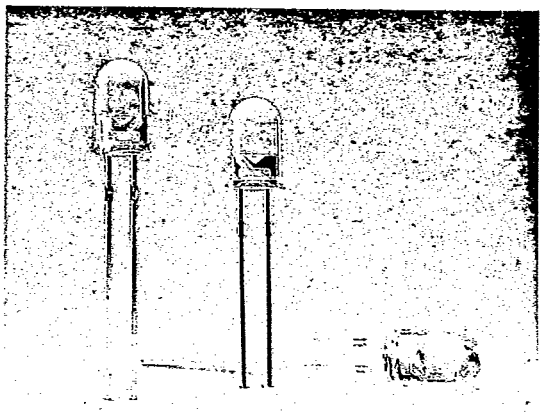
LITE-ON LED SPECIALIST

GaAlAs T-1¾ MODIFIED 5ϕ INFRARED EMITTING DIODE

LTE-4238/4238C

FEATURES

- SELECTED TO SPECIFIC ON-LONE INTENSITY RADIANT INTENSITY RANGES.
- HIGH POWER OUT PUT.
- MECHANICALLY AND SPECTRALLY MATCHED TO THE LTR-4208 SERIES OF PHOTOTRANSISTOR.



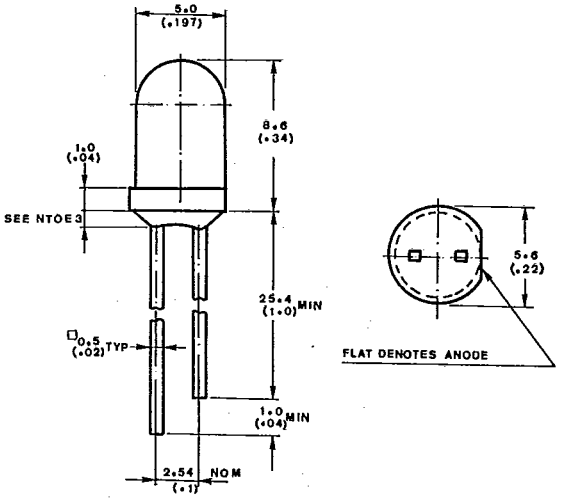
DESCRIPTION

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

The specifications are guaranteed to a cumulative .65% AQL except for the LTE-4238 series Ee(apt) are guaranteed to a 2.5% AQL.

C-smoke color lens

PACKAGE DIMENSION



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±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 T_A = 25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation	100	mW
Peak Forward Current (300pps, 1μs pulse)	3	A
Continuous Forward Current	50	mA
Reverse Voltage	5	V
Operating Temperature Range	−55°C to +100°C	
Storage Temperature Range	−55°C to +100°C	
Lead Soldering Temperature [1.6mm (0.063 in) From Body]	260°C for 5 Seconds	

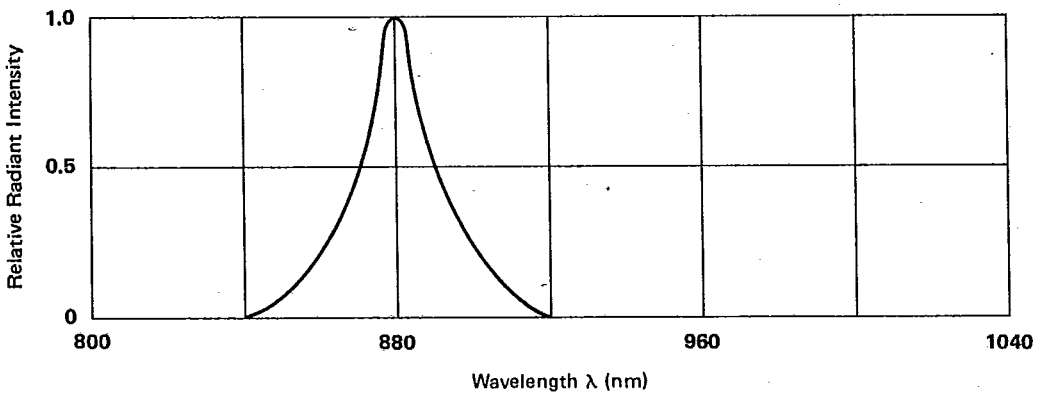


FIG. 1 SPECTRAL DISTRIBUTION

ELECTRICAL OPTICAL CHARACTERISTICS AT T_A = 25°C

PARAMETER	SYMBOL	PART NO. LTE–	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Aperture Radiant Incidence	Ee	4238	0.8	1.4		mW/cm²	I_F = 20 mA
		4238C	0.8	1.4			
Peak Emission Wavelength	λ Peak			880		nm	I_F = 20 mA
Spectral Line Half-Width	Δλ			50		nm	I_F = 20 mA
Forward Voltage	V_F			1.3	1.8	V	I_F = 20 mA
Reverse Current	I_R			0	100	μA	V_R = 5V
Viewing Angle (See fig. 5)	2θ½			20		deg.	
Output Rise Time	Tr			570		ns	$I_{F(PK)}$ =20mA PW = 10μs DC = 10%
Output Fall Time	T_f			220		ns	

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

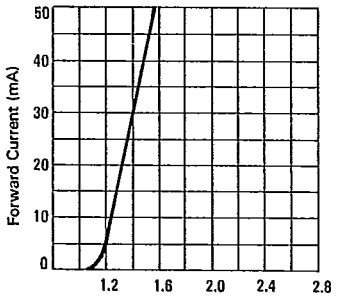


FIG. 2 FORWARD CURRENT VS. VS. FORWARD VOLTAGE

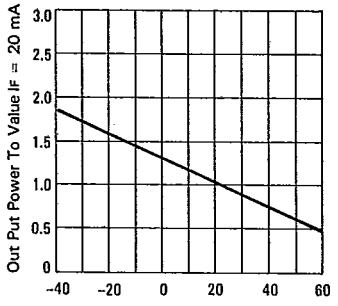


FIG. 3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

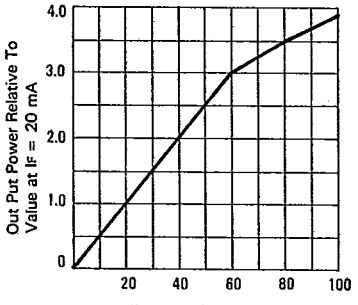


FIG. 4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

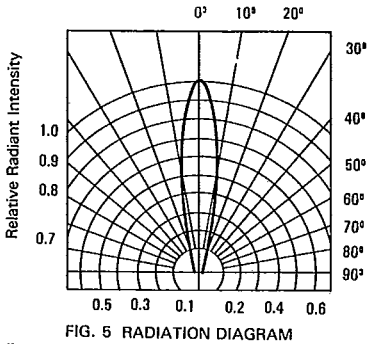


FIG. 5 RADIATION DIAGRAM