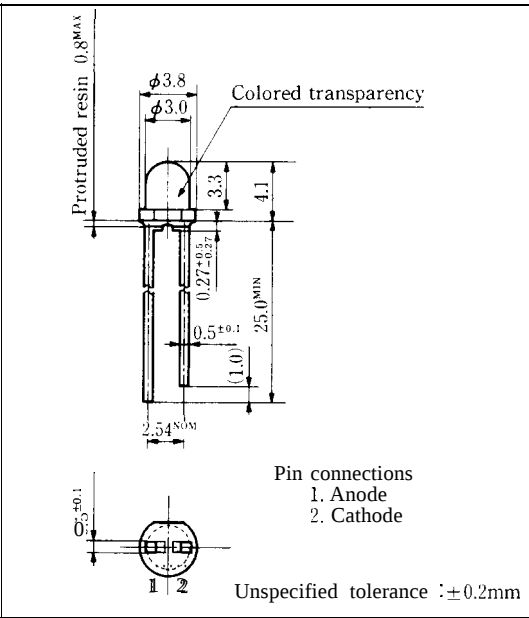


GL3□□43 Series $\phi 3\text{mm(T-1)}$ Cylinder Type LED Lamps

Model No.

- GL3UR43 Red (Super-luminosity) GaAlAs/GaAlAs
- GL3LR43 Red (High-luminosity) GaAlAs/GaAs
- GL3TR43 Red (High-luminosity) GaAlAs/GaAs
- GL3PR43 Red GaP
- GL3HD43 Red GaAsP/GaP
- GL3HS43 Sunset orange GaAsP/GaP
- GL3HY43 Yellow GaAsP/GaP
- GL3EG43 Yellow-green GaP
- GL3KG43 Green GaP

Outline Dimensions (Unit: mm)



Features

- 1. $\phi 3\text{mm(T-1)}$ all resin mold
- 2. Colored transparency lens type
- 3. Wide viewing angle

Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL3UR43	GL3LR43	GL3PR43	GL3HD43	GL3EG43	Unit
			GL3TR43		GL3HS43	GL3KG43	
					GL3HY43		
Power dissipation	P	75	110	23	84	84	mW
Continuous forward current	I _F	30	50	10	30	30	mA
※1 Peak forward current	I _{FM}	50	300	50	50	50	mA
Derating factor	DC	—	0.40	0.67	0.13	0.40	mA/°C
	Pulse	—	0.67	4.00	0.67	0.67	mA/°C
Reverse voltage	V _R	4	5	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 ≤ 1ms for GL3LR43 and GL3TR43
※2 At the position of 1.6mm from the bottom face of resin package

GL3UR43 (Red)

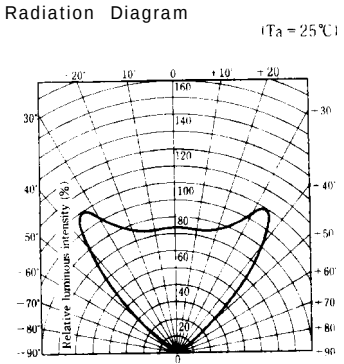
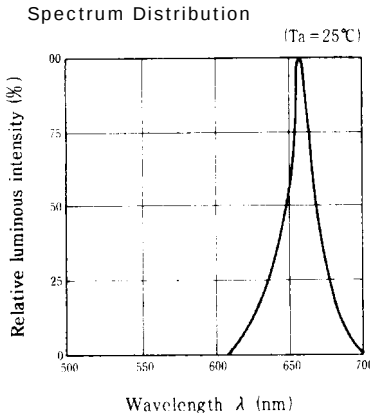
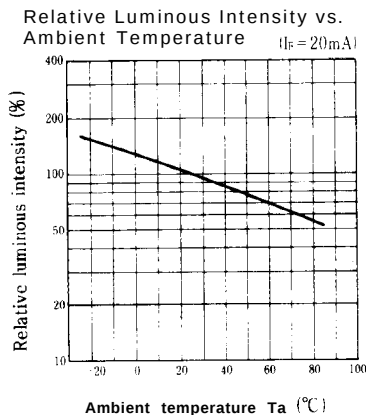
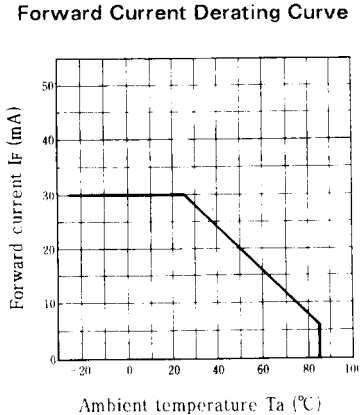
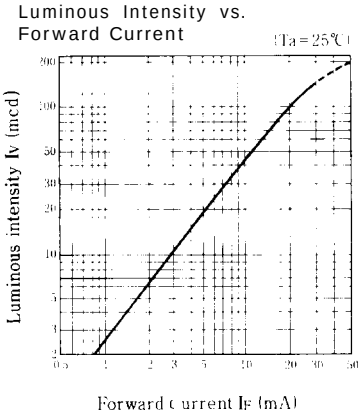
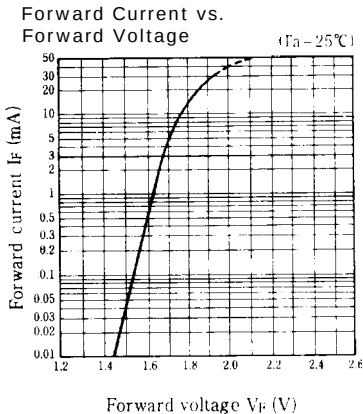
■ Electro-optical Characteristics

