

GL9□□2 Series

Rectangle Type Dichromatic LED Lamps

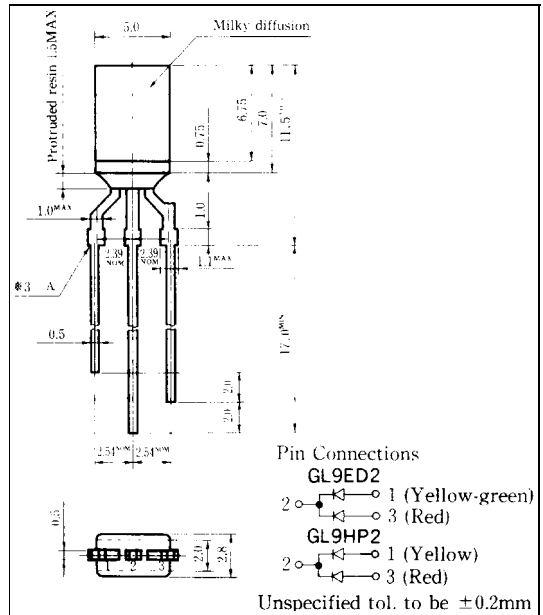
Model No.

GL9ED2 Yellow-green
Red
GL9HP2 Yellow
Red

GaP
GaAsP/GaP
GaAsP/GaP
GaP

Outline Dimensions

(Unit: mm)



Features

- 2.0mm×5.0mm rectangle type all resin mold
- Radiation color
 GL9ED2 : Red, yellow-green and orange (mixed color)
 GL9HP2 : Red, yellow and orange (mixed color)
- Milky diffusion lens type

Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL9ED2		GL9HP2		Unit
		Yellow-green	Red	Yellow	Red	
*1 Power dissipation	P	84	84	50	35	mW
Continuous forward current	I _F	30	30	20	15	mA
*2 Peak forward current	I _{FM}	50	50	50	50	mA
Derating factor	DC	0.40	0.40	0.27	0.20	mA/°C
	Pulse	0.67	0.67	0.67	0.67	mA/°C
Reverse voltage	V _R	5		5		v
operating temperature	T _{opr}	-25 to +85				°C
Storage temperature	T _{stg}	-25 to +100				°C
*3 Soldering temperature	T _{sol}	260 (within 5 seconds)				°C

*1 The value of power dissipation is specified under the condition that either yellow-green or red/yellow or red is lightened separately. When the both diodes of yellow-green and red/yellow or red are lightened simultaneously, the power dissipation of each diode should be less than the half of the value specified in this table.

*2 Duty ratio = 1/10, Pulse width = 0.1ms

*3 At the (A) position of above outline dimensions

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GL9ED2 (Yellow-green/Red)

■ Electro-optical Characteristics

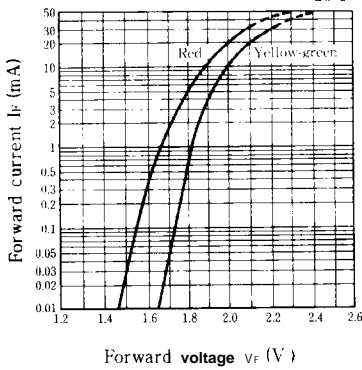
(Ta=25°C)

Parameter	Symbol	Radiation color	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	Yellow-green	I _F = 20mA	—	2.1	2.8	V
		Red	I _F = 20mA	—	2.0	2.8	
※4 Luminous intensity	I _v	Yellow-green	I _F = 20mA	3.0	8.0	—	'cd
		Red	I _F = 20mA	1.5	3.0	—	
Peak emission wavelength	λ _p	Yellow-green	I _F = 20mA	—	565	—	'm
		Red	I _F = 20mA	—	635	—	
Spectrum radiation bandwidth	Δλ	Yellow-green	I _F = 20mA	—	30	—	'm
		Red	I _F = 20mA	—	35	—	
Reverse current	I _R	Yellow-green	V _R = 4V	—	—	10	μA
		Red	V _R = 4V	—	—	10	
Terminal capacitance	C _t	Yellow-green	V = 0V f = 1 MHz	—	35	—	'F
		Red	V = 0V f = 1 MHz	—	40	—	
Response frequency	f _c	Yellow-green	—	—	4	—	'Hz
		Red	—	—	4	—	

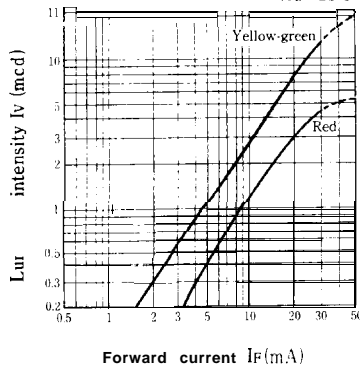
※4 Tolerance: ±30%

■ Characteristics Diagrams

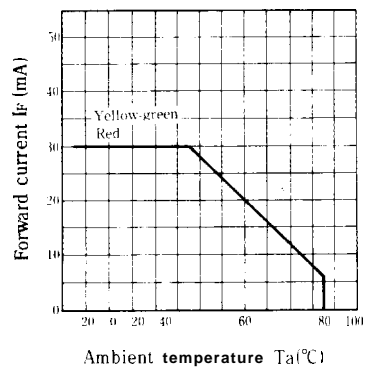
Forward Current vs. Forward Voltage (Ta = 25°C)



