

GL3CL8 / GL5CL44 GL6CL1 i / LT9550CL

Common Anode Type High-luminosity LED Lamps, First in This Industry

Model No.

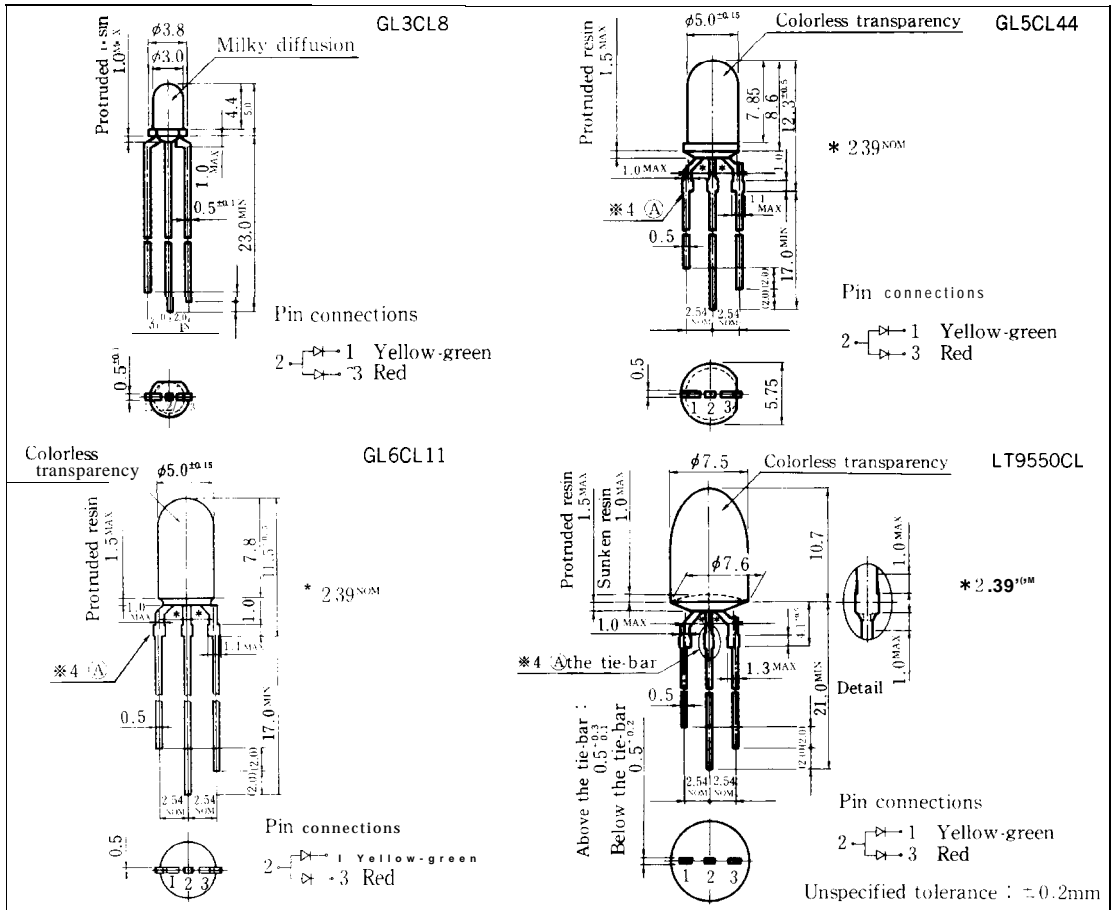
GL3CL8	Yellow-green	GaP
	Red (High-luminosity)	GaAlAs/GaAs
GL5CL44	Yellow-green	GaP
	Red (High-luminosity)	GaAlAs/GaAs
GL6CL1 1	Yellow-green	GaP
	Red (High-luminosity)	GaAlAs/GaAs
LT9550CL	Yellow-green	GaP
	Red (High-luminosity)	GaAlAs/GaAs

Features

1. High-luminosity dichromatic
2. Radiation color : Red, yellow-green and orange (mixed color)
3. Common anode
 - 1. Wide viewing angle
5. To make the driving circuit simpler

Outline Dimensions

(Unit: mm)



