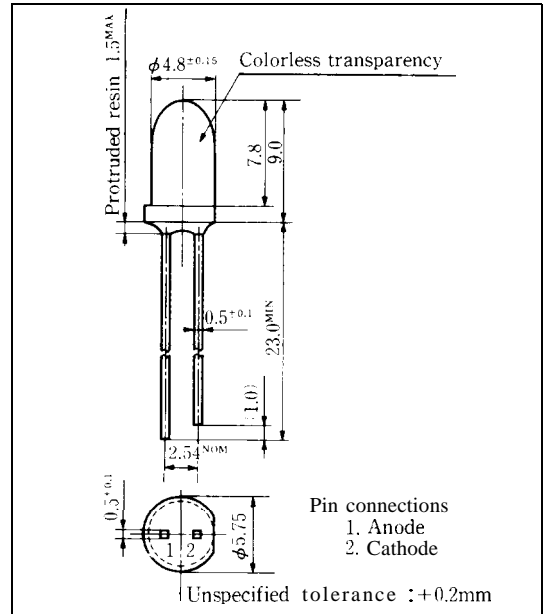


GL5□□43 Series ϕ 5mm(T-1 $\frac{3}{4}$) Cylinder Type LED Lamps

Model No.

GL5LR43 Red (High-luminosity)	GaAlAs/GaAs
GL5TR43 Red (High-luminosity)	GaAlAs/GaAs
GL5HD43 Red	GaAsP/GaP
GL5HY43 Yellow	GaAsP/GaP
GL5EG43 Yellow-green	GaP

Outline Dimensions (Unit: mm)



Features

1. ϕ 5mm(T-1 $\frac{3}{4}$) all resin mold
2. Colorless transparency lens type
3. High directivity

Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL5LR43	GL5HD43	GL5EG43			Unit	
		GL5TR43	GL5HY43					
Power dissipation	P	110	84	84			mW	
Continuous forward current	I _F	50	30	30			mA	
※1 Peak forward current	I _{FM}	300	50	50			mA	
Derating factor	DC	-	0.67	0.40	0.40		mA/°C	
	Pulse	-	4.00	0.67	0.67		mA/°C	
Reverse voltage	V _R	5	5	5			v	
Operating temperature	T _{opr}	-25 to +85						°C
Storage temperature	T _{stg}	-25 to +100						°C
※2 Soldering temperature	T _{sol}	260(within 5 seconds)						°C

※1 Duty ratio = 1/10, Pulse width = 0.1ms

Duty ratio = 1/16 Pulse width \leq 1ms for GL5LR43 and GL5TR43

※2 At the position of 1.6mm from the bottom face of resin package

SHARP

GL5LR43 (Red) / GL5TR43 (Red)

■ Electro-optical Characteristics

(Ta=25°C)

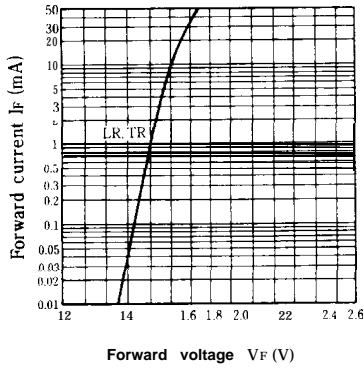
Parameter	Symbol/	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	GL5LR43	I _F = 20mA	—	1.75	2.2	V
		GL5TR43	I _F = 20mA		1.75	2.2	
※3 Luminous intensity	I _v	GL5LR43	I _F = 20mA	600	1200	—	mcd
		GL5TR43	I _F = 20mA	200	500	—	
Peak emission wavelength	λ _p	GL5LR43	I _F = 20mA	—	660	—	nm
		GL5TR43	I _F = 20mA	—	660	—	
Spectrum radiation bandwidth	Δλ	GL5LR43	I _F = 20mA	—	20	—	nm
		GL5TR43	I _F = 20mA	—	20	—	
Reverse current	I _R	GL5LR43	V _R = 4V	—	—	10	μA
		GL5TR43	V _R = 4V	—	—	10	
Terminal capacitance	C _t	GL5LR43	V = 0V f = 1MHz	—	30	—	pF
		GL5TR43	V = 0V f = 1MHz	—	30	—	
Response frequency	f _c	GL5LR43	—	—	8	—	MHz
		GL5TR43	—	—	8	—	

※3 Tolerance: ±30%

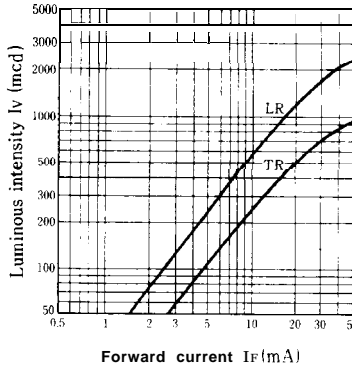
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■ Characteristics Diagrams

