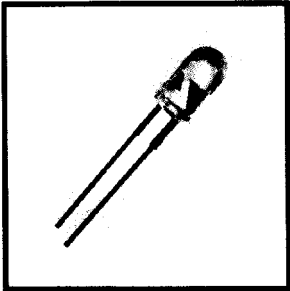


INFRA-RED EMITTING DIODE

ZME50

DESCRIPTION

THE ZME50 IS A GaAlAs INFRA-RED EMITTING DIODE MOULDED IN A CLEAR 5mm Ø PACKAGE WITH A MEDIUM WIDE BEAM, 50°, RADIATION EMISSION ANGLE. THE ZME50 IS SPECTRALLY MATCHED TO THE BPW41 SERIES PIN PHOTODIODES WHICH TOGETHER PROVIDE IDEAL COMPLEMENTS IN I.R. REMOTE CONTROL APPLICATIONS.



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C).

| PARAMETER | SYMBOL | ZME50 | UNIT |
|---|------------------|-------------|------|
| Continuous Forward Current | I _F | 100 | mA |
| Peak Pulsed Forward Current * | I _{FM} | 1 | A |
| Reverse Voltage | V _R | 6 | V |
| Power Dissipation @ T _{amb} = 25°C | P _{TOT} | 175 | mW |
| Operating And Storage Temperature Range | | -40 TO +100 | °C |
| Lead Soldering Temperature (¹ / ₁₆ " from case) | | 260 | °C |

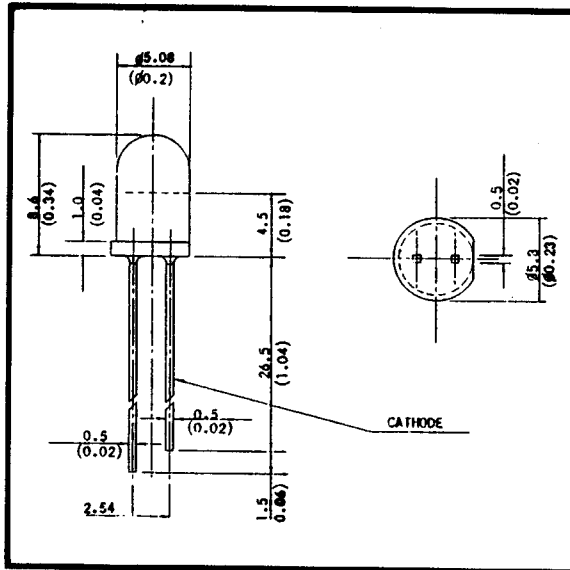
* Pulsed width = 10µS, duty Ratio = 0.01.

ZME50

CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

| PARAMETER | SYMBOL | MIN | TYP. | MAX. | UNIT | CONDITIONS. |
|--------------------|-----------------|------|----------|------|--------------------------------|--------------------|
| Radiant Power | P_O | 2.62 | 4.5 | | mW | $I_F=20\text{mA}$ |
| Forward Voltage | V_F | | 1.6 | 2.0 | V | $I_F=100\text{mA}$ |
| Reverse Current | I_R | | | 10 | μA | $V_R=5\text{V}$ |
| Switching Times | t_r t_f | | 2 1 | | μs μs | $I_F=20\text{mA}$ |
| Peak Wavelength | λ_P | | 940 | | nm | $I_F=20\text{mA}$ |
| Spectral Bandwidth | $\Delta\lambda$ | 45 | | | nm | $I_F=20\text{mA}$ |
| Half Angle | \varnothing | | ± 25 | | DEG | |

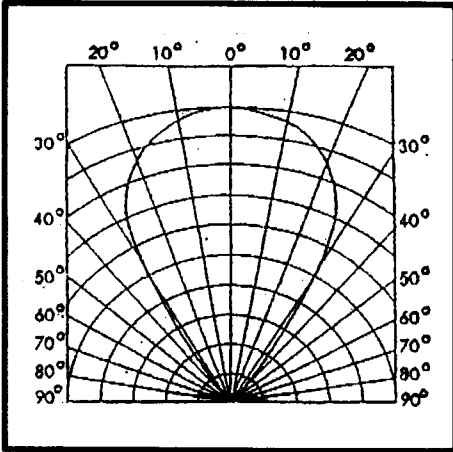
PACKAGE DETAILS



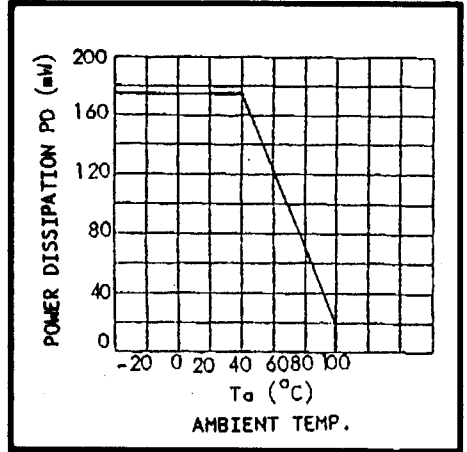
ZME50

TYPICAL CHARACTERISTICS.

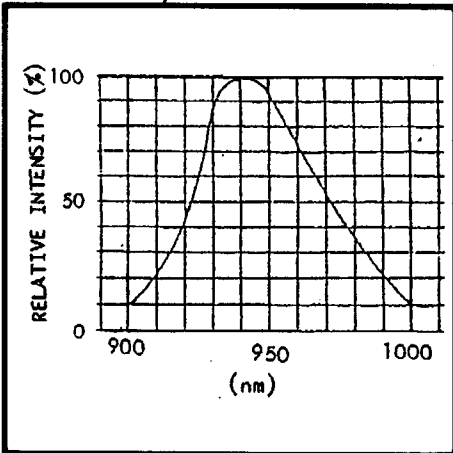
RADIATION PATTERN (TA = 25°C)



POWER DISSIPATION



RELATIVE INTENSITY VS WAVELENGTH



FORWARD CURRENT VS FORWARD VOLTAGE