GL3CL8 / **GL5CL44** / **GL6CL11** / **LT9550CL**

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL3CL8 GL5CL44 GL6CL11		LT9550CL		Unit
		Yellow - green	Red	Yellow - green	Red	
*1 Power dissipation	P	84	110	140	100	mW
*2 Continuous forward current	I _F	30	50	50	50	mA
*3 Peak forward current	I _{FM}	50	300	100	300	mA
Derating factor	DC	—	0.40	0.67	0.67	mA/°C
	Pulse	—	0.67	4.00	1.34	4.00
Reverse voltage	V _R	5		5		V
Operating temperature	T _{OPR}	-25 to +85		-30 to +85		°C
Storage temperature	T _{stg}	-25 to +100		-30 to +100		°C
*4 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 is lightened separately. When the both diodes of yellow-green and red are lightened simultaneously, the power dissipation of each diode should be less than the half of the value specified in this table.

*2 LT9550CL Yellow-green : When lighting continuously, I_F shall be 30mA or less.

x 3 { GL3CL8, GL5CL44 } Yellow-green : Duty ratio = 1/10, Pulse width = 0.1ms

{ GL6CL11 } Red : Duty ratio = 1/16, Pulse width ≤ 1ms

LT9550CL : Duty ratio = 1/16, Pulse width ≤ 1ms

*4 GL3CL8 : At the position of 1.6mm from the bottom face of resin package

GL5CL44, GL6CL11, LT9550CL : At the (A) position of outline dimensions

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GL3CL8 (Yellow-green/Red)

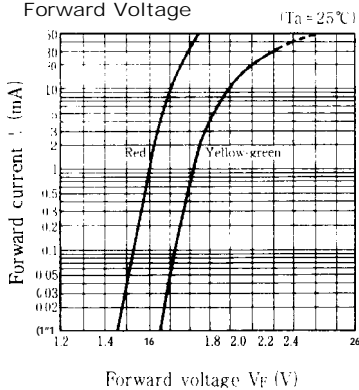
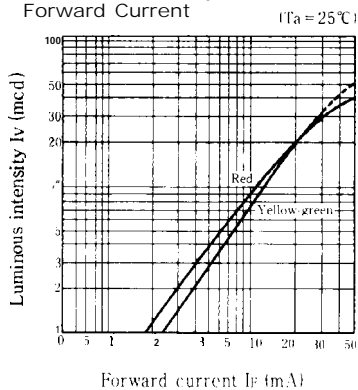
■ Electro-optical Characteristics

(Ta = 25°C)

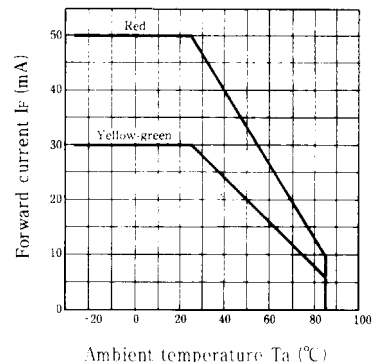
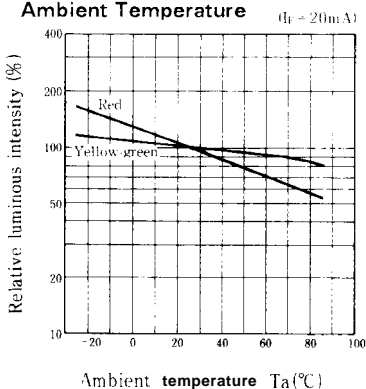
Parameter	Symbol	Radiation color	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	Yellow-green	$I_F = 20\text{mA}$	—	2.1	2.8	V
		Red	$I_F = 20\text{mA}$	—	1.75	2.2	
*5 Luminous intensity	I_V	Yellow-green	$I_F = 20\text{mA}$	10	20	—	mcd
		Red	$I_F = 20\text{mA}$	7.0	20	—	
Peak emission wavelength	λ_p	Yellow-green	$I_F = 20\text{mA}$	—	565	—	nm
		Red	$I_F = 20\text{mA}$	—	660	—	
Spectrum radiation bandwidth	$\Delta\lambda$	Yellow-green	$I_F = 20\text{mA}$	—	30	—	nm
		Red	$I_F = 20\text{mA}$	—	20	—	
Reverse current	I_R	Yellow-green	$V_R = 4\text{V}$	—	—	10	μA
		Red	$V_R = 4\text{V}$	—	—	10	
Terminal capacitance	C_t	Yellow-green	$V = 0\text{V}$ $f = 1\text{MHz}$	—	35	—	pF
		Red	$V = 0\text{V}$ $f = 1\text{MHz}$	—	30	—	
Response frequency	f_c	Yellow-green	—	—	4	—	MHz
		Red	—	—	8	—	

