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

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Selection Guide

| Part No. | Dice | Lens Type | Iv (mcd) @ 10mA | | Viewing Angle |
			Min.	Typ.	2 θ 1/2
L-1513GT	GREEN (GaP)	GREEN TRANSPARENT	18	50	20°

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
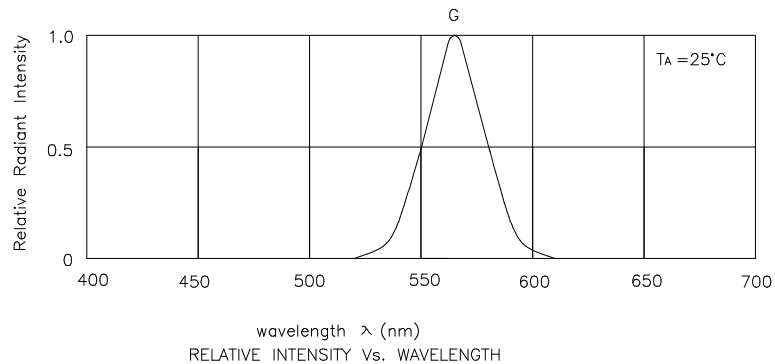
Electrical / Optical Characteristics at T$_A$=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Green	565		nm	I$_F$=20mA
λD	Dominant Wavelength	Green	568		nm	I$_F$=20mA
Δλ1/2	Spectral Line Half-width	Green	30		nm	I$_F$=20mA
C	Capacitance	Green	15		pF	V$_F$=0V;f=1MHz
V$_F$	Forward Voltage	Green	2.2	2.5	V	I$_F$=20mA
I$_R$	Reverse Current	Green		10	uA	V$_R$= 5V

Absolute Maximum Ratings at T$_A$=25°C

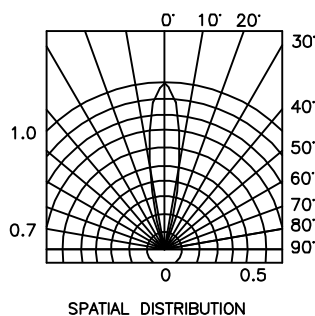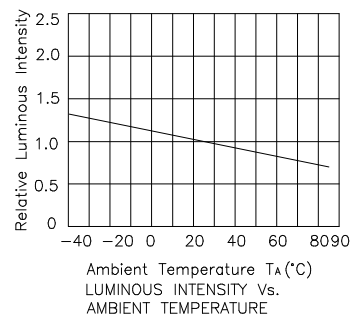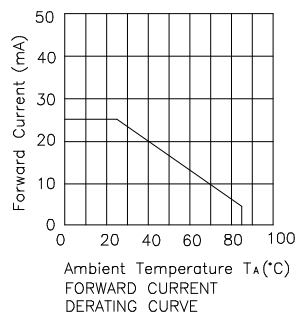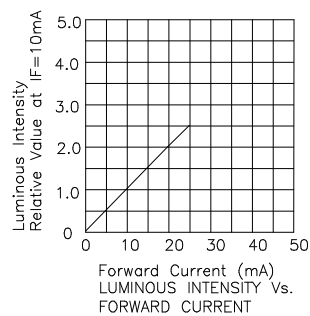| Parameter	Green	Units
Power dissipation	105	mW
DC Forward Current	25	mA
Peak Forward Current [1]	140	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

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G

Relative Radiant Intensity

1.0

0.5

0

$T_A = 25°C$

400   450   500   550   600   650   700

wavelength λ (nm)
RELATIVE INTENSITY Vs. WAVELENGTH

Green   L-1513GT

Forward Current (mA)

50
40
30
20
10
0

1.7 1.9 2.1 2.3 2.5 2.7

Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE

Luminous Intensity
Relative Value at IF=10mA

5.0
4.0
3.0
2.0
1.0
0

0   10   20   30   40   50

Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

Forward Current (mA)

50
40
30
20
10
0

0   20   40   60   80   100

Ambient Temperature T_A(°C)
FORWARD CURRENT
DERATING CURVE

Relative Luminous Intensity

2.5
2.0
1.5
1.0
0.5
0

−40 −20   0   20   40   60   8090

Ambient Temperature T_A(°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

0°   10°   20°
30°
40°
50°
60°
70°
80°
90°

1.0

0.7

0   0.5

SPATIAL DISTRIBUTION

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength),

the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm

2. Luminous Intensity: +/-15%

3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.