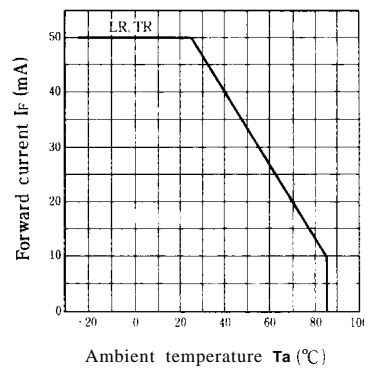
Forward Current vs. Forward Voltage (Ta = 25°C)



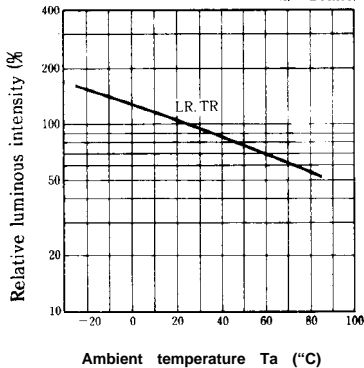
Luminous Intensity vs. Forward Current (Ta = 25°C)



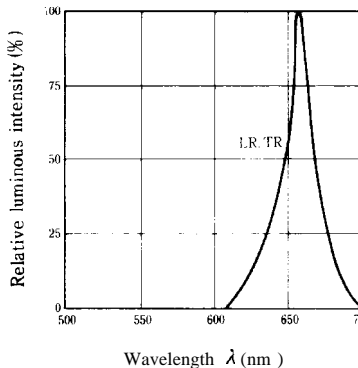
Forward Current Derating Curve



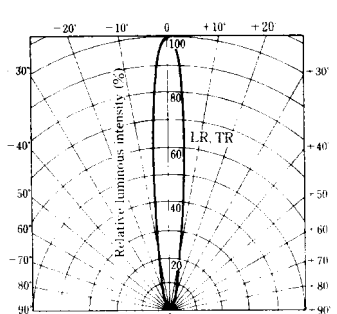
Relative Luminous Intensity vs. Ambient Temperature (If = 20mA)



Spectrum Distribution (Ta = 25°C)



Radiation Diagram (Ta = 25°C)



GL5HD43 (Red)

■ **Electro-optical** Characteristics

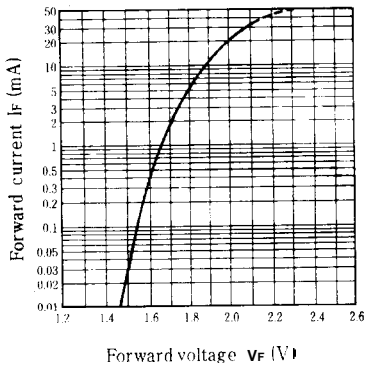
(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN	TYP.	MAX.	Unit
Forward voltage	V_F	GL5HD43	$I_F = 20\text{mA}$	—	2.0	2.8	V
※3 Luminous intensity	I_V	GL5HD43	$I_F = 20\text{mA}$	100	300	—	mcd
Peak emission wavelength	λ_p	GL5HD43	$I_F = 20\text{mA}$	—	635	—	nm
Spectrum radiation bandwidth	$\Delta \lambda$	GL5HD43	$I_F = 20\text{mA}$	—	35	—	nm
Reverse current	I_R	GL5HD43	$V_R = 4\text{V}$	—	—	10	μA
Terminal capacitance	C_t	GL5HD43	$V = 0\text{V}$ $f = 1\text{ MHz}$	—	20	—	pF
Response frequency	f_c	GL5HD43	—	—	4	—	MHz

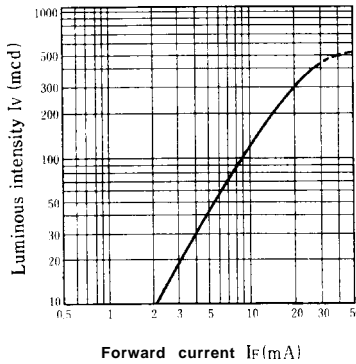
※3 Tolerance: ±30%

■ Characteristics Diagrams

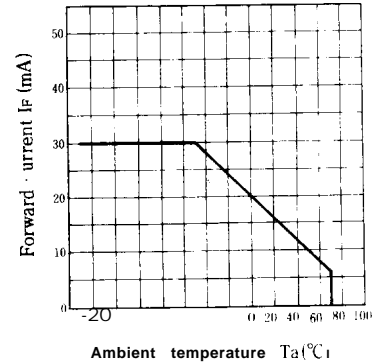
Forward Current vs. Forward Voltage (Ta = 25°C)



