

LNA2904L (LN166)

GaAs Infrared Light Emitting Diode

For optical control systems

■ Features

- High-power output, high-efficiency: $I_e = 10 \text{ mW/sr}$ (min.)
- Emitted light spectrum suited for silicon photodetectors
- Good radiant power output linearity with respect to input current
- High center radiant intensity
- Transparent epoxy resin package

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Power dissipation	P_D	160	mW
Forward current	I_F	100	mA
Pulse forward current *	I_{FP}	1.5	A
Reverse voltage	V_R	3	V
Operating ambient temperature	T_{opr}	-25 to +85	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +100	$^\circ\text{C}$

Note) *: $f = 100 \text{ Hz}$, Duty cycle = 0.1%

■ Electrical-Optical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current	I_R	$V_R = 3 \text{ V}$			10	μA
Forward voltage	V_F	$I_F = 100 \text{ mA}$		1.35	1.60	V
Pulse forward voltage *1	V_{FP}	$I_{FP} = 1.0 \text{ A}$		2.5	3.4	V
Center radiant intensity *2	I_e	$I_F = 50 \text{ mA}$	10.0			mW/sr
Terminal capacitance	C_t	$V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$		50		pF
Peak emission wavelength	λ_p	$I_F = 50 \text{ mA}$		950		nm
Spectral half band width	$\Delta\lambda$	$I_F = 50 \text{ mA}$		50		nm
Half-power angle	θ	The angle when the radiant power is halved.		20		$^\circ$

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.

