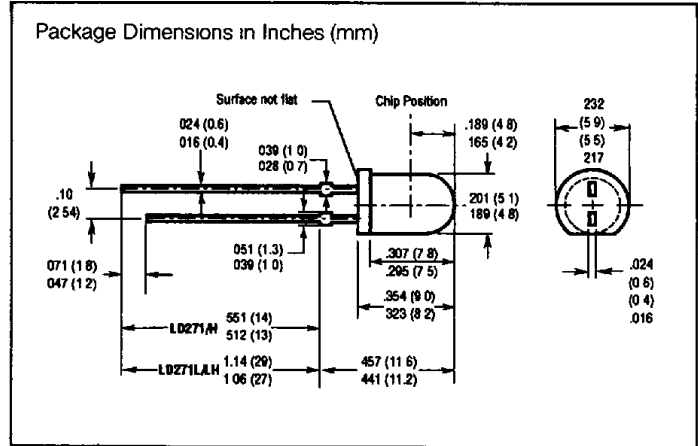
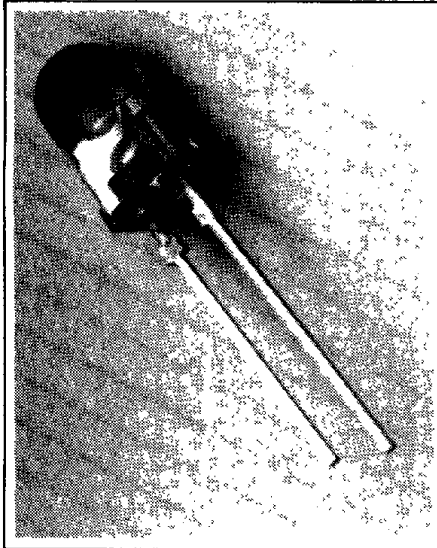


**SIEMENS**

**LD 271/271H**  
**1" LEADS LD 271L/271LH**

**INFRARED EMITTER**

T-41-11



**FEATURES**

- Low Cost
- T-1 $\frac{1}{4}$  Package
- Lightly Diffused Gray Plastic Lens
- LD 271L/LD 271LH 1-inch Leads
- Long Term Stability
- Medium Wide Beam, 50°
- Very High Power
- High Intensity
- Matches with Photodiodes SFH 205 or BP104 or Phototransistors BP103B

**DESCRIPTION**

LD 271/H/L/LH an infrared emitting diode, emits radiation in the near infrared range (950 nm peak). The emitted radiation, which can be modulated, is generated by forward flowing current. The device is enclosed in a 5 mm plastic package. An application for the LD 271 family is remote control of color TV receivers

**Maximum Ratings**

Storage Temperature	T	-55 to +100	°C
Soldering Temperature (Distance from soldering joint to package $\geq$ 10 mm, soldering time $t \leq$ 3 s)	$T_S$	260	°C
Junction Temperature	$T_J$	100	°C
Reverse Voltage	$V_R$	5	V
Forward Current	$I_F$	130	mA
Surge Current ( $t = 10 \mu s, D = 0$ )	$I_{FS}$	3.5	A
Power Dissipation	$P_{tot}$	210	mW
Thermal Resistance	$R_{thJamb}$	350	K/W

