GL528V Datasheet

DiGi Electronics Part Number	GL528V-DG
Manufacturer	Sharp Microelectronics
Manufacturer Product Number	GL528V
Description	EMITTER IR 940NM 100MA T 1 3/4
Detailed Description	Infrared (IR) Emitter 940nm 1.2V 100mA 12mW/sr @ 50mA 26° T 1 3/4

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Manufacturer Product Number:	Manufacturer:
GL528V	Sharp Microelectronics
Series:	
-	

GL527V/GL528V

low Peak Forward Voltage Type ϕ5mm Resin Mold Type Infrared Emitting Diode

■ Features

1. Low peak forward voltage (V_{FM} : TYP. 1.6V at I_{FM}=0.5A)
2. ϕ5mm epoxy resin package

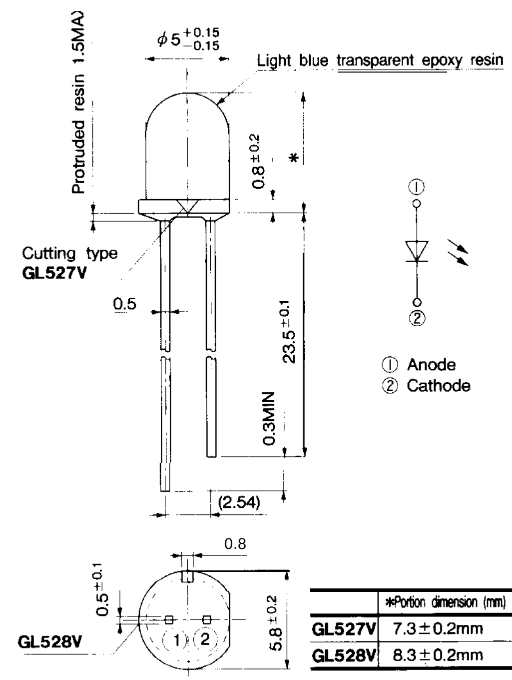
■ Applications

1. Infrared remote controllers for TVs, VCRs, audio equipment and air conditioners

■ Model Line-ups

	GL527V	GL528V
Radiation intensity (TYPmW/sr)	12	23
Half intensity angle (TYP deg)	±21	±13

■ Outline Dimensions (Unit : mm)



	*Portion dimension (mm)
GL527V	7.3±0.2mm
GL528V	8.3±0.2mm

■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol]	Rating	Unit
Forward current	I_F	100	mA
*1 Peak forward current	I_{FM}	1	A
Reverse voltage	V_R	6	v
power dissipation	P	150	mW
Operating temperature	T_{opr}	-25 to +85	'c
Storage temperature	T_{stg}	-40 to +100	℃
*2 Soldering temperature	T_{sol}	260	℃

*1 Pulse width ≤ 100 μs., Dutv ratio= 0.01
*2 For 3 seconds at the position of 2.6mm from the bottom face of resin package.

■ Electro-optical Characteristics (Ta = 25℃)

Parameter		Symbol	Conditions	M.I.N.	TYP.	MAX.	LInit
Forward voltage		V_F	I_F=50mA		1.2	1.37	V
Peak forward voltage		V_{FM}	I_{FM}=0.5A	–	1,6	2.5	V
Reverse current		I_R	V_R=3V		–	10	μA
Radiation intensity	GL527V	I_E	I_F=50mA	5	12	–	mW/sr
	GL528V			12	23	–	
Peak emission wavelength		λp	I_F=5mA	–	940	–	nm
Half intensity wavelength		AL	I_F=5mA	–	45		nm
Terminal capacitance		C_t	V_R=0, f=lMHz	–	50	–	pF
Response frequency		fc		–	300	–	kHz
Half intensity angle	GL527V	$\Delta\theta$	I_F= 20mA	–	±21	–	°
	GL528V			–	±13	–	

*3 I_E: Value obtained by converting the value in power of radiant fluxes emitted at the solid angle of 0.01 sr (steradian) in the direction of mechanical axis of the lens portion into 1 sr of all those emitted from the light emitting diode.

