T-41-11

GL430 Narrow Beam Infrared Light Emitting Diode

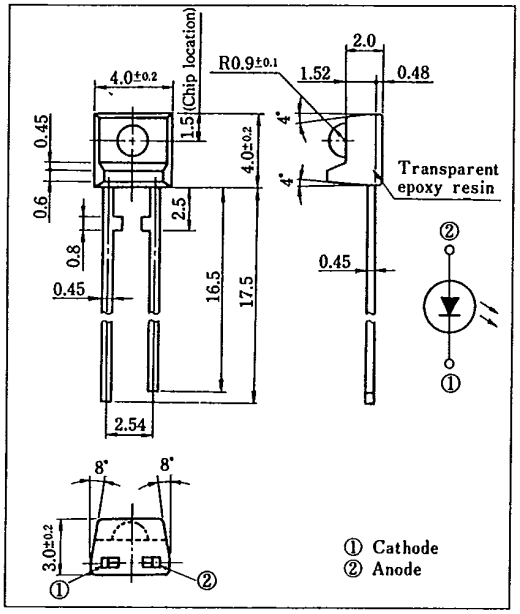
■ Features

1. Narrow beam angle ($\Delta\theta$: TYP. ±13°)
2. Epoxy resin package

■ Applications

1. Optoelectronic switches, optoelectronic counters
2. Smoke detectors, infrared remote controllers

■ Outline Dimensions (Unit : mm)



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■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Power dissipation	P	75	mW
*1Forward current	I_F	50	mA
Peak forward current	I_{FM}	1	A
Reverse voltage	V_R	6	V
Operating temperature	T_{opr}	−25~+85	°C
Storage temperature	T_{stg}	−40~+85	°C
*2Soldering temperature	T_{sol}	260	°C

*1 Pulse width≦100μs, Duty ratio=0.01
*2 For 3 seconds at the position of 2.5mm from the bottom face of resin package

■ Electro-optical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	I_F=20mA	—	1.2	1.4	V
Peak forward voltage	V_{FM}	I_{FM}=0.5A	—	3	4	V
Reverse current	I_R	V_R=3V	—	—	10	μA
Terminal capacitance	C_t	V=0, f=1MHz	—	50	—	pF
Radiant flux	Φ_e	I_F=20mA	0.5	—	2.0	mW
Peak emission wavelength	λ_p	I_F=5mA	—	950	—	nm
Half intensity wavelength	$\Delta\lambda$	I_F=5mA	—	45	—	nm

