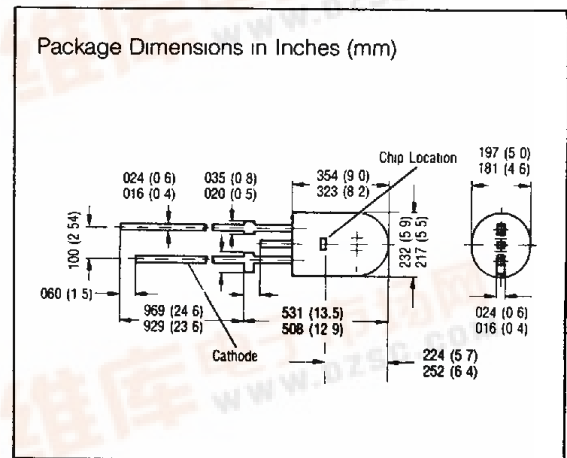
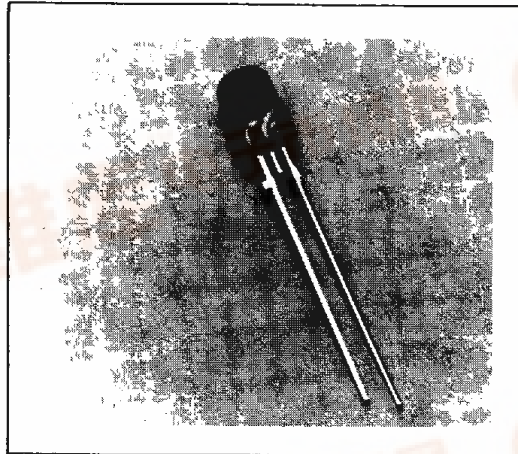


SIEMENS

LD 273
TWO CHIP
INFRARED EMITTER

T-41-11



FEATURES

- Very High Radiant Intensity
- Two Chip Device
- Grey Oval Plastic Package
- Equivalent to T1 $\frac{1}{4}$ Size
- Matches with Photodiodes SFH 205 or BP104 or Phototransistors BP103B

DESCRIPTION

The LD 273 is an infrared emitter consisting of two GaAs-IRLED chips connected in a series. This provides a very high radiant intensity of greater than 25 mW/sr at 100 mA. Radiation is emitted in the axial (0°) direction from a smoke colored oval plastic package. This device serves particularly well as a powerful emitter of increased range in remote control applications.

Mounting Instruction

In order not to damage the system when soldering in the emitting diodes, the soldering distance to the plastic package has to be dimensioned as large as possible. We recommend a minimum distance of 10 mm between package and soldering point for the usual soldering conditions (260°C/3 sec)