*5 Tolerance: $\pm 30\%$

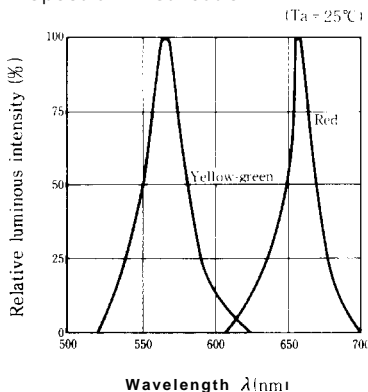
■ Characteristics Diagrams

Forward Current vs.
Forward VoltageLuminous Intensity vs.
Forward Current

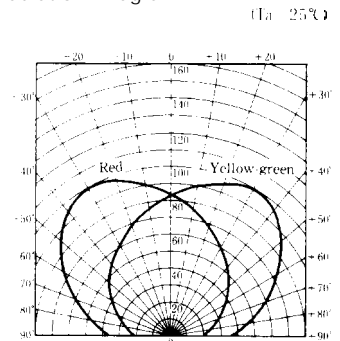
Forward Current Derating Curve

Relative Luminous Intensity vs.
Ambient Temperature

Spectrum Distribution



Radiation Diagram



GL5CL44 (Yellow-green/Red)

Electro-optical Characteristics

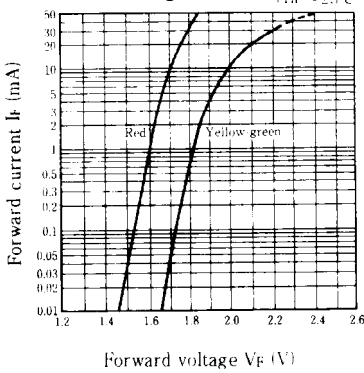
(Ta = 25°C)

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		1.75	2.2	
※5 Luminous intensity	I _v	Yellow-green	I _F = 20mA	50	100		mcd
		Red	I _F = 20mA	50	120	—	
Peak emission wavelength	λ _p	Yellow-green	I _F = 20mA		565	—	nm
		Red	I _F = 20mA		660	—	
Spectrum radiation bandwidth	Δλ	Yellow-green	I _F = 20mA	—	30	—	nm
		Red	I _F = 20mA	—	20	—	
Reverse current	I _R		V _R = 4V		—	10	μA
			V _R = 4V			10	
Terminal capacitance	C _t	Yellow-green	V = 0V f = 1 MHz	—	35	—	pF
		Red	V = 0V f = 1 MHz	—	30	—	
Response frequency	f _c	Yellow-green	—	—	4	—	MHz
		Red	—	—	8	—	

