3mm Dome Power LED

Piranha

Features

- High flux output
- Low profile
- Low thermal resistance
- Design for high current operation
- Packaged in Tubes for use with automatic insertion equipment

Descriptions

- This revolutionary package design allows the light designer to reduce the number of LEDs required and provide a more uniform and unique illuminated appearance than with other LED solutions. This is possible through the efficient optical package design and high-currentcapabilities.
- The low profile package can be easily coupled with reflectors or lenses to efficiently distribute light and provide the desired light appearance.

Applications

- Automotive Exterior Lighting
- Electronic Signs and Signals
- Channel Letter
- Special Lighting application

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TLN-B1W3-3001	GaN	Super Blue	Water Clear

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	5	V
Continuous Forward Current	I_F	30	mA
Power Dissipation	P_d	120	mW
Soldering Temperature (Note.1)	T_{sol}	260 ± 5	°C
Operating Temperature	T_{opr}	-20 ~ +85	°C
Storage Temperature	T_{stg}	-30 ~ +100	°C

Note 1: Soldering time ≤ 5 seconds

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Flux	**Φv**	250	400	-----	mlm	I_F =20mA
Viewing Angle	**2θ1/2**	-----	60	-----	deg	
Peak wavelength	**λp**	-----	475	-----	nm	
Dominant wavelength	**λd**	-----	470	-----	nm	
Spectrum Radiation Bandwidth	**Δλ**	-----	35	-----	nm	
Forward Voltage	**V_F**	3.0	3.5	4.0	V	
Reverse Current	**I_R**	-----	-----	10	μA	V_R=5V
Recommend Operating Current	**$I_{F(Rec)}$**	-----	-----	20	mA	
DC Forward Current	**$I_{F(mA)}$**	-----	-----	30	mA	

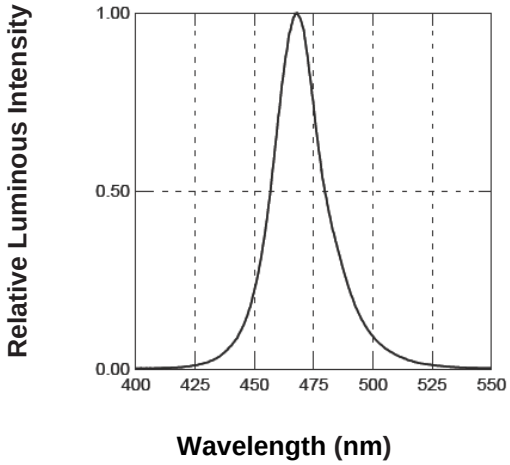
Notes: Tolerance of Luminous Flux: ±15%

Tolerance of Forward Voltage: ±0.1V

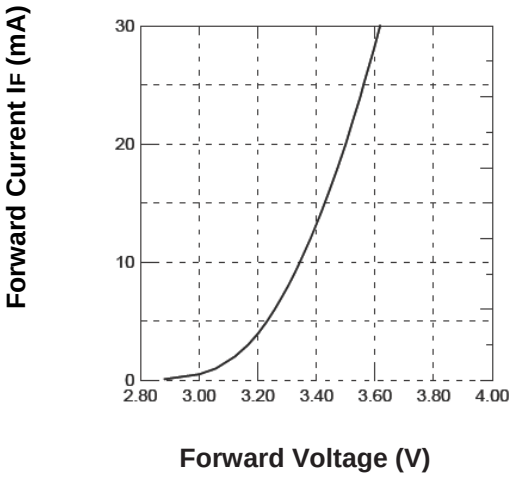
Tolerance of Dominant Wavelength ±1.0nm

Typical Electro-Optical Characteristics Curves (Ta=25°C)

