

GL5□□5 Series

φ 5mm(T-1 $\frac{3}{4}$) Cylinder Type Dichromatic LED Lamps

Model No.

GL5ED5 Yellow-green
Red
GL5HP5 Yellow
Red

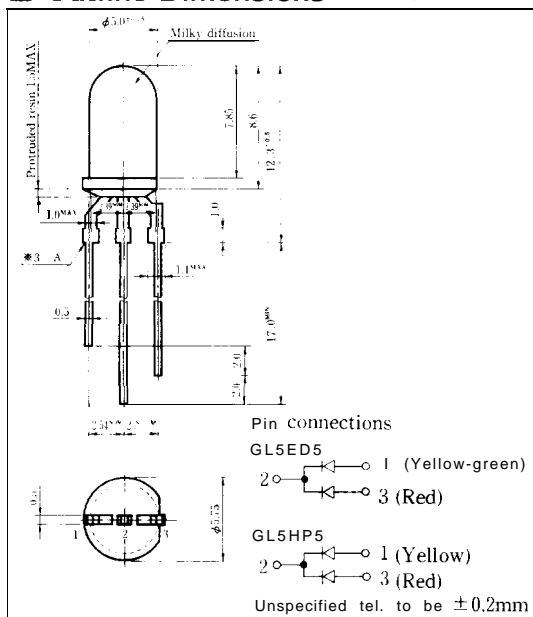
GaP
GaAsP/GaP
GaAsP/GaP
GaP

Features

- φ 5mm (T-1 $\frac{3}{4}$) all resin mold
- Radiation color
GL5ED5 : Red, yellow-green and orange (mixed color)
GL5HP5 : Red, yellow and orange (mixed color)
- Milky diffusion lens type

Outline Dimensions

(Unit: mm)



Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL5ED5		GL5HP5		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

SHARP

GL5ED5 (Yellow-green/Red)

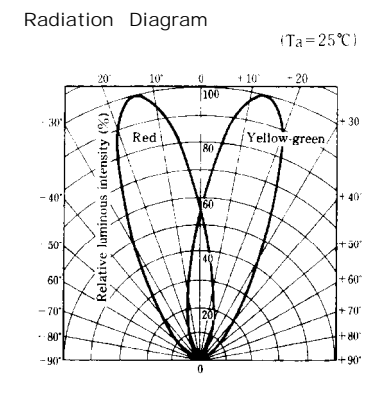
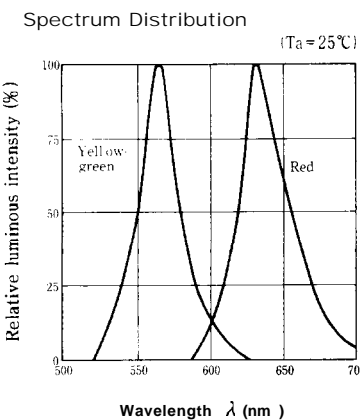
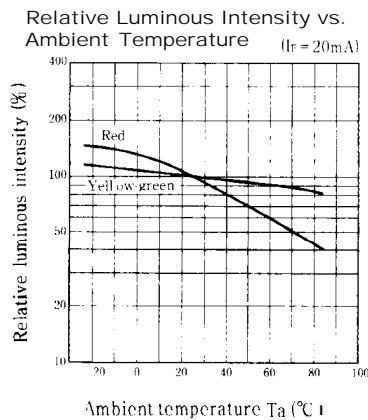
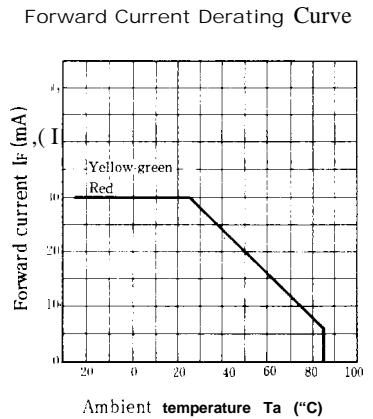
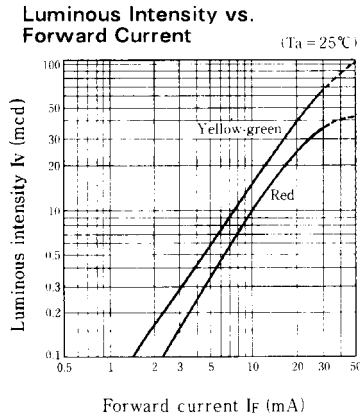
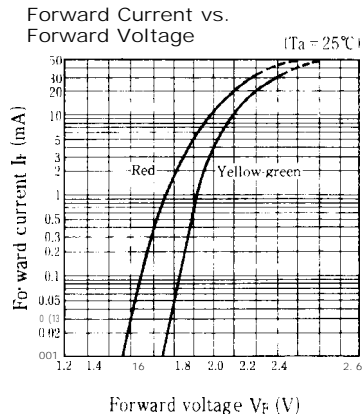
■ Electro-optical Characteristics

