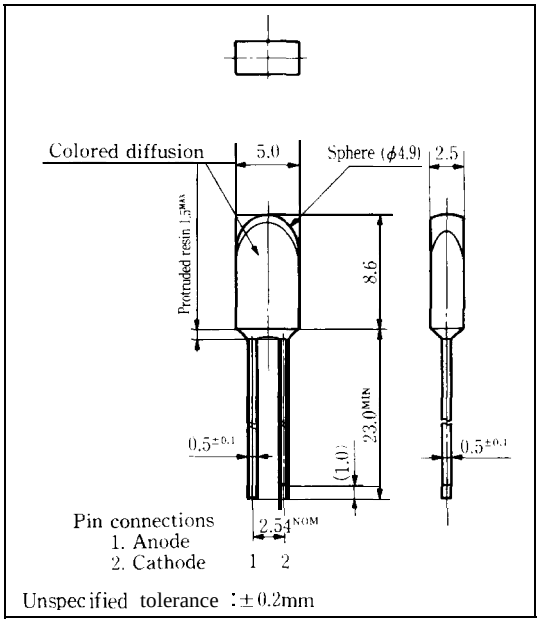
GL8□□2 Series

Arch Type LED Lamps

■ Model No.

GL8LR2 Red (High-luminosity)	GaAlAs/GaAs
GL8TR2 Red (High-luminosity)	GaAlAs/GaAs
GL8HD2 Red	GaAsP/GaP
GL8HY2 Yellow	GaAsP/GaP
GL8EG2 Yellow-green	GaP

■ Outline Dimensions (Unit: mm)



Features

1. 2.5mm×5.0mm arch type all resin mold
2. Colored diffusion lens type

■ Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	GL8LR2 / GL8TR2	GL8HD2 / GL8HY2	GL8EG2			Unit
Power dissipation		P	110	84	84			fnw
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(witbin 5 seconds)					°C

※1 Duty ratio = 1/1(.) , Pulse width = 0.1ms
Duty ratio = 1/16 . Pulse width ≦ 1ms for GL8LR2 and GL8TR2
※2 At the position of 1.6mm from the bottom face of resin package

GL8LR2 (Red) / GL8TR2 (Red)

■ Electro-optical Characteristics

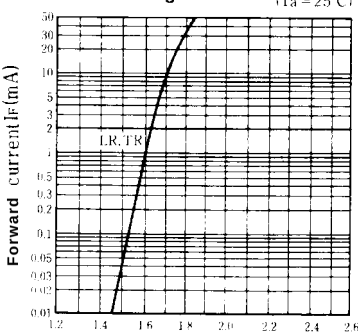
(Ta = 25°C)

Forward voltage	V_F	GL8LR2	I_F=20mA	–	1.75	2.2	V
		GL8TR2	I_F=20mA	–	1.75	2.2	
*3 Luminous intensity	I_V	GL8LR2	I_F=20mA	25	50	–	mcd
		GL8TR2	I_F=20mA	10	25		
Peak emission wavelength	λ_p	GL8LR2	I_F=20mA	–	660	–	nm
		GL8TR2	I_F=20mA		660		
Spectrum radiation bandwidth	$\Delta\lambda$	GL8LR2	I_F=20mA	–	20	–	nm
		GL8TR2	I_F=20mA		20		
		GL8TR2	V_R=4V			10	μA
Terminal capacitance	C_t	GL8LR2	V=0V f=1MHz	–	30	–	pF
		GL8TR2	V=0V f=1MHz	–	20		
Response frequency	f_c	GL8LR2	–	–	9		MHz
		GL8TR2	–	–	9		

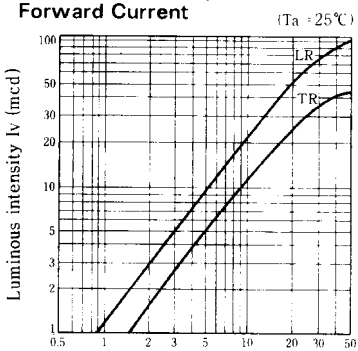
*3 Tolerance: ±30%

■ Characteristics Diagrams

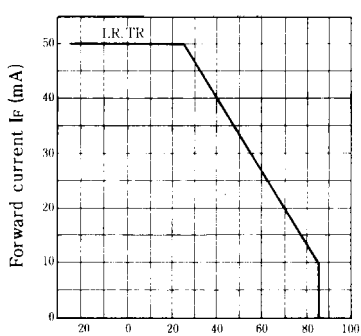
Forward Current vs. Forward Voltage (Ta = 25°C)



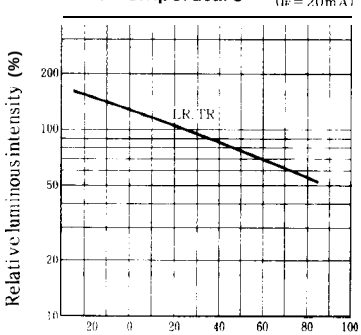
Luminous Intensity vs. Forward Current (Ta = 25°C)