2. Cutoff frequency: 1 MHz

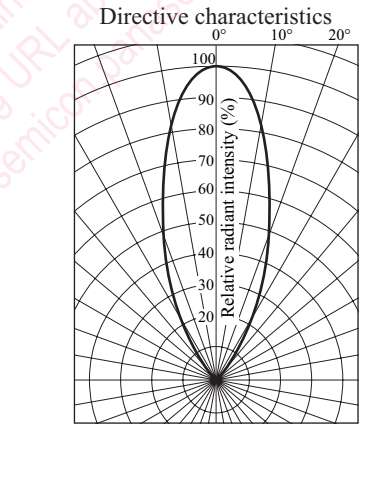
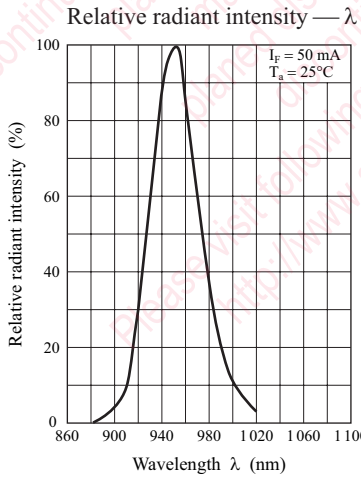
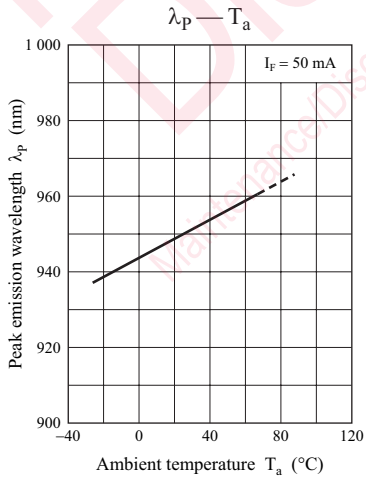
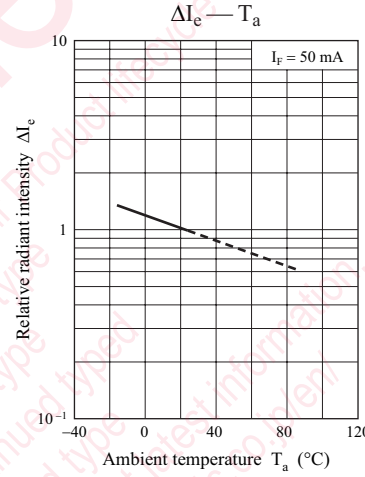
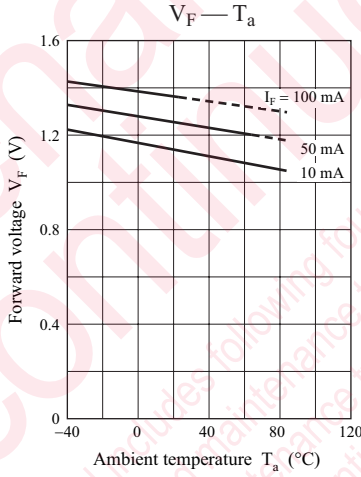
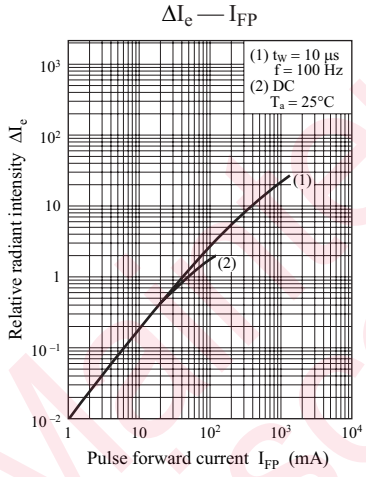
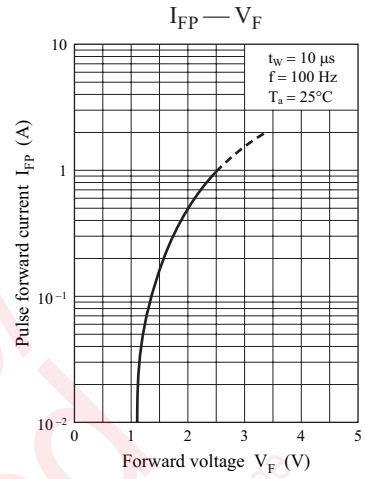
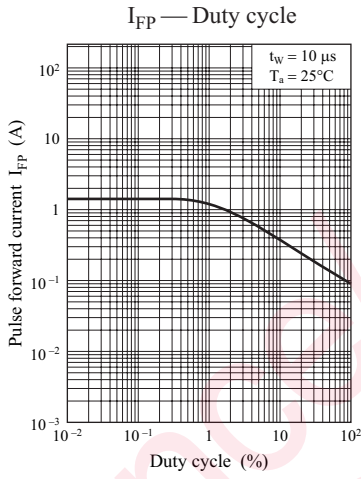
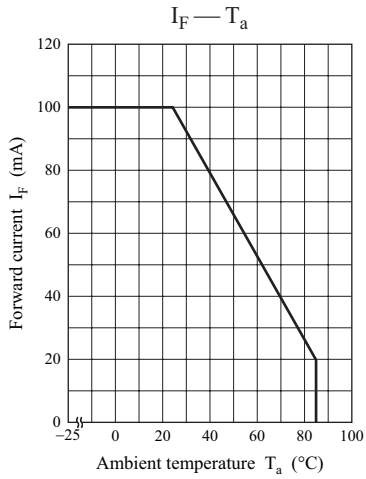
$$f_c : 10 \times \log \frac{P_O \text{ at } f = f_c}{P_O \text{ at } f = 50 \text{ kHz}} = -3$$