(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	10	40	—	mcd
		Red	I _F = 20mA	10	25	—	
Peak emission wavelength	λ _p	Yellow-green	I _F = 20mA	—	565	—	nm
		Red	I _F = 20mA	—	635	—	
Spectrum radiation bandwidth	Δλ	Yellow-green	I _F = 20mA	—	30	—	nm
		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 = 1MHz	—	35	—	pF
		Red	V = 0V f = 1 MHz	—	20	—	
Response frequency	f _c	Yellow-green	—	—	4	—	MHz
		Red	—	—	4	—	

*4 Tolerance: ±30%

■ Characteristics Diagrams



GL5HP5 (Yellow/Red)

■ Electro-optical Characteristics

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

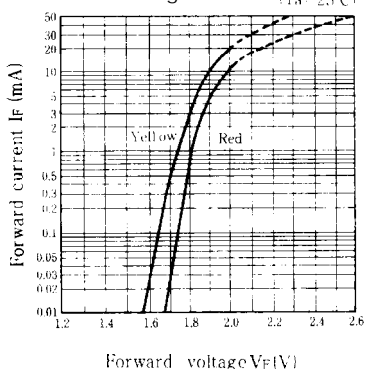
Parameter	Symbol	Radiation color	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	Yellow	$I_F = 10\text{mA}$		1.9	2.5	V
		Red	$I_F = 10\text{mA}$	—	2.0	2.4	
※4 Luminous intensity	I_v	Yellow	$I_F = 10\text{mA}$	4.0	15	—	'cd
		Red	$I_F = 10\text{mA}$	3.0	9.0	—	
Peak emission wavelength	λ_p	Yellow	$I_F = 10\text{mA}$		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	—	'Hz
		Red			4	—	

※4 Tolerance: $\pm 30\%$

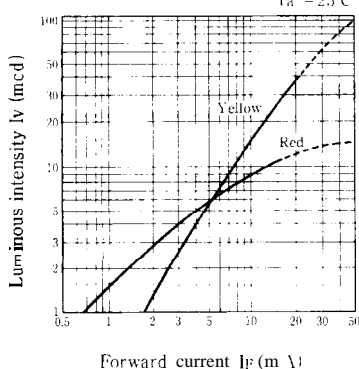
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■ Characteristics Diagrams

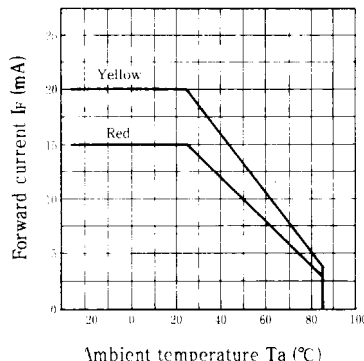
Forward Current vs. Forward Voltage



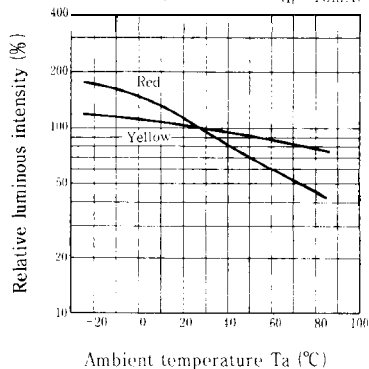
Luminous Intensity vs. Forward Current



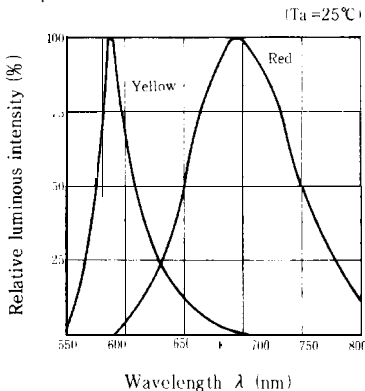
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



Radiation Diagram

