

LITEON**GaAs T-1³/₄ STANDARD 5 ϕ
INFRARED EMITTING DIODE**

LTE-4208/4208C

T-41-11

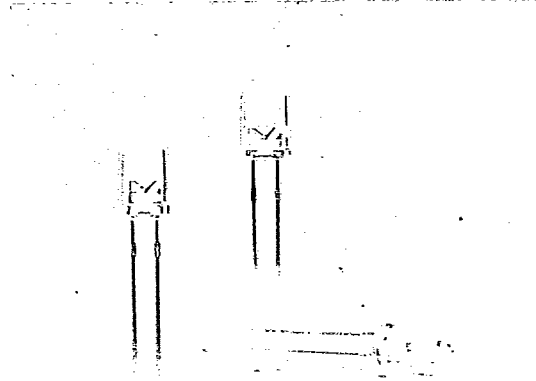
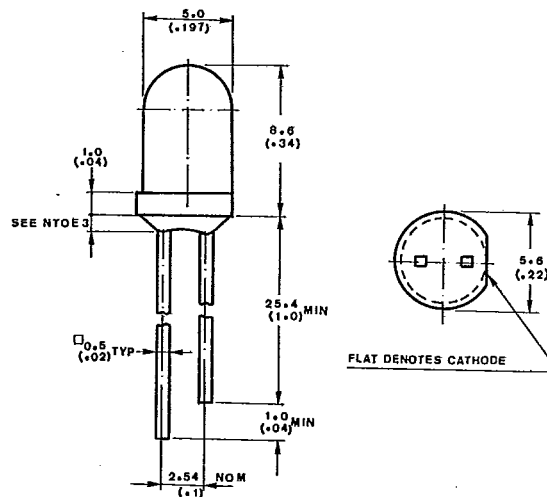
FEATURES

- SELECTED TO SPECIFIC ON-LINE INTENSITY AND RADIANT INTENSITY RANGES.
- LOW COST PLASTIC END LOOKING PACKAGE.
- MECHANICALLY AND SPECTRALLY MATCHED TO THE LTR-3208 SERIES OF PHOTOTRANSISTOR.
- THE LTE-4208 SERIES ARE MADE WITH GALLIUM ALUMINUM ARSENIDE WINDOW LAYER ON GALLIUM ARSENIDE INFRARED EMITTING DIODES.

DESCRIPTION

The LTE-4208 series are high intensity Gallium Arsenide infrared emitting diodes mounted in clear plastic end looking packages. LTE-4208 series provides a broad range of intensity selection.

All electrical parameters are 100% tested by manufacturing. The specifications are guaranteed to a cumulative .65% AQL C-smoke color lens.

**PACKAGE DIMENSIONS****NOTES:**

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.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 $T_A = 25^\circ\text{C}$

| PARAMETER | MAXIMUM RATING | UNIT |
|---|---------------------|------|
| Power Dissipation | 100 | mW |
| Peak Forward Current (300pps, 1 μ s 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 (0.063in) From Body] | 260°C for 5 Seconds | |