3. *1: $f = 100 \text{ Hz}$, Duty cycle = 0.1%

*2: Rank classification

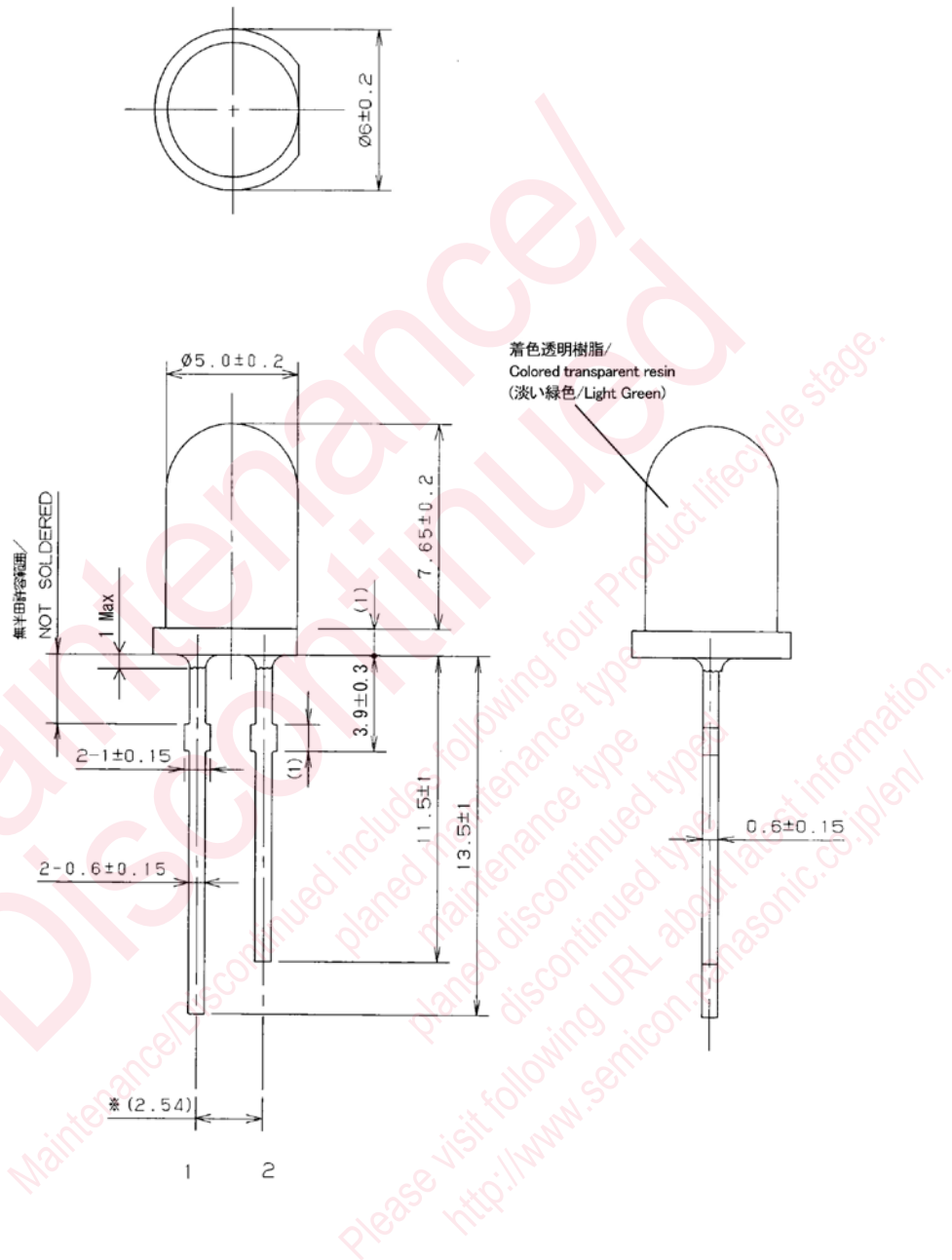
Rank	No-rank	T	U
I_e (mW/sr)	$10.0 \leq$	10.0 to 14.0	$12.0 \leq$

Note) The part number in the parenthesis shows conventional part number.



■ Package (Unit: mm)

LEXLTN2S0004



- Pin name
- 1: Anode
- 2: Cathode

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