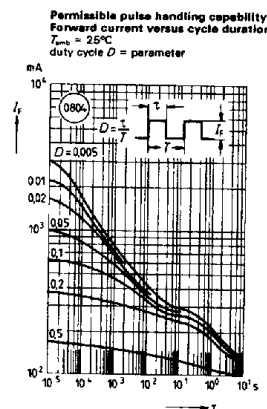
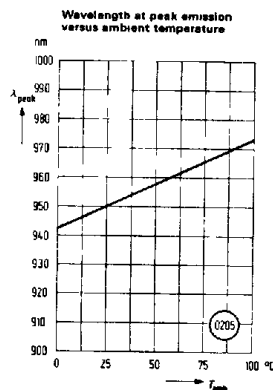
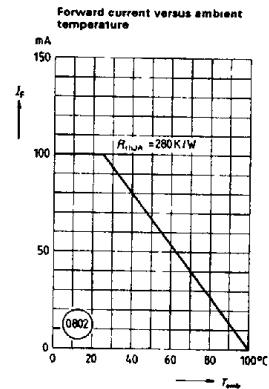
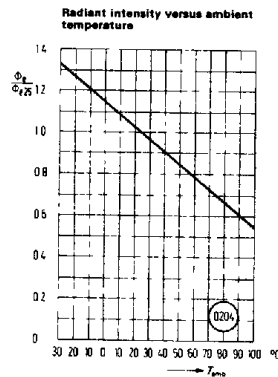
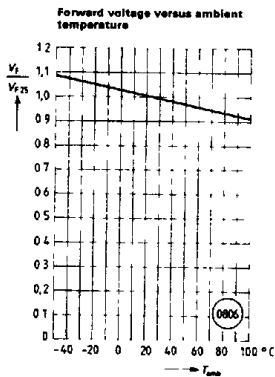
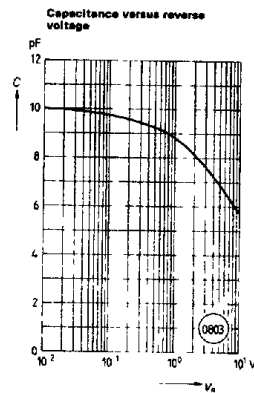
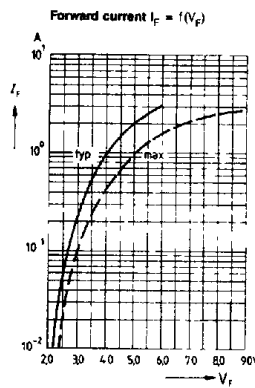
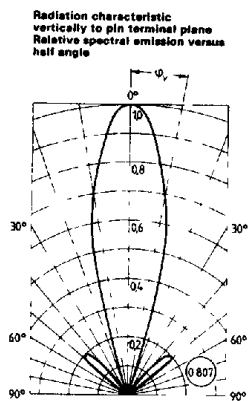
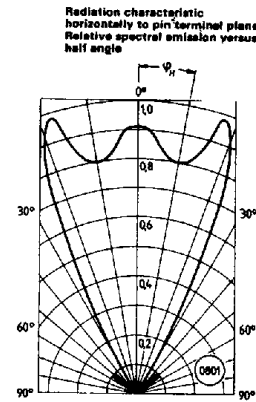
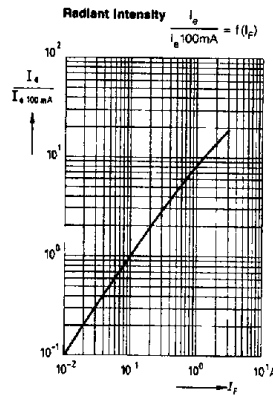
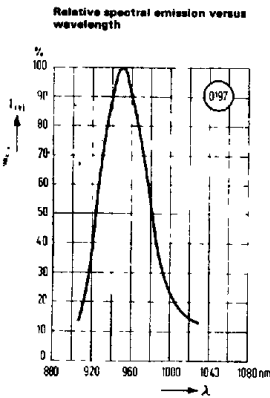
Maximum Ratings

Storage Temperature	T	-55 to +100	°C
Soldering Temperature			
(Distance from soldering joint to package ≥ 10 mm, soldering time $t \leq 3$ s)			
Junction Temperature	T_J	260	°C
Reverse Voltage	V_R	10	V
Forward Current	I_F	100	mA
Surge Current ($t = 10$ μ s, $D = 0$)	I_{FS}	3.2	A
Power Dissipation	P_{tot}	260	mW
Thermal Resistance	R_{thJamb}	280	K/W

Characteristics ($T_{amb} = 25^\circ\text{C}$)

Wavelength ($I_F = 100$ mA, $t_p = 20$ ms)	λ	950 ± 20	nm
Spectral Bandwidth ($I_F = 100$ mA, $t_p = 20$ ms)	$\Delta\lambda$	55	nm
Half Angle (Horizontal to terminal plane)	φ_H	± 25	Deg
Half Angle (Vertical to terminal plane)	φ_V	± 15	Deg
Active Area (2 die)	A	0.09	mm ²
Active Die Area per Die	L x W	0.3×0.3	mm
Distance Die Surface to Package Surface	H	4.8 to 5.4	mm
Switching Time (I_a from 10% to 90% and from 90% to 10% at $I_F = 100$ mA)	t_r, t_f	1	μ s
Capacitance ($V_R = 0$ V)	C_0	10	pF
Forward Voltage ($I_F = 100$ mA)	V_F	2.6 (≤ 3.0)	V
($I_F = 1$ A, $t_p = 100$ μ s)	V_F	3.8 (≤ 5.2)	V
Breakdown Voltage ($I_R = 10$ μ A)	V_{BR}	50 (≥ 10)	V
Reverse Current ($V_R = 10$ V)	I_R	0.01 (≤ 1)	μ A
Temperature Coefficient of I_a or Φ_e	TC_I	-0.55	%/K
Temperature Coefficient of V_F	TC_V	-3	mV/K
Temperature Coefficient of λ_{peak}	TC_λ	+0.3	nm/K
Radiant Intensity in Axial Direction Measured at a Solid Angle of $\Omega = 0.01$ sr ($I_F = 100$ mA, $t_p = 20$ ms)	I_e	≥ 25	mW/sr
($I_F = 1$ A, $t_p = 100$ μ s)	I_e	220	mW/sr
Radiant Power ($I_F = 100$ mA, $t_p = 20$ ms)	Φ_e	26	mW

T-41-11



Infrared
Emitters