Features

- 5mm Tricolor Through hole
- 4 leads, 8.65mm lens height
- Common Cathode
- White diffused lens
- Special packaging available upon request
- High reliability

Description

The INL-5TB4URGB25 is Tricolor, 4 leads and through-hole lamp. It is a 5mm epoxy type LED which can be used in various applications.

Applications

- Consumer Electronics
- Variable Message Signs (VMS)
- Automobile After Market
- Industrial Equipment
- Advertising Signs

Package Dimensions in mm

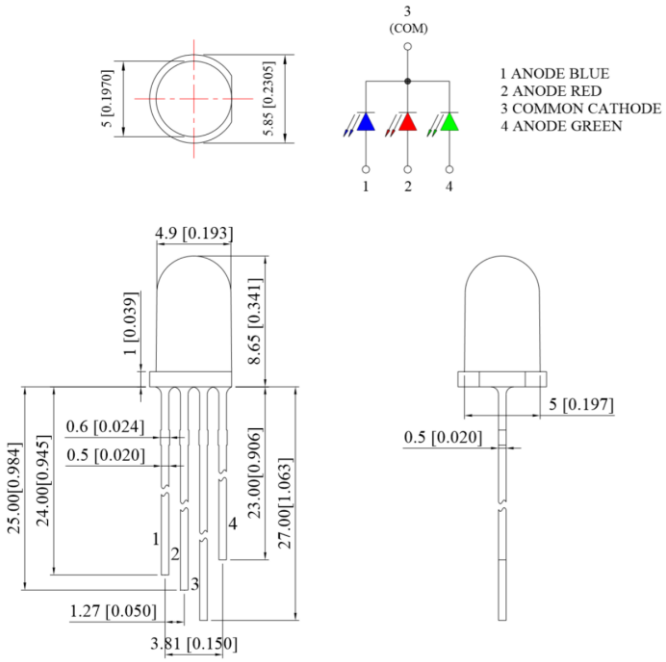


Figure 1. INL-5TB4URGB25 Package Dimensions

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm (.010〃) unless otherwise noted.
3. Protruded resin under flange is 1.00mm (0.39”) max.

Absolute Maximum Rating at 25°C (Note 1)

Product	Emission Color	Pd (mW)	IF (mA)	IFP* (mA)	VR (V)	TOP (°C)	TST (°C)
INL-5TB4URGB25	Red	60	25	100	5	-40°C ~+85°C	-40°C ~+100°C
	Green	90					
	Blue	90					

Notes
1. Condition for IFP is pulse of 1/10 duty and 0.1msec width

Electrical Characteristics T_A = 25℃ (Note 1)

Product	Emission Color	IF(mA)	VF(V)		λ (nm)			Viewing Angle	I*V(mcd)	
			min	max	λ D	λ P	△λ	2θ 1/2	min	typ.
INL-5TB4URGB25	Red	20	1.6	2.4	624	632	20	25	1600	3200
	Green	20	2.6	3.6	525	520	20		2000	4000
	Blue	20	2.6	3.6	470	468	25		1000	2000

Notes1. Performance guaranteed only under conditions listed in above tables.