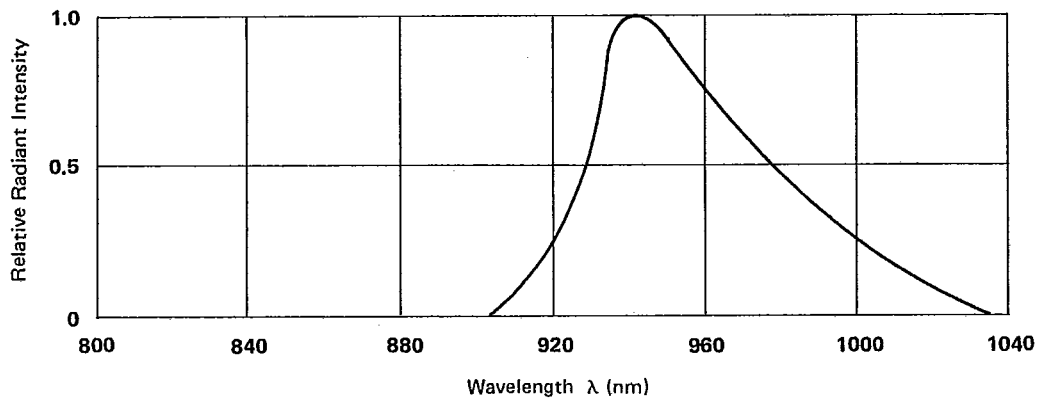


FIG. 1 SPECTRAL DISTRIBUTION



ELECTRICAL/OPTICAL CHARACTERISTICS AND CURVES AT TA = 25°C

| PARAMETER | SYMBOL | PART NO. LTE- | MIN | TYP | MAX | UNIT | TEST CONDITION |
|----------------------------|----------------|---------------|-----|-----|-----|--------------------|-----------------------|
| Aperture Radiant Incidence | E _a | 4208 | 0.5 | 1.4 | | mW/cm ² | I _F = 20mA |
| | | 4208C | 0.5 | 1.4 | | | |
| Peak Emission Wavelength | λ Peak | | | 940 | | nm | I _F = 20mA |
| Spectral Line Half-Width | Δλ | | | 50 | | nm | I _F = 20mA |
| Forward Voltage | V _F | | | 1.2 | 1.6 | V | I _F = 20mA |
| Reverse Current | I _R | | | 0 | 100 | μA | V _R = 5V |
| Viewing Angle (See fig. 5) | 2θ½ | | | 20 | | deg. | |

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

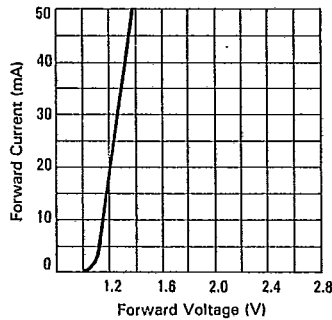


FIG. 2 FORWARD CURRENT VS. FORWARD VOLTAGE

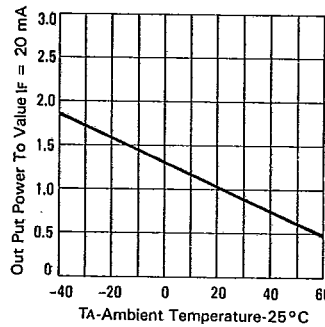


FIG. 3 RELATIVE RADIANT INTENSITY VS. AMBIENT TEMPERATURE

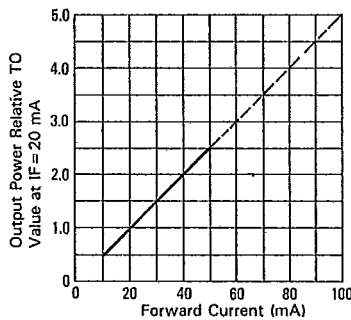


FIG. 4 RELATIVE RADIANT INTENSITY VS. FORWARD CURRENT

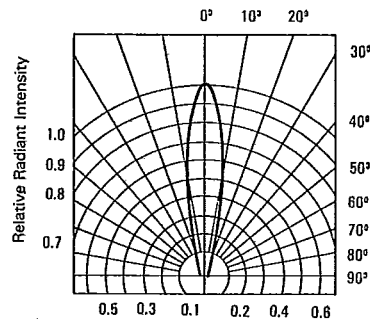


FIG. 5 RADIATION DIAGRAM

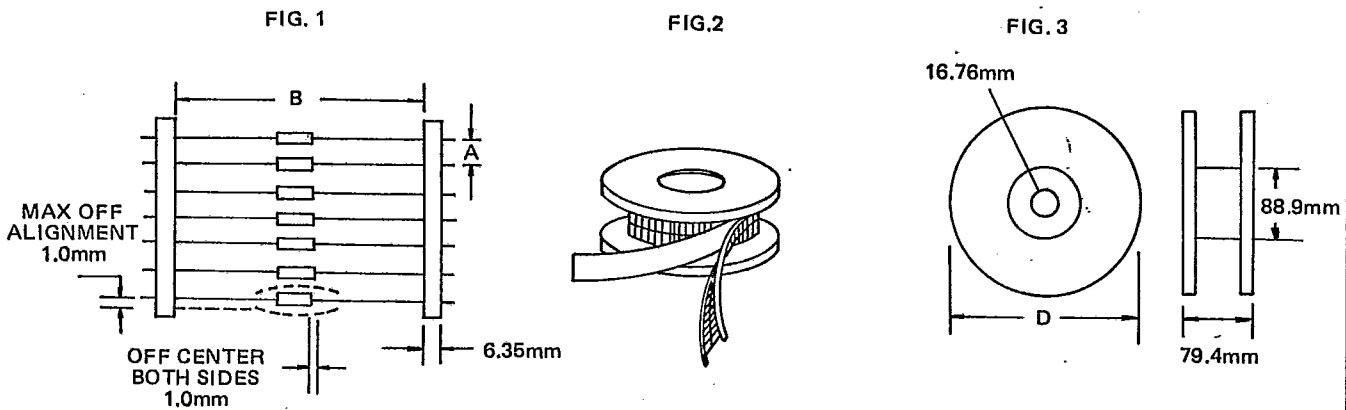
PACKAGING

T-90-20

Reel Packaging (Axial Lead Units)

