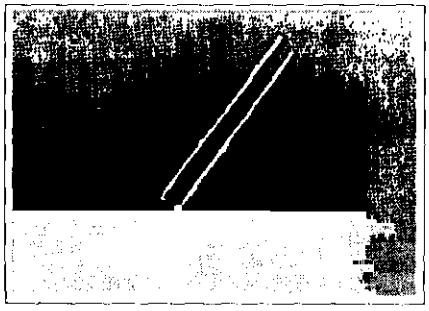
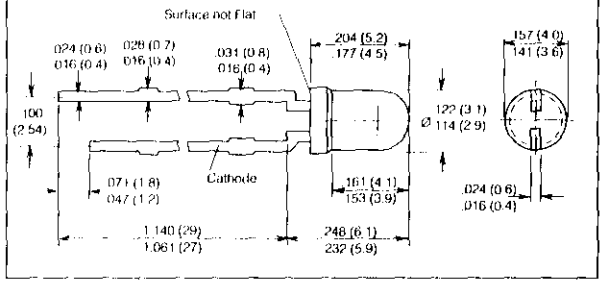
SIEMENS

DOUBLE HETERO JUNCTION LH 3344-QO
DOUBLE HETERO JUNCTION LH 3364-MO

Hyper-Red GaAlAs T1 (3mm) LED Lamp



Package Dimensions in Inches (mm)



FEATURES

- **T1 (3mm) Package**
- **Double Hetero Junction Technology**
- **Choice of Diffused Lens–LH3364 or Red Clear Lens-LH 3344**
- **High Luminous Intensity**
- **Excellent Light Efficiency for Low Current Operation**
- **IC Compatible**

DESCRIPTION

The T1 hyper-red GaAlAs LED lamps use double hetero junction material to produce very high luminous intensities. When operated at very low currents (1 mA) these lamps can produce luminous intensities comparable to standard and high efficiency LEDs that operate at 10 mA to 20 mA.

Luminous Intensity and Lens Type

Part No.	Lens Type	Luminous Intensity* I_F = 10 mA, I_V (mcd)	
		Typ.	Min.
LH 3344-QO	red clear	150	63
LH 3364-MO	red diffused	40	16

See graph numbers 1, 2G (LH 3344), 2H (LH 3364), 3A, 4B, 5A, 6A, 7A, 8A, 9A, 10A, 10B (LH3344, LH 3364) in the back of this section.

Maximum Ratings

Operating Temperature Range (T_{OP}) ..... -55°C to + 100°C
Storage Temperature Range (T_{STG}) ..... -55°C to +100°C
Junction Temperature (T_J) ..... + 100°C
Reverse Voltage (V_R) ..... 3 V
Forward Current (I_F) ..... 40 mA
Surge Current (I_{FM}) ..... 0.5 A
Power Dissipation (P_{TOT}) T_A=25°C ..... 120 mW
Thermal Resistance, Junction to Air (R_{thJA}) ..... 400 K/W

Characteristics (T_A=25°C) All values typical unless otherwise noted.

Parameter	Symbol		Unit
Peak Wavelength (I_F=20 mA)	λ_{PEAK}	660	nm
Dominant Wavelength (I_F=20 mA)	λ_{DOM}	645	nm
Spectral Bandwidth (50% $I_{REL MAX}$, I_F= 20 mA)	$\Delta\lambda$	22	nm
Viewing Angle 50% I_V			
LH3344	2 φ	25	Deg.
LH3364	2 φ	45	Deg.
Forward Voltage (I_F=10 mA)	V_F	1.75 (≤2.6)	V
Reverse Current (V_R= 3 V)	I_R	0.01 (≤10)	µA
Capacitance (V_R=0 V, f=1 MHz)	C_0	25	pF
Switching Times (I_F=100 mA, t_p=10 µs, R_L=50 Ω)			
Rise time–10% to 90%	t_R	140	ns
Fall time 90% to 10%	t_F	110	ns

* Luminous intensity ratio of one packaging unit $I_{VMAX}/I_{VMIN} \leq 2$