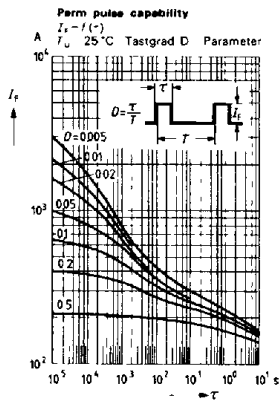
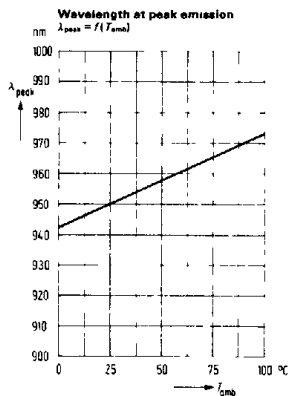
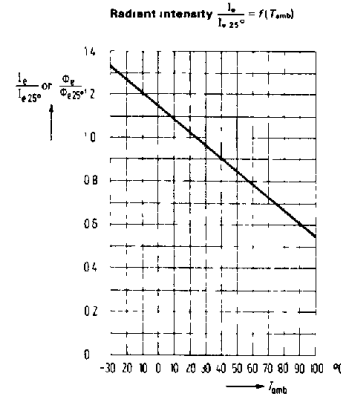
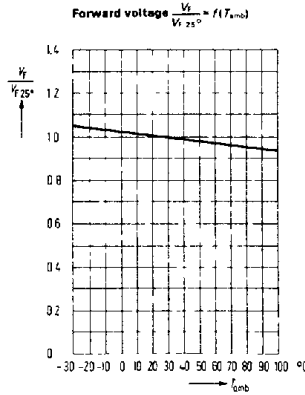
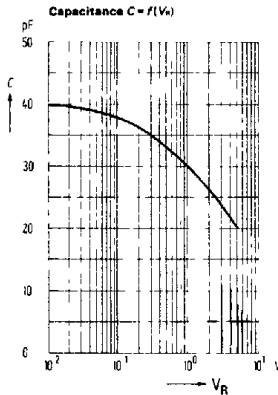
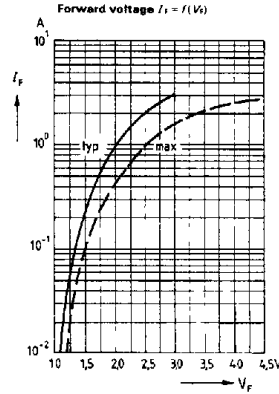
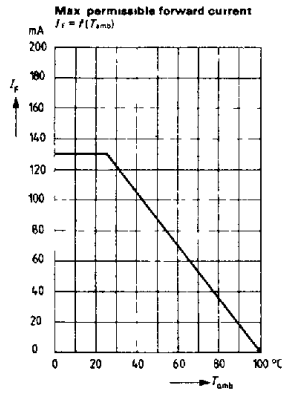
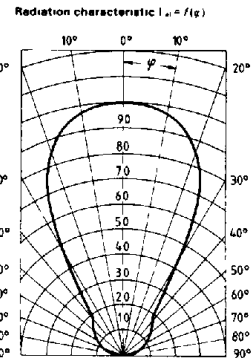
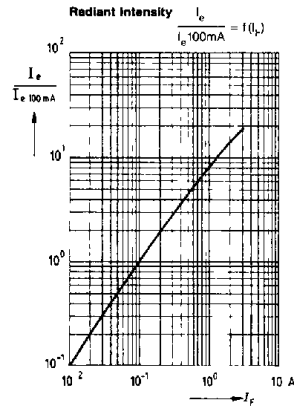
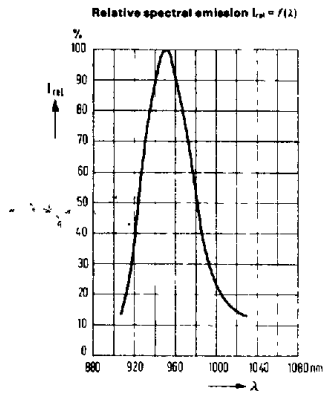
**Characteristics ( $T_{amb} = 25^\circ C$ )**

Wavelength ( $I_F = 100 \text{ mA}, t_p = 20 \text{ ms}$ )	$\lambda$	$950 \pm 20$	nm
Spectral Bandwidth ( $I_F = 100 \text{ mA}, t_p = 20 \text{ ms}$ )	$\Delta\lambda$	55	nm
Half Angle	$\varphi$	$\pm 25$	Deg
Active Area	A	0.25	mm <sup>2</sup>
Active Die Area per Die	$L \times W$	$0.5 \times 0.5$	mm
Distance Die Surface to Package Surface	H	4.0 to 4.6	mm
Switching Time ( $I_b$ from 10% to 90% and from 90% to 10% at $I_F = 100 \text{ mA}$ )	$t_r, t_f$	1	$\mu s$
Capacitance ( $V_R = 0 \text{ V}$ )	$C_o$	40	pF
Forward Voltage ( $I_F = 100 \text{ mA}$ )	$V_F$	1.30 ( $\leq 1.5$ )	V
( $I_F = 1 \text{ A}, t_p = 100 \mu s$ )	$V_F$	1.9 ( $\leq 2.5$ )	V
Breakdown Voltage ( $I_R = 10 \mu A$ )	$V_{BR}$	30 ( $\geq 5$ )	V
Reverse Current ( $V_R = 5 \text{ V}$ )	$I_R$	0.01 ( $\leq 1$ )	$\mu A$
Temperature Coefficient of $I_b$ or $\Phi_e$	$TC_I$	-0.55	%/K
Temperature Coefficient of $V_F$	$TC_V$	-1.5	mV/K
Temperature Coefficient of $\lambda_{peak}$	$TC_\lambda$	+0.3	nm/K

**Radiant Intensity  $I_e$  in Axial Direction Measured at a Solid Angle of  $\Omega = 0.01 \text{ sr}$**

Group	LD 271 & LD 271L	LD 271H & LD 271 LH	
Radiant Intensity ( $I_F = 100 \text{ mA}, t_p = 20 \text{ ms}$ ) $I_e$	15 ( $\geq 10$ )	$\geq 16$	mW/sr
( $I_F = 1 \text{ A}, t_p = 100 \mu s$ ) $I_e$	100	120	mW/sr
Radiant Power ( $I_F = 100 \text{ mA}, t_p = 20 \text{ ms}$ ) $\Phi_e$	12	16	mW

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Infrared Emitters