Fig. 1 Forward Current vs. Ambient Temperature

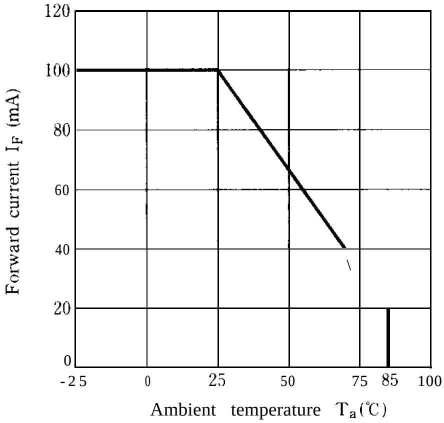


Fig. 2 Peak Forward Current vs. Duty Ratio

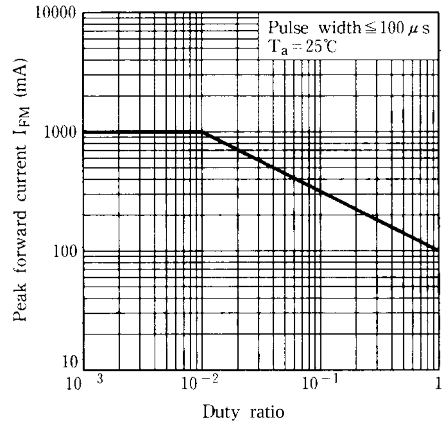


Fig. 3 Spectral Distribution

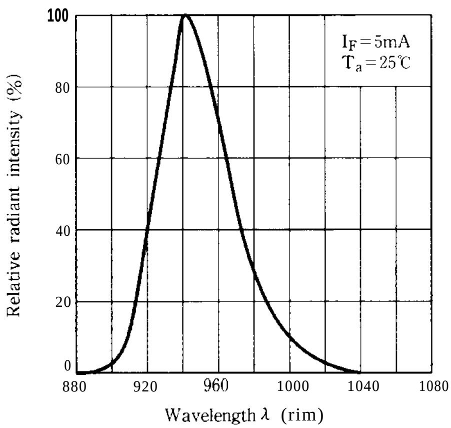


Fig. 4 Peak **Emission Wavelength vs. Ambient Temperature**

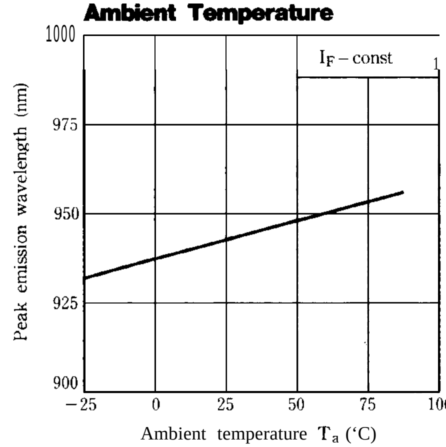


Fig. 5 Forward **Current vs.** Forward **Voltage**

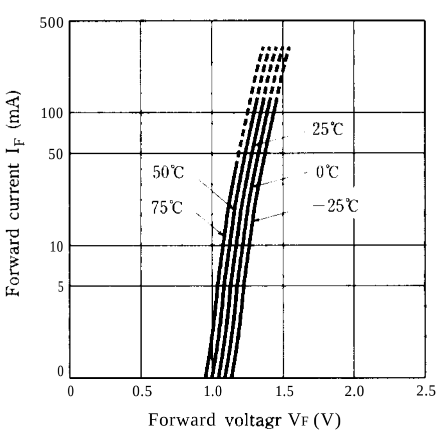


Fig. 6 Relative Forward Voltage ve. **Ambient Temperature**

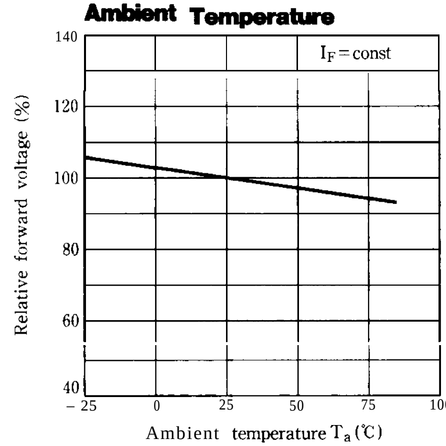


Fig. 7 Relative Output vs. Ambient Temperature (Detector : **PD410PI**)