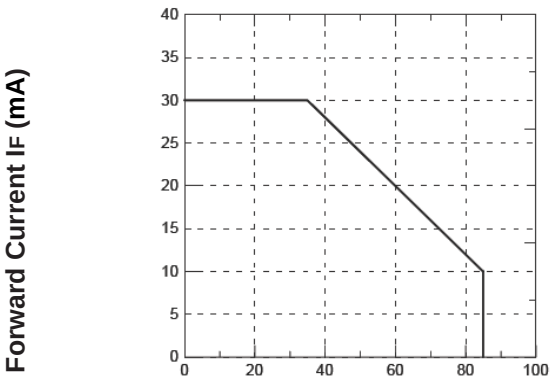
Relative Intensity vs. Wavelength



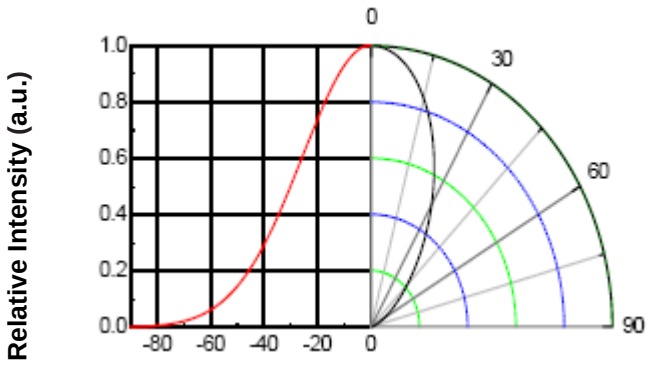
Forward Current vs. Forward Voltage



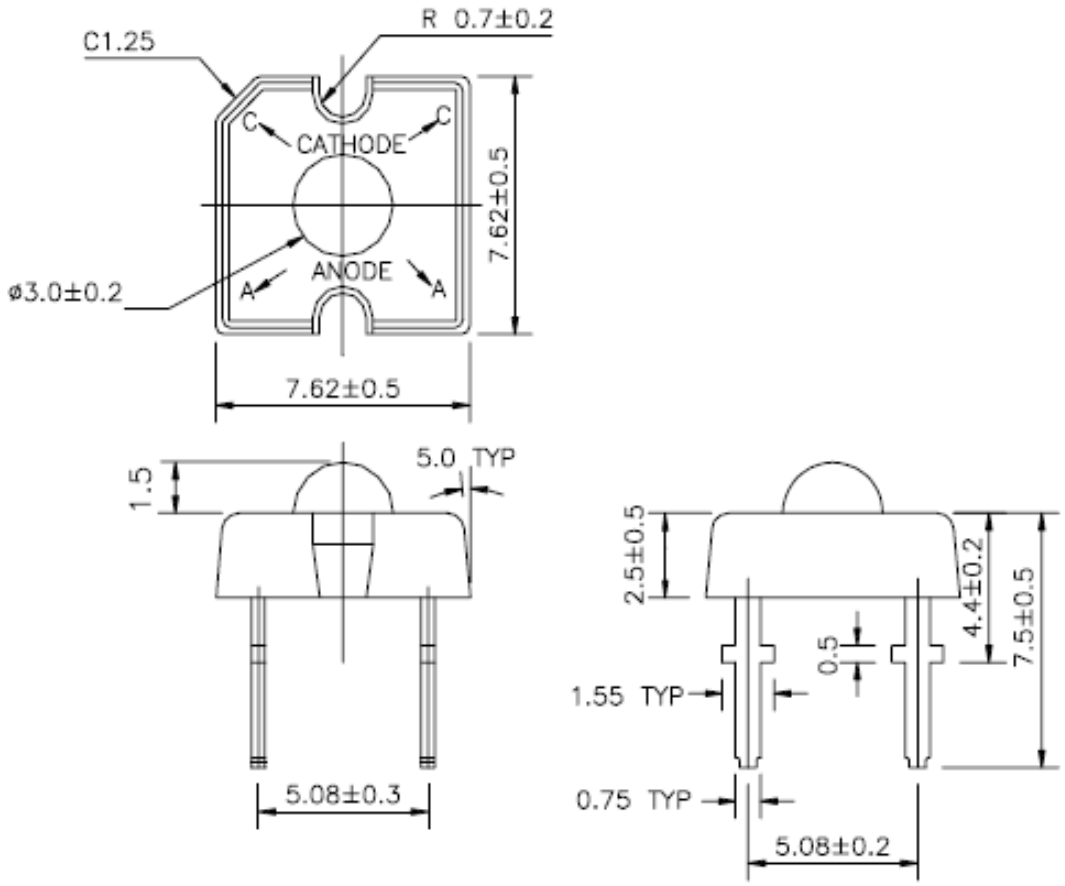
Forward Current vs. Ambient Temp



Relative Intensity vs. Displacement Angle



Package Dimensions (In mm)



Notes:
1. All dimensions are in millimeters, and tolerance is 0.25mm without special declared.
2. An epoxy meniscus may extend about 1.5mm (0.059") down the lead.