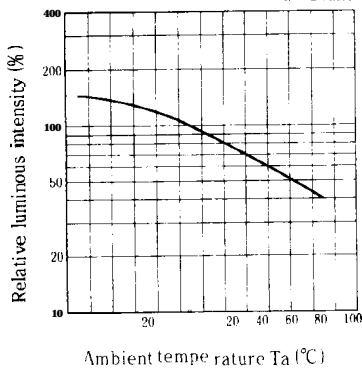
Luminous Intensity vs. Forward Current (Ta = 25°C)



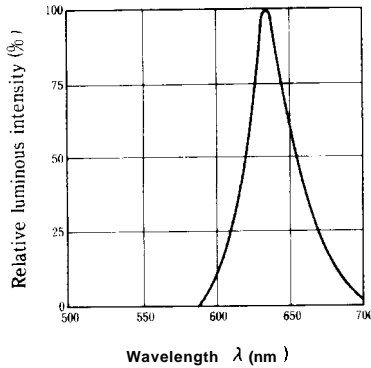
Forward Current Derating Curve



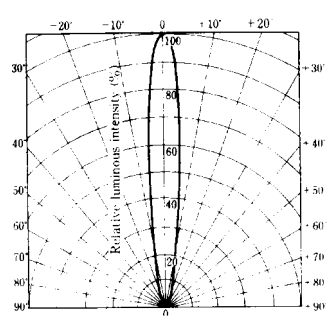
Relative Luminous Intensity vs., Ambient Temperature (IF = 20mA)



Spectrum Distribution (Ta = 25°C)



Radiation Diagram (Ta = 25°C)



GL5HY43 (Yellow)

Electro-optical Characteristics

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

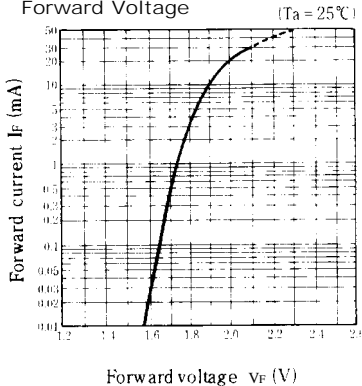
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL5HY43	$I_F = 20\text{mA}$	—	2.0	2.8	“
※3 Luminous intensity	I_V	GL5HY43	$I_F = 20\text{mA}$	100	250	—	mcd
Peak emission wavelength	λ_p	GL5HY43	$I_F = 20\text{mA}$	—	585	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL5HY43	$I_F = 20\text{mA}$	—	30	—	nm
Reverse current	I_R	GL5HY43	$V_R = 4\text{V}$	—	—	10	μA
Terminal capacitance	C_t	GL5HY43	$V = 0\text{V}$ $f = 1\text{MHz}$	—	35	—	pF
Response frequency	f_c	GL5HY43	—	—	4	—	MHz

※3 Tolerance: $\pm 30\%$

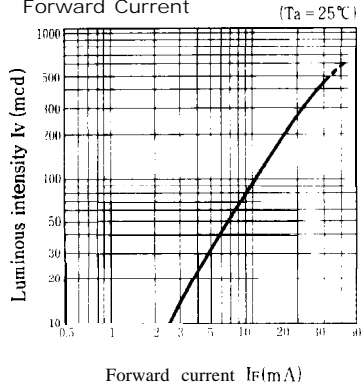
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Characteristics Diagrams

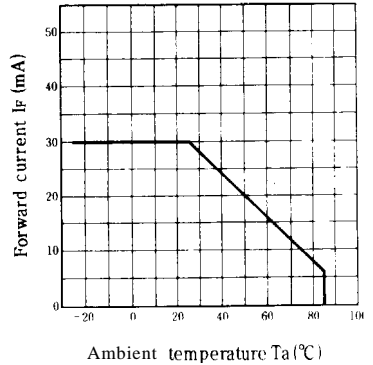
Forward Current vs. Forward Voltage



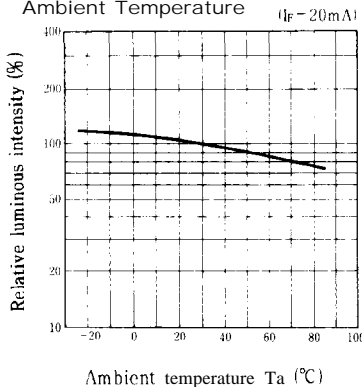
Luminous Intensity vs. Forward Current



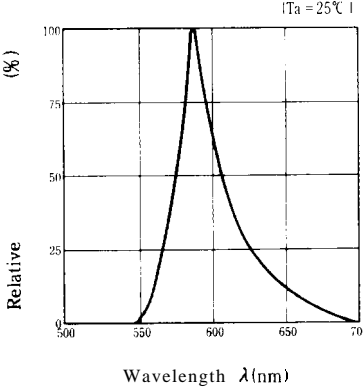
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



Radiation Diagram