| DEVICE TYPE | COMPONENT SPACE (MM) "A" | TAPE SPACE (MM) "B" | REEL DIA (MM) "D" | QUANTITY (EA) | | CARTON | |
|-----------------|--------------------------|---------------------|-------------------|---------------|--------|-----------------|-------------|
| | | | | REEL | CARTON | SIZE (MM) | WEIGHT (KG) |
| DO-41 DO-41L | 5±0.5 | 52.4±1.5 | 326~336 | 5000 | 20K | 355 x 355 x 355 | 10.5 |
| DO-201AD | 10±0.5 | 52.4±1.5 | 326~336 | 1200 | 4.8K | 355 x 355 x 355 | 9.0 |
| P6(Aleg) | 10±0.5 | 52.4±1.5 | 326~336 | 700 | 2.8K | 355 x 355 x 355 | 8.8 |

The C dimension of Fig. 3 is between 3.17m.m. and 635mm greater than the length of the component involved.

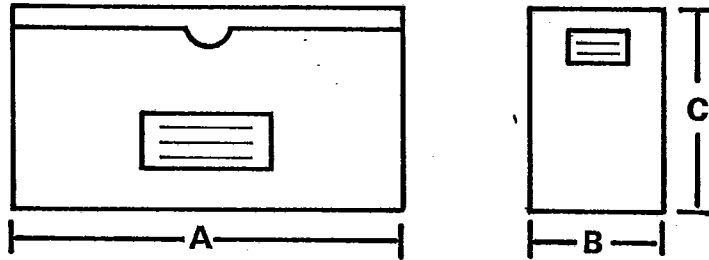


Bulk Packaging (Axial Lead Devices and Bridge Rectifiers)

| DEVICE TYPE | PACKAGING SIZE (MM) | | QUANTITY (EA) | | APPROX GROSS WEIGHT (KG) | |
|-----------------|---------------------|-----------------|---------------|--------|--------------------------|--------|
| | BOX | CARTON | BOX | CARTON | BOX | CARTON |
| DO-41 DO-41L | 196 x 84 x 20 | 450 x 210 x 250 | 1000 | 50K | 0.38 | 20 |
| DO-201AD | 305 x 93 x 59 | 355 x 355 x 355 | 1000 | 20K | 1.35 | 28 |
| P6(Aleg) | 305 x 93 x 59 | 355 x 355 x 355 | 500 | 10K | 1.2 | 24.5 |
| PBM | 357 x 125 x 60 | 530 x 360 x 340 | 1000 | 20K | 1.5 | 32.3 |
| PBDF | 495 x 155 x 145 | 500 x 325 x 305 | 5000 | 20K | 5.1 | 21.5 |
| PBP | 357 x 125 x 60 | 530 x 360 x 340 | 500 | 10K | 1.5 | 31.5 |
| PBL | 375 x 220 x 155 | 470 x 385 x 455 | 1000 | 5K | 5.7 | 30.5 |
| PBPC-6 | 357 x 125 x 60 | 560 x 360 x 340 | 250 | 5K | 1.1 | 22 |
| PBPC-8 | 357 x 125 x 60 | 560 x 360 x 340 | 250 | 5K | 1.7 | 35 |
| KBPC | 375 x 220 x 365 | 470 x 390 x 385 | 500 | 1K | 15.1 | 31.5 |
| KBPC-W | 375 x 220 x 365 | 470 x 390 x 385 | 500 | 1K | 14.5 | 30.0 |

AMMO BOX PACKAGING

BOX SIZE



Unit:m. m.