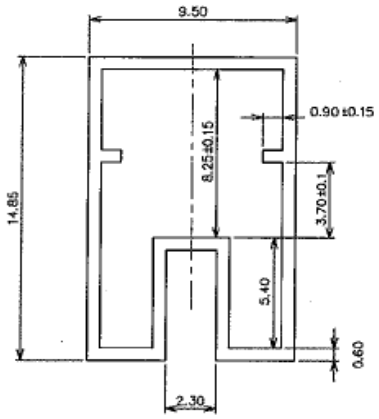
Packing Information

Packing Type	PCS per Tube	PCS Per Inner Box	PCS Per Carton
Tube	60	1,200	14,400

Packing Specification

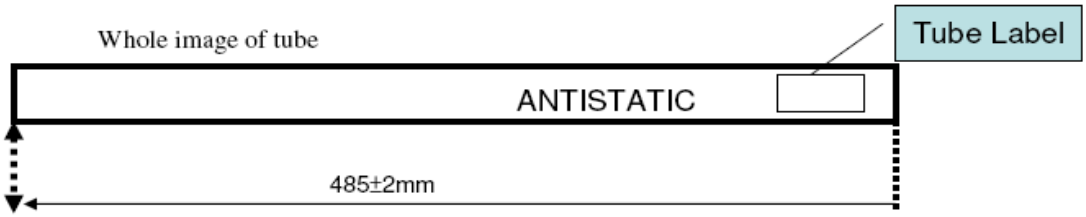
1. Tube

Cross section image of tube

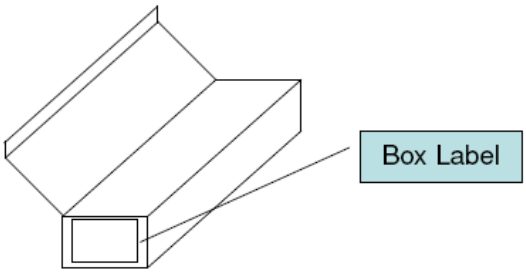


Unit: mm

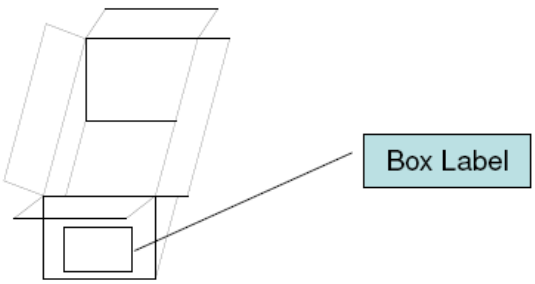
Whole image of tube



2. Inner Box

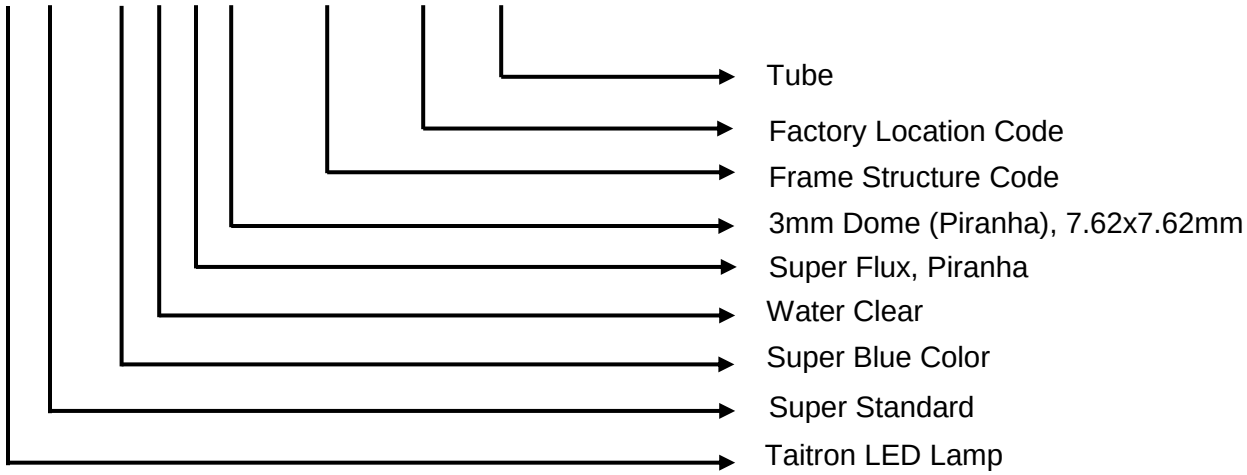


3. Carton (out box)



Ordering Information

TL N – B 1 W 3 – 3001 – 92 – C



Rank Combinations

Bin Range of Luminous Flux

Bin Code	Min.	Max.	Unit	Condition
T	250	500	mlm	I_F=20 mA
U	400	800		
V	630	1250		
W	1000	2000		

Notes: Tolerance of Luminous Flux: ±15%

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