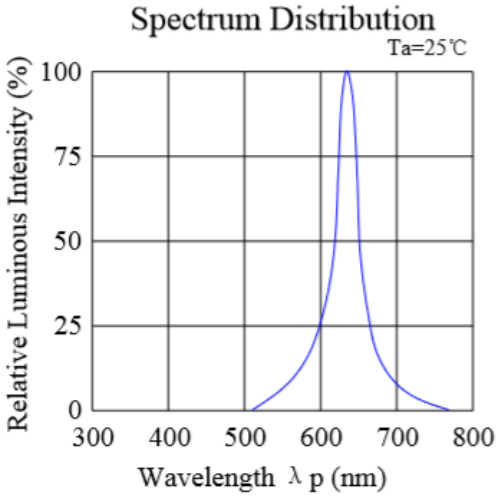
ESD Precaution

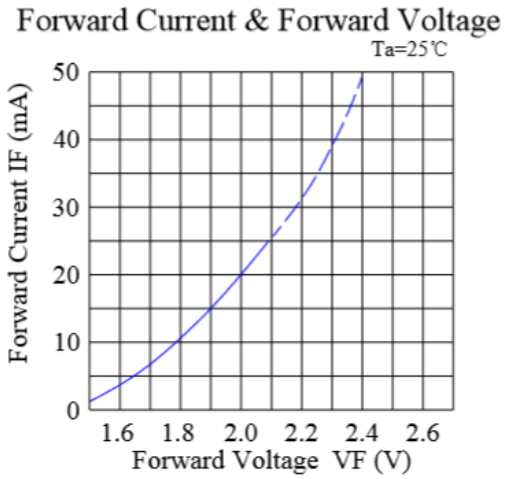
ATTENTION: Electrostatic Discharge (ESD) protection

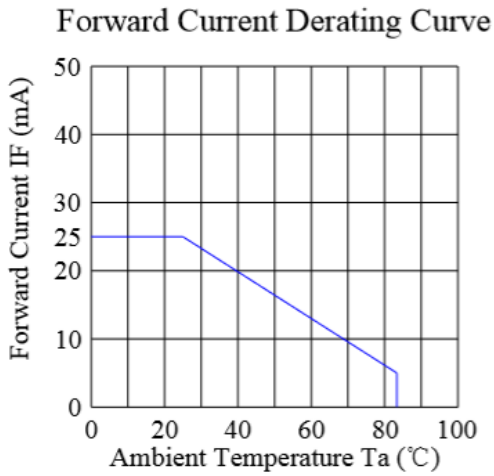
The symbol above denotes that ESD precaution is needed. ESD protection for GaP and AlGaAs based chips is necessary even though they are relatively safe in the presence of low static-electric discharge. Parts built with AlInGaP, GaN, or/and InGaN based chips are STATIC SENSITIVE devices. ESD precaution must be taken during design and assembly.
If manual work or processing is needed, please ensure the device is adequately protected from ESD during the process.

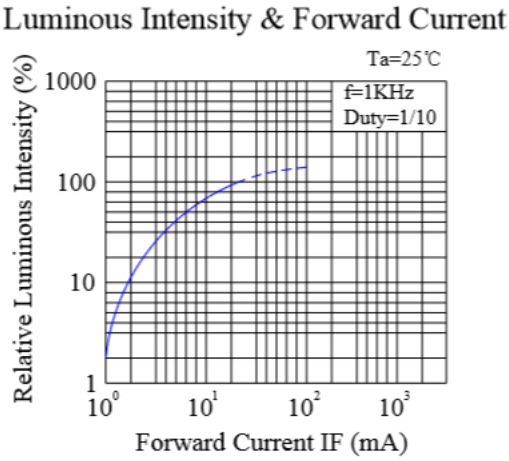
Please be advised that normal static precautions should be taken in the handling and assembly of this device to prevent damage or degradation which may be induced by electrostatic discharge (ESD).