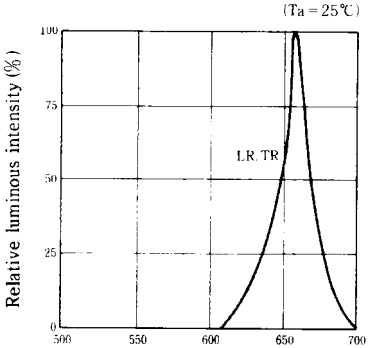
Forward Current Derating Curve



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



Spectrum Distribution (Ta = 25°C)



GL8HD2 (Red)

■ Electro-optical Characteristics

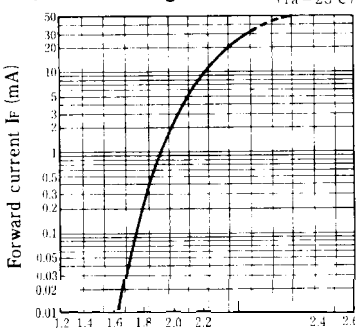
(Ta = 25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL8HD2	I_F = 20mA	–	2.0	2.8	V
※3 Luminous intensity	I_V	GL8HD2	I_F = 20mA	7.0	35	--	mcd
Peak emission wavelength	λ_p	GL8HD2	I_F = 20mA	–	635	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL8HD2	I_F = 20mA	–	35	–	nm
Reverse current	I_R	GL8HD2	V_R = 4V	–		10	μA
Terminal capacitance	C_t	GL8HD2	V = 0V f = 1 MHz	–	20	-	pF
Response frequency	f_c	GL8HD2	-		4	–	MHz

※3 Tolerance: ±30%

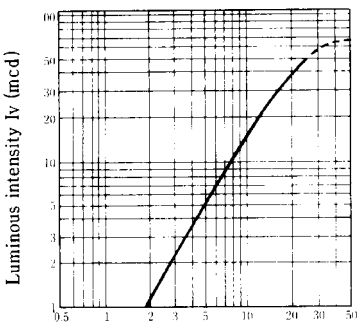
■ Characteristics Diagrams

Forward Current vs. Forward Voltage (Ta = 25℃)



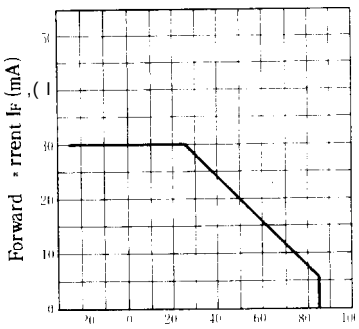
Forward voltage V_F (V)

Luminous Intensity vs. Forward Current (Ta = 25℃)



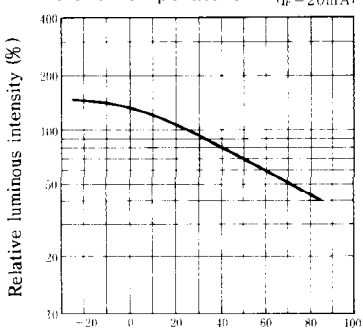
Forward current IF (mA)

Forward Current Derating Curve



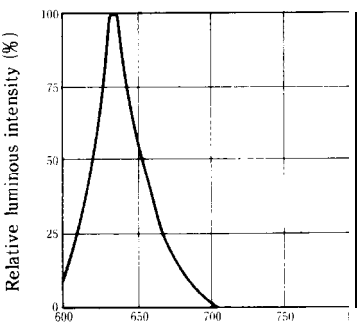
Ambient temperature Ta(℃)

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



Ambient temperature Ta (°C)

Spectrum Distribution (Ta = 25℃)



Wavelength λ(nm)

GL8HY2 (Yellow)

■ Electro-optical Characteristics

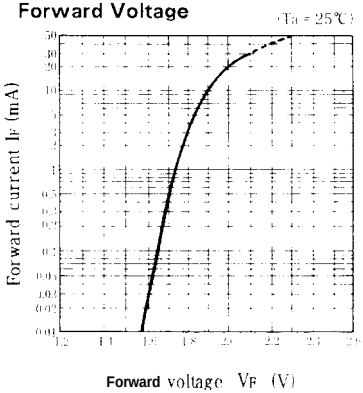
(Ta = 25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX	Unit
Forward voltage	V_F	GL8HY2	I_F = 20mA		2.0	2.8	"
※3 Luminous intensity	I_V	GL8HY2	I_F = 20mA	4.0	16		mcd
Peak emission wavelength	λ_p	GL8HY2	I_F = 20mA		585	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL8HY2	I_F = 20mA		30	–	nm
Reverse current	I_R	GL8HY2	V_R = 4V			10	μA
Terminal capacitance	C_t	GL8HY2	V = 0V f = 1 MHz	–	35	–	pF
Response frequency	f_c	GL8HY2	–		4		MHz