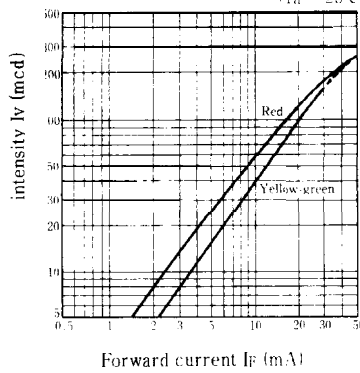
※5 Tolerance: ±30%

Characteristics Diagrams

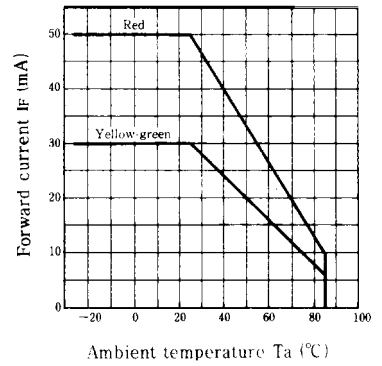
Forward Current vs. Forward Voltage



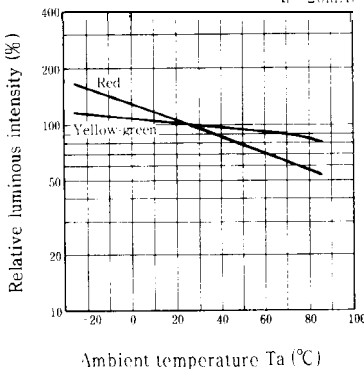
Luminous Intensity vs. Forward Current



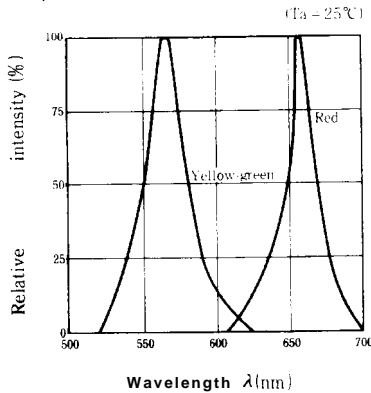
Forward Current Derating Curve



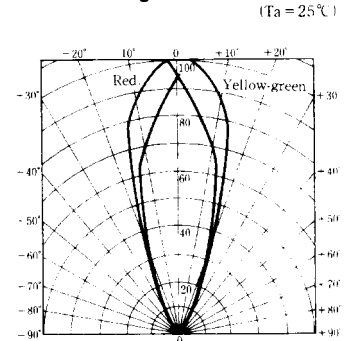
Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



Radiation Diagram



GL6CL11 (Yellow-green/Red)

■ **Electro-optical Characteristics**

(Ta=25°C)

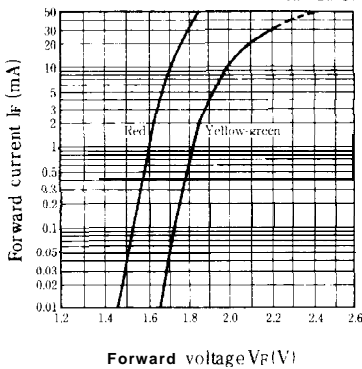
Parameter	Symbol	Radiation color	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	Yellow-green	I _F = 20mA	—	2.1	2.8	V
		Red	I _F = 20mA	—	1.75	2.2	
※5 Luminous intensity	I _V	Yellow-green	I _F = 20mA	40	80	—	mcd
		Red	I _F = 20mA	40	100	—	
Peak emission wavelength	λ _p	Yellow-green	I _F = 20mA	—	565	—	nm
		Red	I _F = 20mA	—	660	—	
Spectrum radiation bandwidth	Δλ	Yellow-green	I _F = 20mA	—	30	—	nm
		Red	I _F = 20mA	—	20	—	
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	—	pF
		Red	V = 0V f = 1MHz	—	30	—	
Response frequency	f _c	Yellow-green	—	—	4	—	kHz
		Red	—	—	8	—	

※5 Tolerance: ±30%

■ **Characteristics Diagrams**

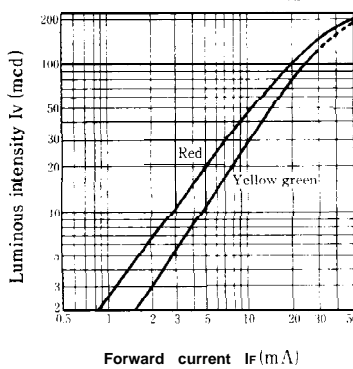
Forward Current vs. Forward Voltage

(Ta = 25°C)

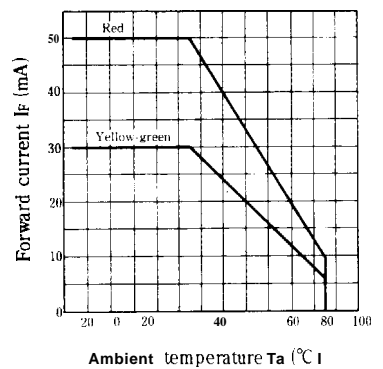


Luminous Intensity vs. Forward Current

(Ta = 25°C)