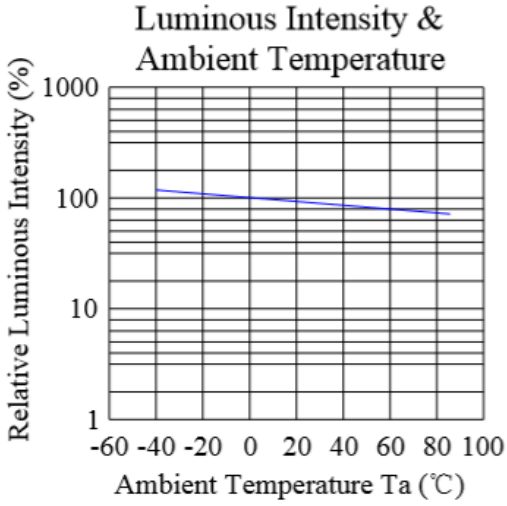
Typical Characteristic Curves-Red





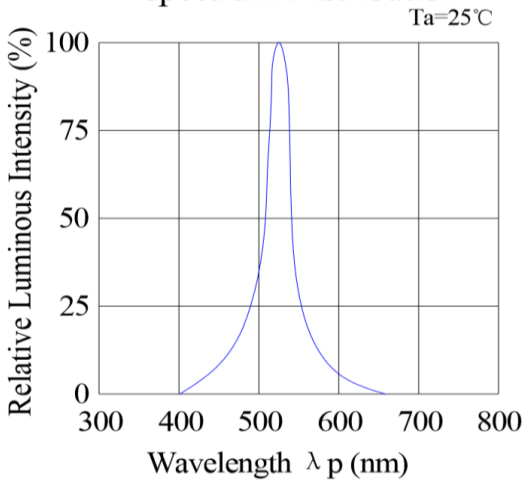




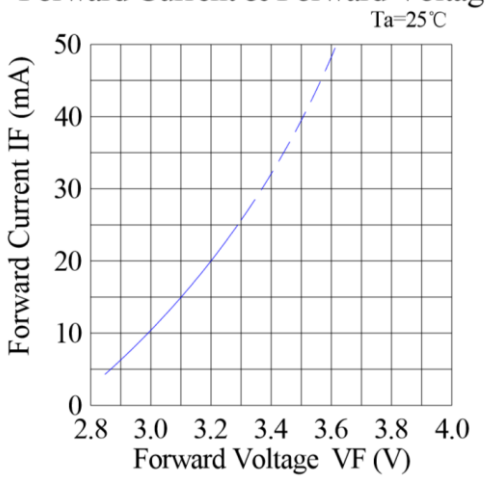


Typical Characteristic Curves-Green

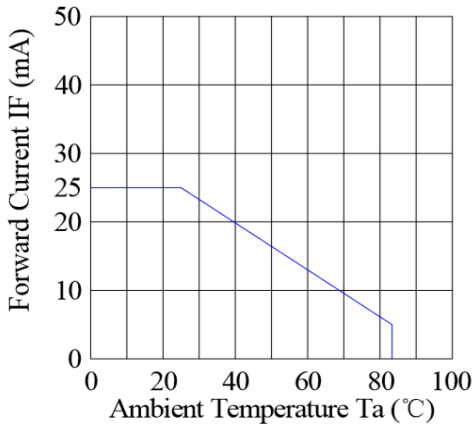
Spectrum Distribution



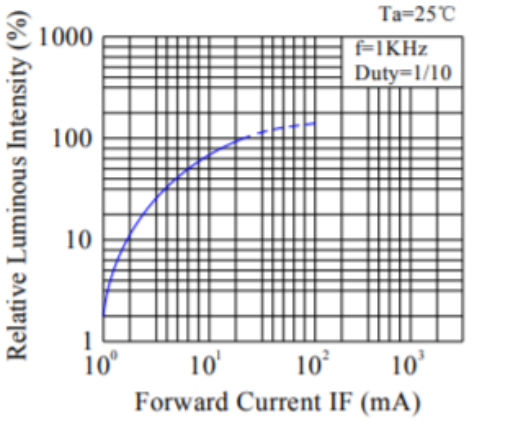
Forward Current & Forward Voltage



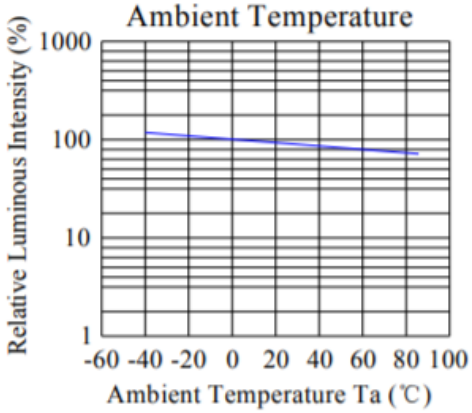
Forward Current Derating Curve



Luminous Intensity & Forward Current

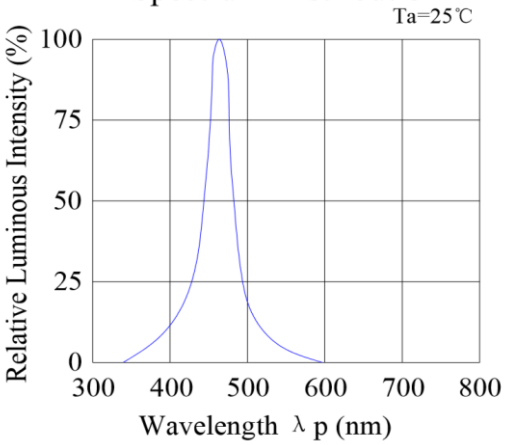


Luminous Intensity & Ambient Temperature

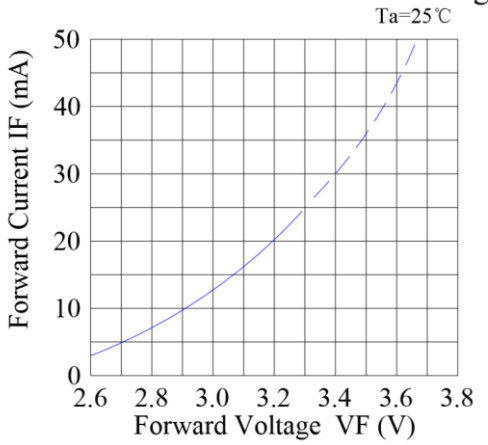


Typical Characteristic Curves-Blue

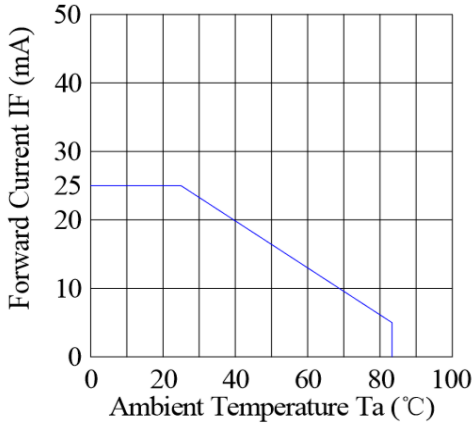
Spectrum Distribution



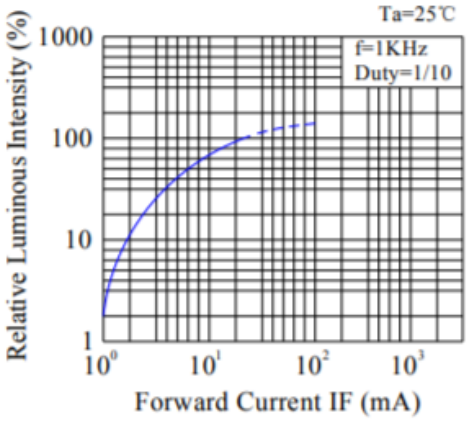
Forward Current & Forward Voltage



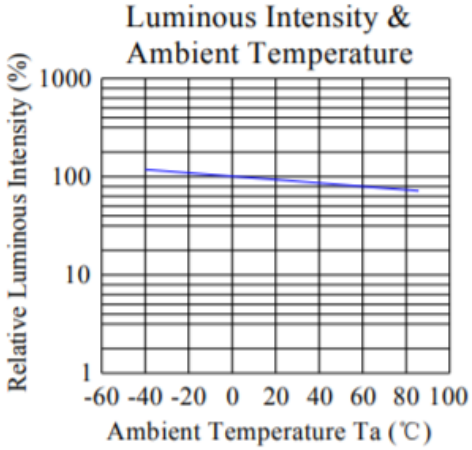
Forward Current Derating Curve



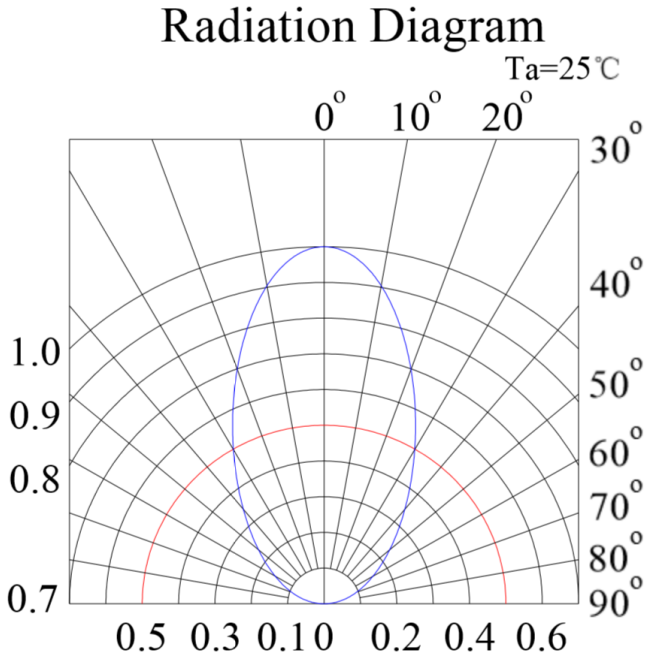
Luminous Intensity & Forward Current



Luminous Intensity & Ambient Temperature



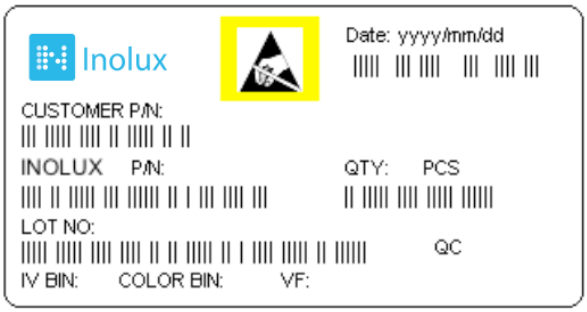
Typical Characteristic Curves – Radiation Pattern



Ordering Information

