HIRL5020

Infrared Emitter for Remote Control GaAlAs/GaAs

■ Features

Infrared Light Emitting Diode 940nm
High output power MIN. 30mW/sr at I_F = 50 mA
Beam Angle θ½ TYP. ±17°
5mm Diameter Clear Package

■ Absolute Maximum Ratings (T_a = 25°C)

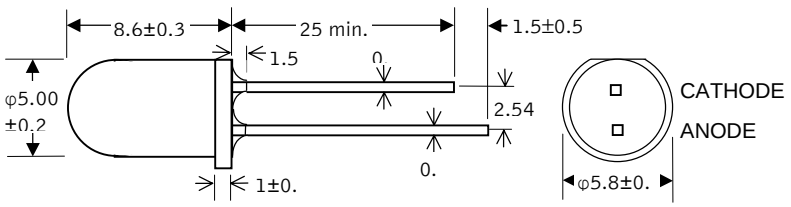
Parameter	Symbol	Rated Value	Unit
Pulsed forward current (t ≤ 10µs)	I_{PM}	1	A
Forward current	I_{FM}	100	mA
Reverse voltage	V_{RM}	5	V
Operating temperature	T_{opr}	-25 to +80	°C
Storage temperature	T_{stg}	-25 to +100	°C
Power dissipation	P_M	170	mW

■ Electro-Optical Characteristics (T_a = 25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Radiant intensity	Φ_e	I_F = 50 mA	30	60		mW/sr
Forward voltage	V_F	I_F = 100 mA		1.45	1.7	V
Reverse current	I_R	V_R = 5 V			10	µA
Peak emission wavelength	λ_p	I_F = 50 mA		940		nm
Spectral bandwidth	$\Delta\lambda$	I_F = 50 mA		50		nm
Breakdown voltage	V_{BR}	I_R = 100 µA	5	30		V
Capacitance	C_t	f =1MHz, V_R = 0		25		pF
Switching times	t_r	I_F = 50 mA		80		ns
(Φ_e from 10% to 90%)	t_f	I_F = 50 mA		180		ns
Half intensity angle	θ½	I_F = 50 mA		±17		degree

■ Outline Dimensions (mm)

Package body is water clear



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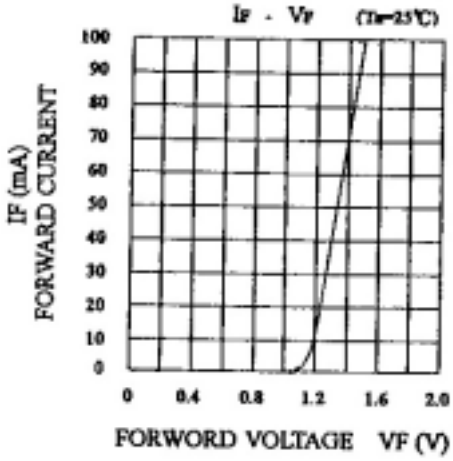

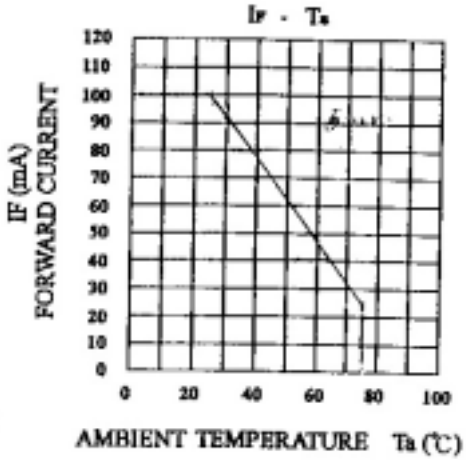

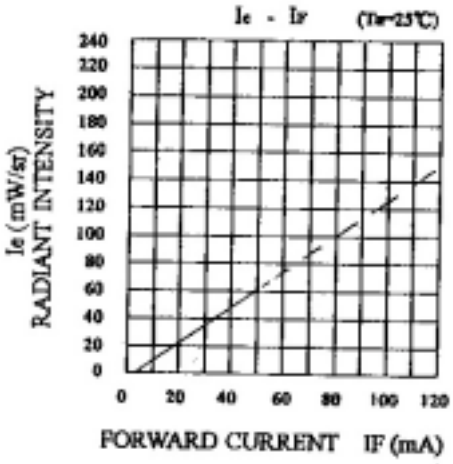

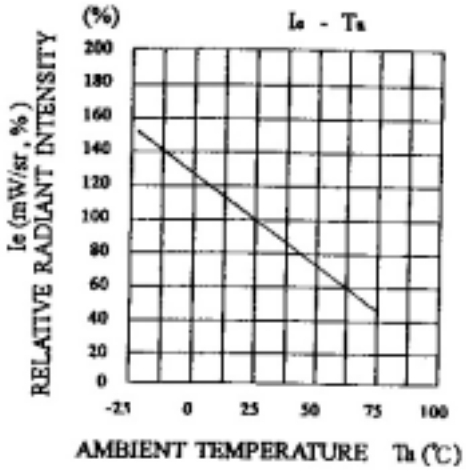

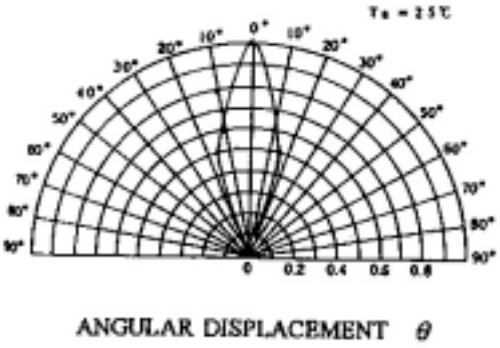

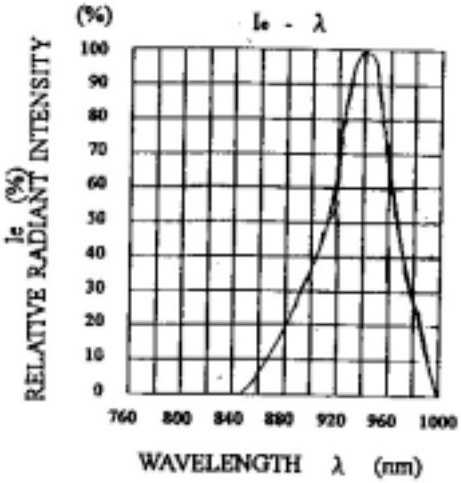

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