LITEON

GaAlAs T-1 3/4 Standard 5 ϕ Infrared Emitting Diode

LTE-4238/LTE-4238C/LTE-5238A/LTE-5238AC

Features

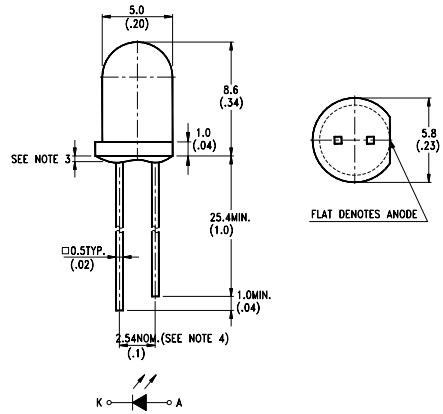
- Selected to specific on-line intensity and radiant intensity ranges.
- High power out put.
- Mechanically and spectrally matched to the LTR-3208 series of phototransistor.
- Wavelength is 880nm.

Description

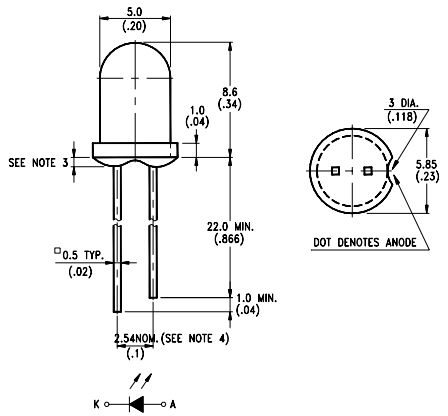
The LTE-4238 series and LTE-5238A series are high intensity Gallium Aluminum Arsenide infrared emitting diodes mounted in clear plastic end looking packages. Gallium Aluminum Arsenide features a significant increase in the radiated output of Gallium Arsenide at the same forward current. Also with a wavelength centered at 880nanometers it more closely of silicon phototransistor.

Package Dimensions

LTE-4238/LTE-4238C



LTE-5238A/LTE-5238AC



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm$ 0.25mm (.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.

Absolute Maximum Ratings at Ta =25℃

Parameter	Maximum Rating	Unit
Power Dissipation	150	mW
Peak Forward Current(300pps, 10 μs pulse)	2	A
Continuous Forward Current	100	mA
Reverse Voltage	5	V
Operating Temperature Range	-40℃ to +85℃	
Storage Temperature Range	-55℃ to +100℃	
Lead Soldering Temperature [1.6mm (.063 in.) from body]	260℃ for 5 Seconds	

Electrical Optical Characteristics at Ta=25℃

Parameter	Symbol	Part No.	Min.	Typ.	Max.	Unit	Test Condition
*Aperture Radiant Incidence	Ee	LTE-4238	0.80	1.4		mW/cm²	IF=20mA
		LTE-4238C					
		LTE-5238A	0.08	1.0			
		LTE-5238AC					
Radiant Intensity	Ie	LTE-4238	6.0	10.5		mW/sr	IF=20mA
		LTE-4238C					
		LTE-5238A	6.0	7.5			
		LTE-5238AC					
Peak Emission Wavelength	λ Peak			880		nm	IF=20mA
Spectral Line Half-Width	Δλ			50		nm	IF=20mA
Forward Voltage	VF			1.3	1.8	V	IF=20mA
Reverse Current	IR				100	μA	VR=5V
View Angle (See Fig. 6)	2θ 1/2	LTE-4238		20		deg	
		LTE-4238C					
		LTE-5238A		40			
		LTE-5238AC					

Note: *Ee is a measurement of the average radiant incidence upon a sensing area 1cm² in perpendicular to and centered on the mechanical axis of the lens and 26.8mm from lens.

Typical Electrical/Optical Characteristic Curves
(25℃ Ambient Temperature Unless Otherwise Noted)

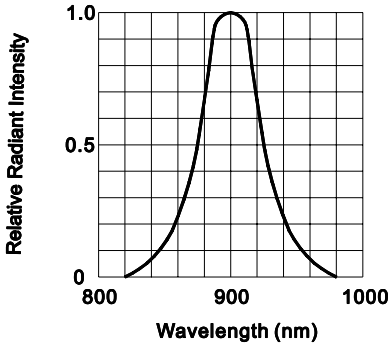


FIG.1 SPECTRAL DISTRIBUTION

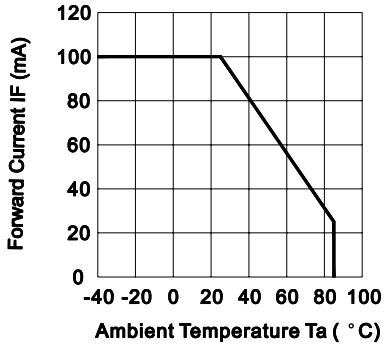


FIG.2 FORWARD CURRENT VS. AMBIENT TEMPERATURE

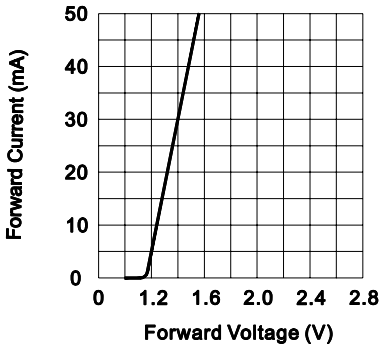


FIG.3 FORWARD CURRENT VS. FORWARD VOLTAGE

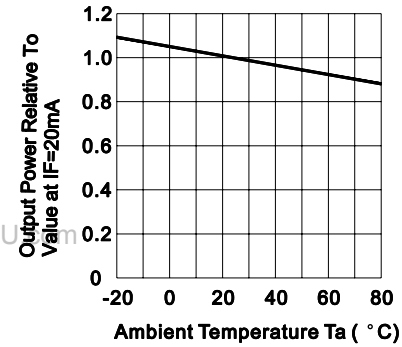


FIG.4 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

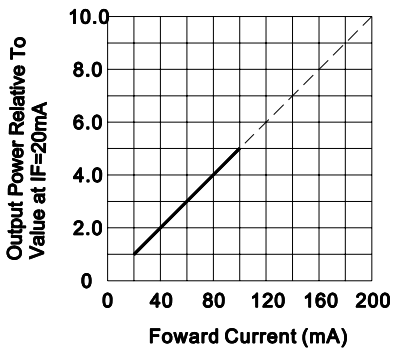


FIG.5 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

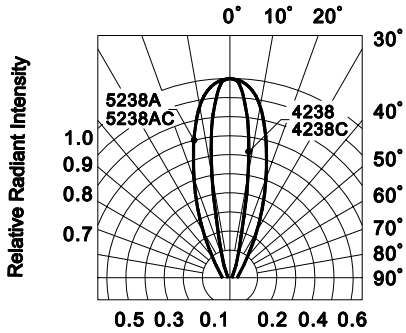


FIG.6 RADIATION DIAGRAM