Product	Emission Color	Test Current I_F (mA)	Luminous Intensity I_V (mcd) (Typ.)	Forward Voltage V_F (V) (Typ.)	Orderable Part Number
INL-5TB4URGB25	Red	20	3200	2.0	INL-5TB4URGB25
	Green	20	4000	3.2	
	Blue	20	2000	3.2	

Label Specifications



Inolux P/N:

I	N	L	-	5	TB	4	U	RGB	25	-	X	X	X	X
				Material		Lead Number	Lens	Color	View Angle		Customized Stamp-off			
Inolux Through Hole Lamp				5TB = Standard 5mm bullet 8.65mm three chips		4 = 4 leads	U = Diffused Lens	R = 632nm G = 520nm B = 468nm	25 = 25 deg.					

Lot No.:

Z	2	0	1	7	01	24	001
Internal Tracker	Year (2017, 2018, …..)				Month	Date	Serial

Reliability

Item	Frequency/ lots/ samples/ failures	Standards Reference	Conditions
Precondition	For all reliability monitoring tests according to JEDEC Level 2	J-STD-020	1.) Baking at 85°C for 24hrs 2.) Moisture storage at 85°C/ 60% R.H. for 168hrs
Solderability	1Q/ 1/ 22/ 0	JESD22-B102-B And CNS-5068	Accelerated aging 155°C/ 24hrs Tinning speed: 2.5+0.5cm/s Tinning: A: 215°C/ 3+1s or B: 260°C/ 10+1s
Resistance to soldering heat		CNS-5067	Dipping soldering terminal only Soldering bath temperature A: 260+/-5°C; 10+/-1s B: 350+/-10°C; 3+/-0.5s
