LIGHT EMITTING DIODE
SE310

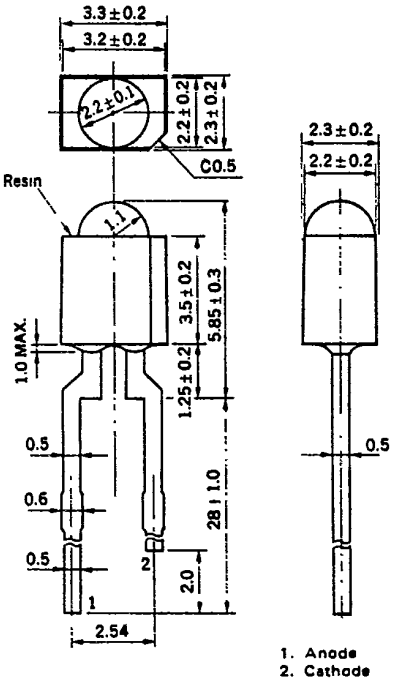
GaAs INFRARED EMITTING DIODE

DESCRIPTION

The SE310 is a GaAs (Gallium Arsenide) Infrared Emitting Diode which is mounted on the lead frames and molded in plastic. On forward bias, it emits a spectrally narrow band of radiation peaking at 940 nm. It is suitable for a optical switch with combination of the PH110

PACKAGE DIMENSIONS

in millimeters



1. Anode
2. Cathode

FEATURES

- Small size plastic molded package.
- High output power.
- Long life.
- Good linearity.
- Spectrally matched to silicon sensors.

APPLICATIONS

- Light Source for Electro optical switches.
- Paper Tape and Punch Card Readers.
- Optical encoders.
- Photochoppers, Isolator.
- High speed Optoelectronic Data Links.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation (T_a=25 °C)	P	100	mW
Maximum Forward Current (T_a=25 °C)	I_F	50	mA
Maximum Reverse Voltage (T_a=25 °C)	V_R	5.0	V
Maximum Temperatures			
Junction Temperature	T_j	100	°C
Storage Temperature	T_{stg}	−40 to +100	°C

ELECTRO-OPTICAL CHARACTERISTICS (T_a=25 °C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	V_F		1.1	1.4	V	I_F=50 mA
Reverse Current	I_R		0.01	5	μA	V_R=5 V
Peak Emission Wavelength	λ_{peak}		940		nm	I_F=50 mA
Spectral Line Half Width	$\Delta\lambda$		60		nm	I_F=50 mA
Output Power	I_e	6	11		mW/sr	I_F=50 mA
Light Turn-On and Turn-Off	t_{on}, t_{off}		1		μs	

SE310

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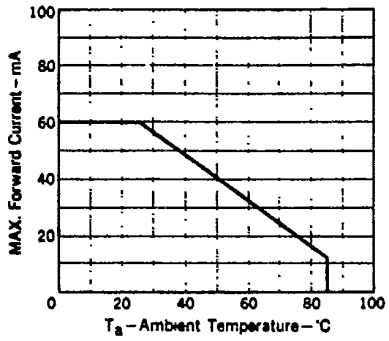
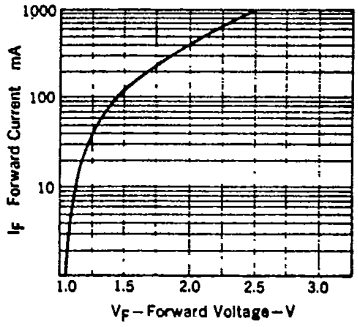
TYPICAL CHARACTERISTICS (T_a=25 °C)

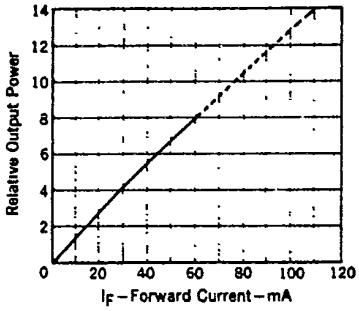
MAX. FORWARD CURRENT vs. AMBIENT TEMPERATURE



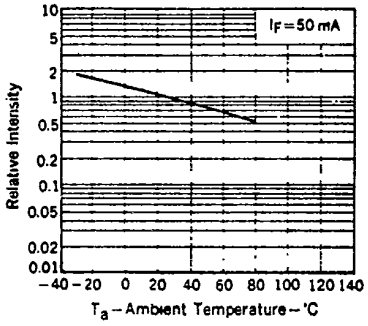
FORWARD CURRENT vs. FORWARD VOLTAGE



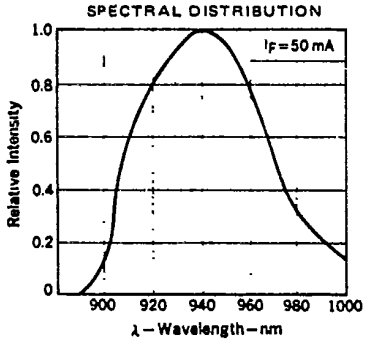
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



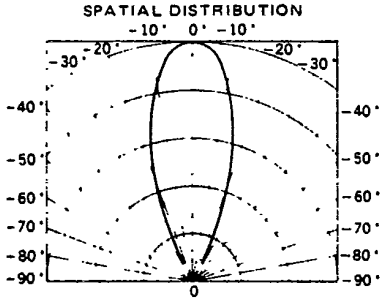
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



SPECTRAL DISTRIBUTION



SPATIAL DISTRIBUTION



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