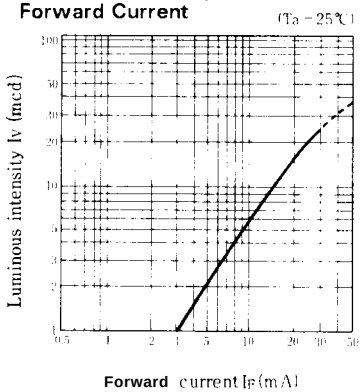
※3 Tolerance: ±30%

■ Characteristics Diagrams

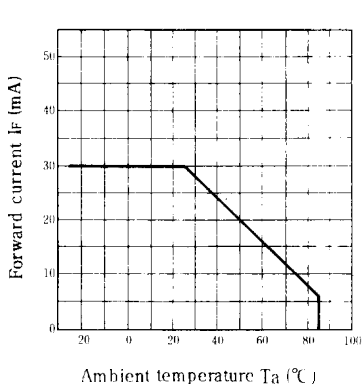
Forward Current vs. Forward Voltage



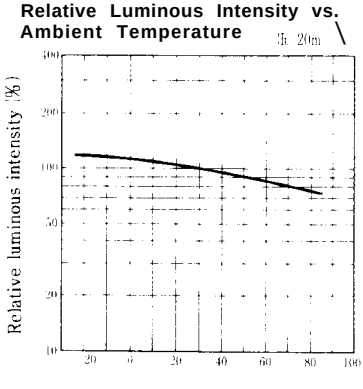
Luminous Intensity vs. Forward Current



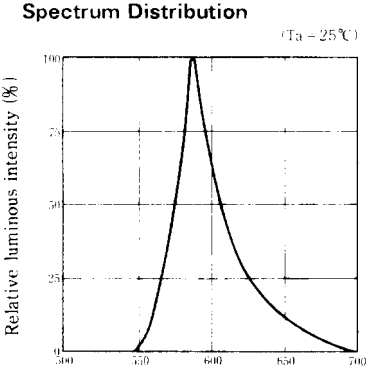
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



GL8EG2 (Yellow-green)

■ Electro-optical Characteristics

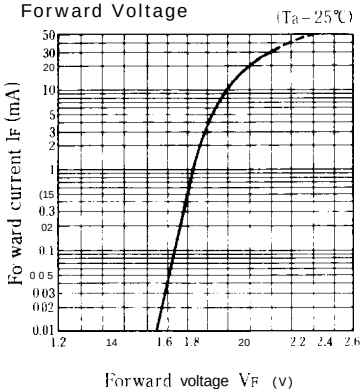
(Ta = 25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL8EG2	I_F = 20mA	–	2.1	2.8	V
※3 Luminous intensity	I_V	GL8EG2	I_F = 20mA	10	50	–	mcd
Peak emission wavelength	λ_p	GL8EG2	I_F = 20mA	–	565	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL8EG2	I_F = 20mA	–	30	–	nm
Reverse current	I_R	GL8EG2	V_R = 4V	–	–	10	μA
Terminal capacitance	C_t	GL8EG2	V=OV f=1 MHz	–	35	–	pF
Response frequency	f_c	GL8EG2	–	–	4	–	MHz

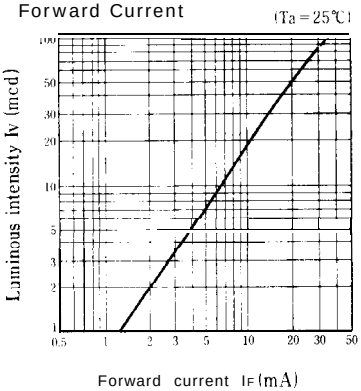
※3 Tolerance: ±30%

■ Characteristics Diagrams

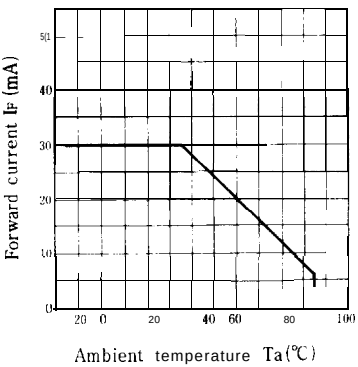
Forward Current **vs.** Forward Voltage



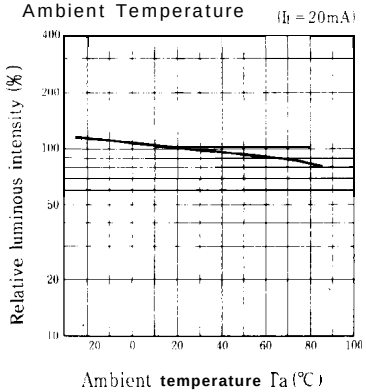
Luminous Intensity vs. Forward Current



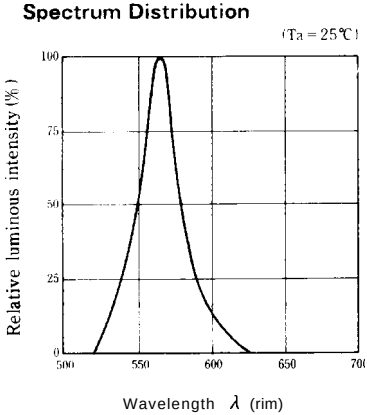
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



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