Operating life test	1Q/ 1/ 40/ 0	CNS-11829	1.) Precondition: 85°C baking for 24hrs 85°C/ 60%R.H. for 168hrs 2.) Tamb25°C; IF=20mA; duration 1000hrs
High humidity, high temperature bias	1Q/ 1/ 45/ 0	JESD-A101-B	Tamb: 85°C Humidity: 85% R.H., IF=5mA Duration: 1000hrs
High temperature bias	1Q/ 1/ 20	IN specs.	Tamb: 55°C IF=20mA Duration: 1000hrs
Pulse life test	1Q/ 1/ 40/ 0		Tamb25°C, If=20mA,, Ip=100mA, Duty cycle=0.125 (tp=125 μs,T=1sec) Duration 500hrs)
Temperature cycle	1Q/ 1/ 76/ 0	JESD-A104-A IEC 68-2-14, Nb	A cycle: -40 degree C 15min; +85 degree C 15min Thermal steady within 5 min.. 300 cycles 2 chamber/ Air-to-air type
High humidity storage test	1Q/ 1/ 40/ 0	CNS-6117	60+3°C 90+5/-10% R.H. for 500hrs
High temperature storage test	1Q/ 1/ 40/ 0	CNS-554	100+10°C for 500hrs
Low temperature storage test	1Q/ 1/ 40/ 0	CNS-6118	-40+5°C for 500hrs

Revision History

Changes since last revision	Page	Version No.	Revision Date
Initial Release		1.0	07-15-2019

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.