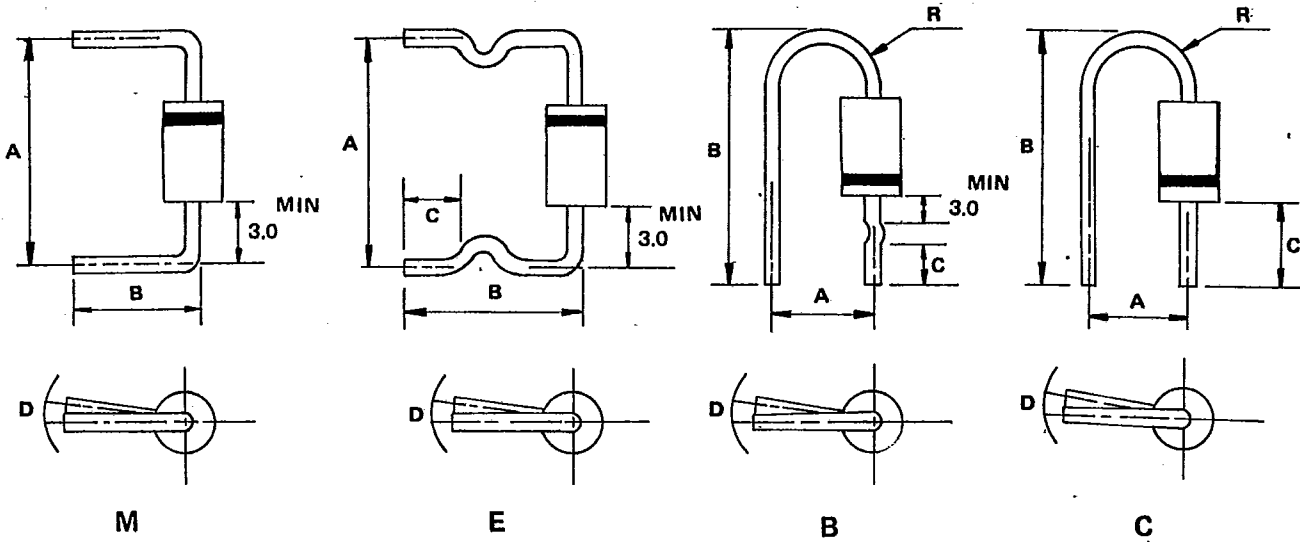
| Packaging | Products Outline | Dimension *A* | Dimension *B* | Dimension *C* | Q'ty per BOX |
|---------------------------|-----------------------------|---------------|---------------|---------------|--------------|
| 26MM Horizontal Ammo Pack | DO-41 DO-41L(0.6mm Lead) | 255 | 50 | 95 | 3K |
| | | | | | 3K |
| 52MM Horizontal Ammo Pack | DO-41and DO-41L DO 201AD | 250 | 75 | 92 | 3K |
| | | | | | 0.8K |

CARTON SIZE

Unit:m. m.

| Packaging | Products Outline | length | Width | High | Q'ty Per Carton |
|---------------------------|-----------------------------|--------|-------|------|-----------------|
| 26MM Horizontal Ammo Pack | DO-41 DO-41L(0.6mm Lead) | 330 | 310 | 268 | 42K |
| | | | | | 48K |
| 52MM Horizontal Ammo Pack | DO-41and DO-41L DO 201AD | 355 | 355 | 340 | 12K |

PREFORMED LEAD DRAWING



| Case type | Preformed type | A (mm) | | B (mm) | | C (mm) | | D (mm) | | R (mm) | |
|-----------|----------------|-----------|-----------|-----------|-----------|----------|-----------|--------|-----------|---------|-----------|
| | | range | tolerance | range | tolerance | range | tolerance | range | tolerance | range | tolerance |
| D041 | M | 9.0-20.0 | 1.0 | 8.0-22.0 | ±0.5 | - | - | 1.5 | max | - | - |
| | E | 11.0-20.0 | ±1.0 | 11.0-16.0 | ±1.0 | 4.0-5.0 | ±0.5 | 1.5 | max | - | - |
| | B | 7.5 | ±0.5 | 19.0-22.0 | ±0.5 | 7.5 | ±0.5 | 1.5 | max | 2.5-4.0 | Typ |
| | C | 4.5 | ±0.8 | 18.0-19.0 | ±0.5 | 9.0 | ±0.5 | 1.5 | max | 2.5-4.0 | Typ |
| D0201AD | M | 15.0-20.0 | ±1.0 | 8.0-22.0 | ±1.0 | - | - | 2.0 | max | - | - |
| | E | 15.0-20.0 | ±1.0 | 10.0-22.0 | ±1.0 | 3.0-15.0 | ±0.5 | 2.0 | max | - | - |
| P6(Aleg) | M | 15.0-20.0 | ±1.0 | 8.0-22.0 | ±1.0 | - | - | 2.0 | max | - | - |