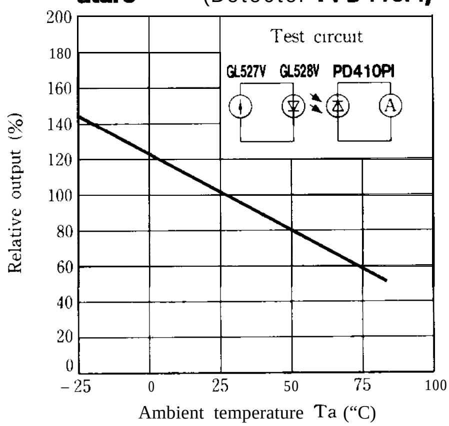


Fig. 8 Radiation Intensity vs. Peak Forward Current

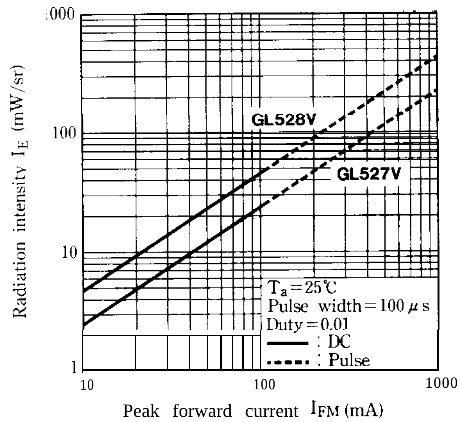


Fig. 9 Relative Collector Current vs. Distance (Detector : PD410PI)

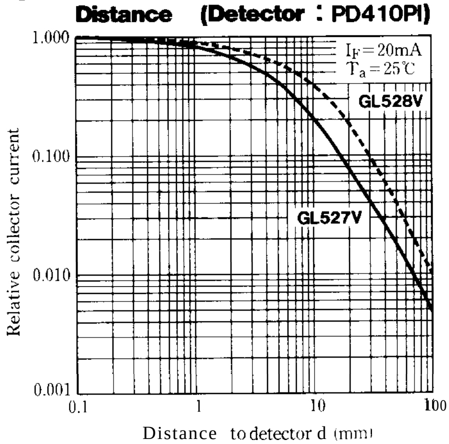


Fig.10 Relative Collector Current vs. Distance (Detector : PD49PI)

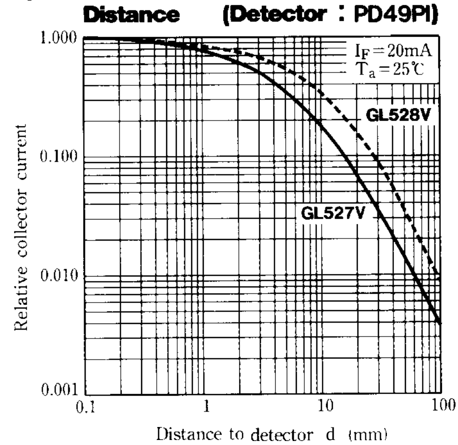


Fig.1 l-a Radiation Diagram **(GL527V)**
(Ta = 25-C)

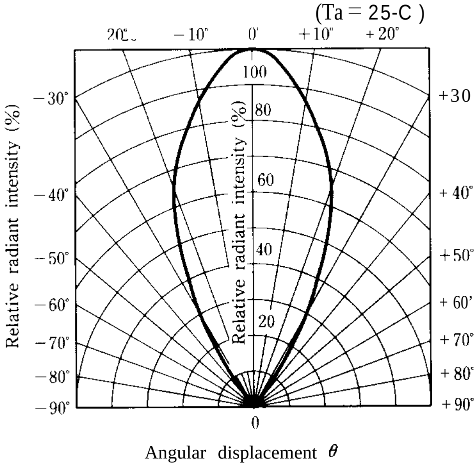
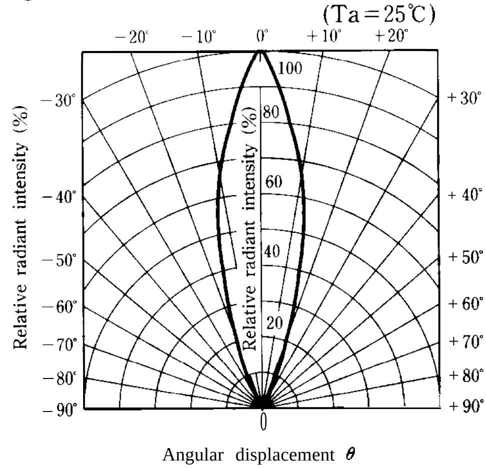


Fig.11-b Radiation Diagram **(GL528V)**
(Ta = 25℃)



. Please refer to the chapter “Precautions for Use.” (Page 78 to 93)

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