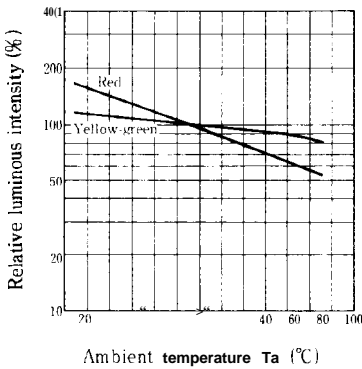


Forward Current Derating Curve



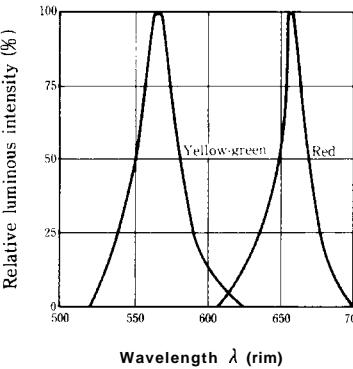
Relative Luminous Intensity vs. Ambient Temperature

(I_F = 20mA)



Spectrum Distribution

(Ta = 25°C)



LT9550CL (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	—	1.75	2.0	
*5 Luminous intensity	I _v	Yellow-green	I _F = 20mA	80	120	—	mcd
		Red	I _F = 20mA	120	250	—	
Peak emission wavelength	λ _p	Yellow-green	I _F = 20mA	—	565	—	‘m
		Red	I _F = 20mA	—	660	—	
Spectrum radiation bandwidth	Δλ	Yellow-green	I _F = 20mA	—	30	—	‘m
		Red	I _F = 20mA	—	20	—	
Reverse current	I _R	Yellow-green	V _R = 4V	—	—	1.0	μA
		Red	V _R = 4V	—	—	10	
Terminal capacitance	C _t	Yellow-green	V = 0V f = 1 MHz	—	35	—	pF
		Red	V = 0V f = 1 MHz	—	30	—	
Response frequency	f _c	Yellow-green	—	—	4	—	MHz
		Red	—	—	8	—	

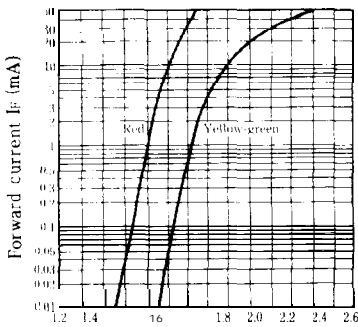
*5 Tolerance: ±30%

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Characteristics Diagrams

Forward Current vs. Forward Voltage

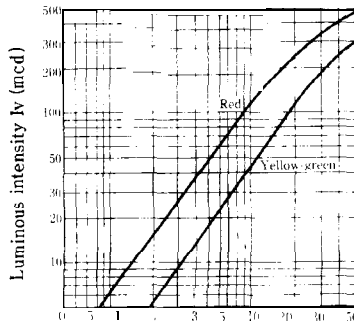
(Ta = 25°C)



Forward voltage V_F (V)

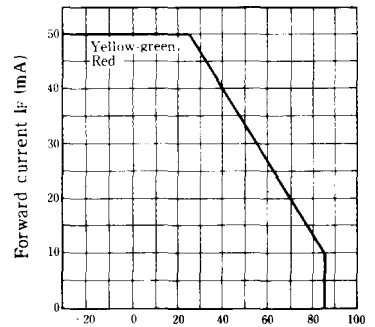
Luminous Intensity vs. Forward Current

(Ta = 25°C)



Forward current I_F (mA)

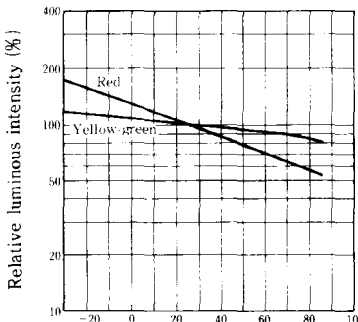
Forward Current Derating Curve



Ambient temperature Ta (°C)

Relative Luminous Intensity vs. Ambient Temperature

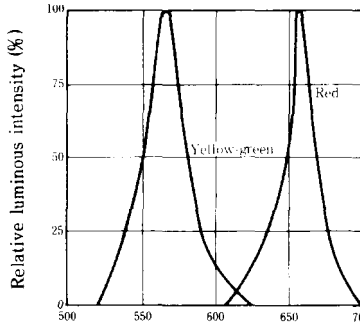
(I_F = 20mA)



Ambient temperature Ta (°C)

Spectrum Distribution

(Ta = 25°C)



Wavelength λ (nm)

Radiation Diagram

(Ta = 25°C)