Fig. 1 Forward Current vs. Ambient Temperature

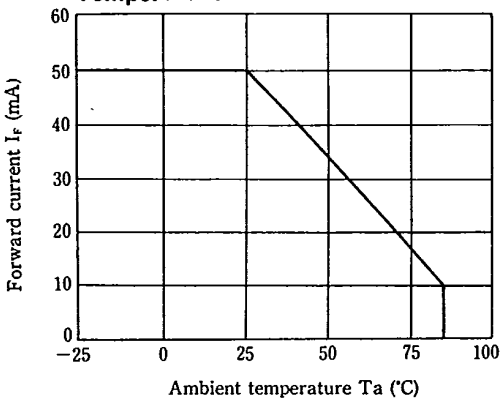

Fig. 2 Peak Forward Current vs. Duty Ratio

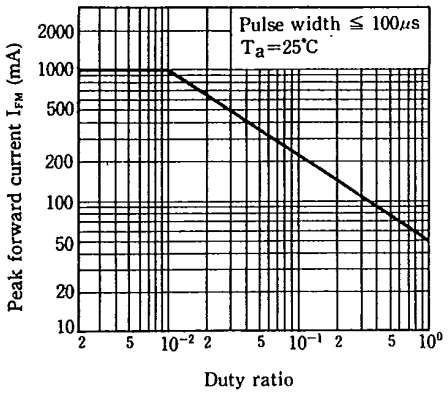

Fig. 3 Spectral Distribution

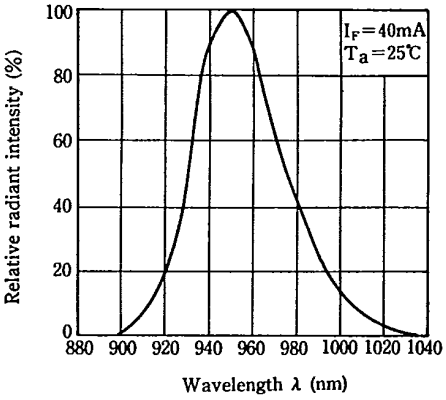

Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

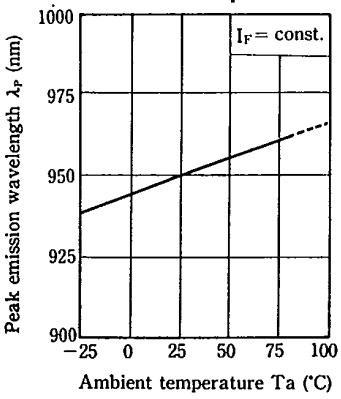

Fig. 5 Forward Current vs. Forward Voltage

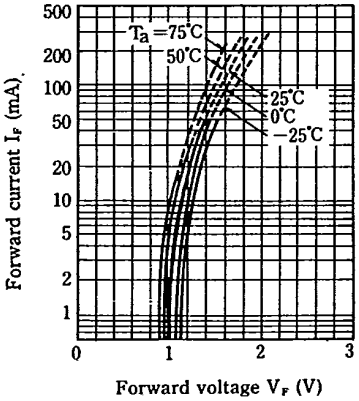

Fig. 6 Relative Radiant Flux vs. Ambient Temperature

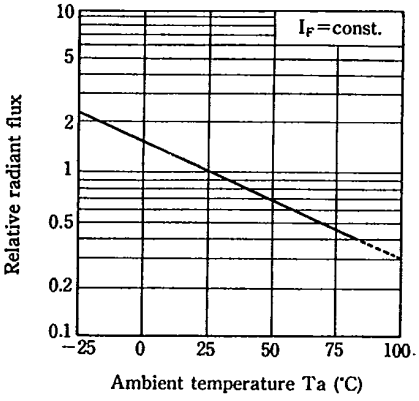

Fig. 7 Radiant Flux vs. Forward Current

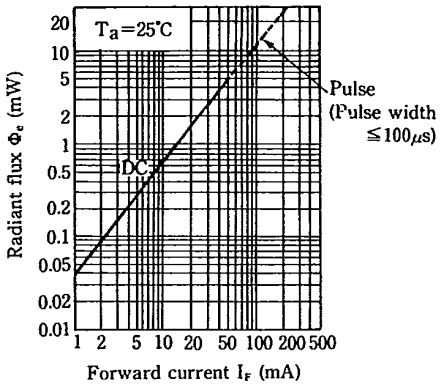

Fig. 8 Relative Radiant Intensity vs. Distance

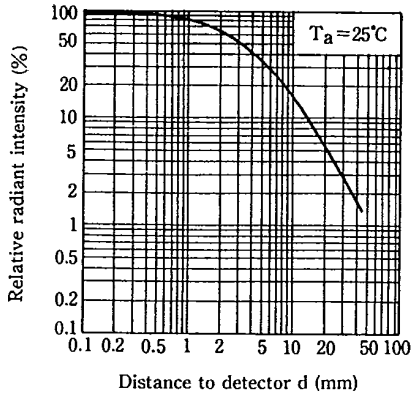

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Fig. 9 Relative Collector Current vs. Distance (Detector: PT430)

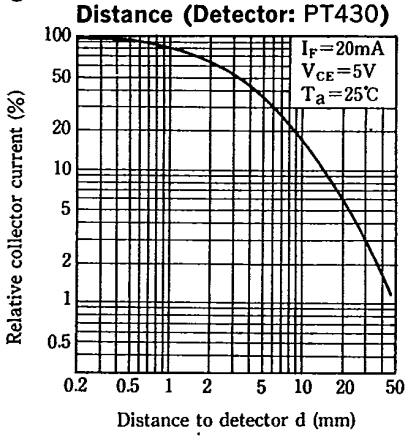

Fig. 10 Radiation Diagram (Ta=25°C)