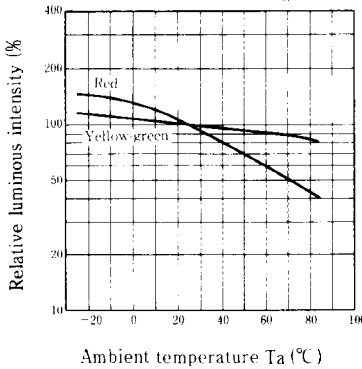
Luminous Intensity vs. Forward Current (Ta = 25°C)



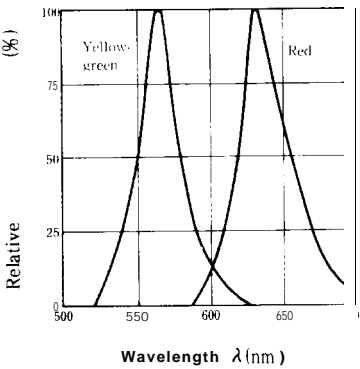
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature (If = 20mA)



Spectrum Distribution (Ta = 25°C)



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3

GL9HP2 (Yellow/Red)

■ **Electro-optical** Characteristics

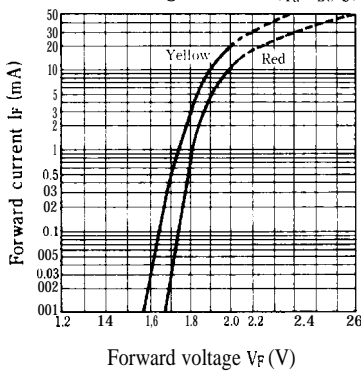
($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Radiation color	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	Yellow	$I_F = 10\text{mA}$	—	1.9	2.5	V
		Red	$I_F = 10\text{mA}$	—	2.0	2.4	
*4 Luminous intensity	I_V	Yellow	$I_F = 10\text{mA}$	0.3	1.0	—	mcd
		Red	$I_F = 10\text{mA}$	0.5	0.8	—	
Peak emission wavelength	λ_p	Yellow	$I_F = 10\text{mA}$	—	585	—	'm
		Red	$I_F = 10\text{mA}$	—	695	—	
Spectrum radiation bandwidth	$\Delta\lambda$	Yellow	$I_F = 10\text{mA}$	—	30	—	'm
		Red	$I_F = 10\text{mA}$	—	100	—	
Reverse current	I_R	Yellow	$V_R = 4\text{V}$	—	—	10	μA
		Red	$V_R = 4\text{V}$	—	—	10	
Terminal capacitance	C_t	Yellow	$V = 0\text{V}$ $f = 1\text{ MHz}$	—	35	—	pF
		Red	$V = 0\text{V}$ $f = 1\text{ MHz}$	—	55	—	
Response frequency	f_c	Yellow	—	—	4	—	MHz
		Red	—	—	4	—	

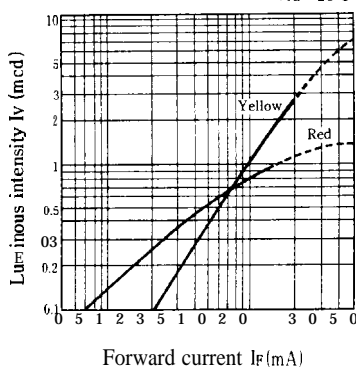
*4 Tolerance: $\pm 30\%$

■ **Characteristics Diagrams**

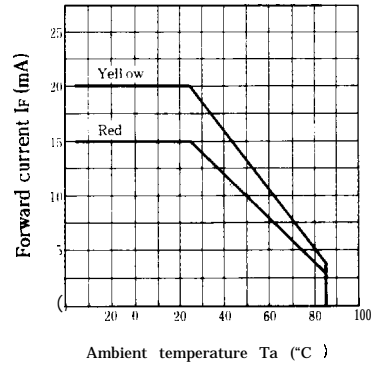
Forward Current vs. Forward Voltage



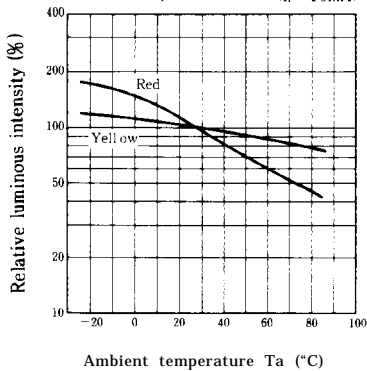
Luminous Intensity vs. Forward Current



Forward Current **Derating** Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution