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL3UR43	$I_F = 20\text{mA}$	—	185	2.5	V
※3 Luminous intensity	I_V	GL3UR43	$I_F = 20\text{mA}$	50	100	—	mcd
Peak emission wavelength	λ_p	GL3UR43	$I_F = 20\text{mA}$		660	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL3UR43	$I_F = 20\text{mA}$	—	20	—	nm
Reverse current	I_R	GL3UR43	$V_R = 3\text{V}$		—	100	μA
Terminal capacitance	C_t	GL3UR43	$V = 0\text{V}$ $f = \text{MHz}$	—	25	—	pF
Response frequency	f_c	GL3UR43	—	—	8	—	MHz

※3 Tolerance: $\pm 30\%$

■ Characteristics Diagrams



GL3LR43 (Red) / GL3TR43 (Red)

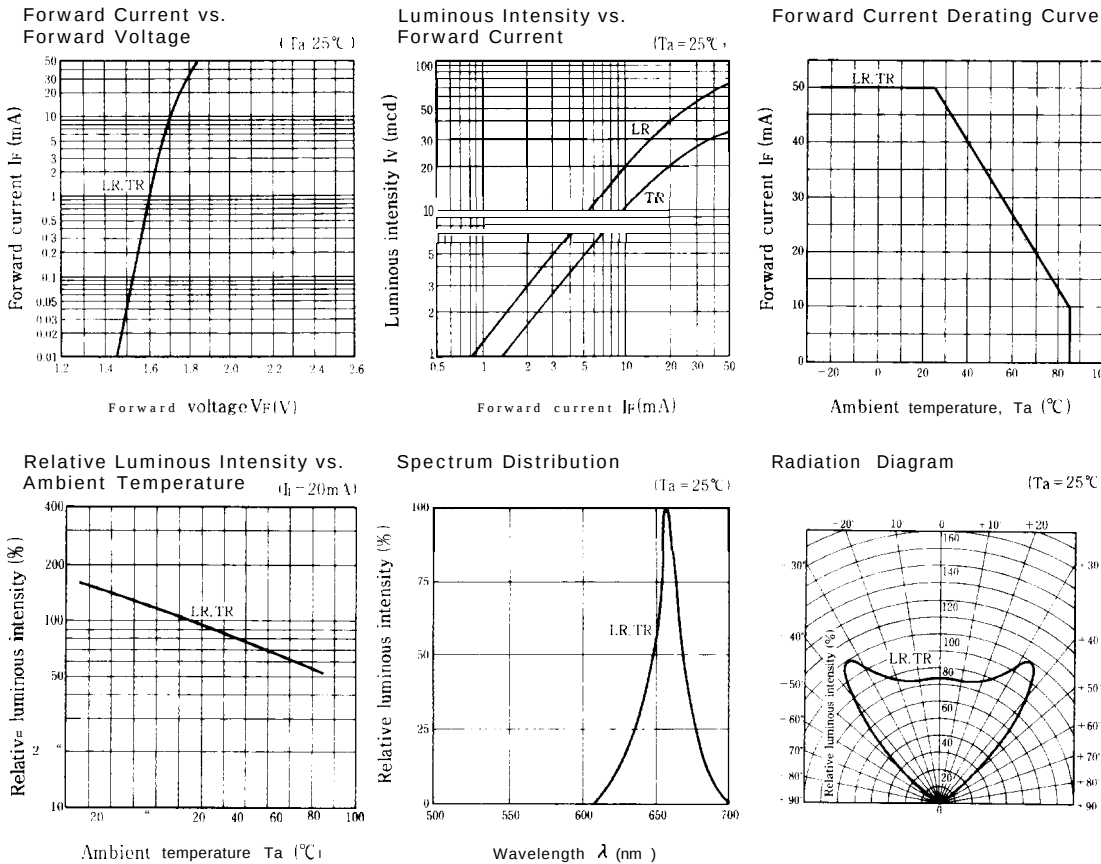
Electro-optical Characteristics

(Ta = 25°C)

Parameter	Symbol	Model No,	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	VF	GL3LR43	IF = 20mA	—	1,75	2,2	V
		GL3TR43	IF = 20mA	—	1,75	2,2	
※3 Luminous intensity	IV	GL3LR43	IF = 20mA	20	40	—	'cd
		GL3TR43	IF = 20mA	10	20	—	
Peak emission wavelength	λp	GL3LR43	IF = 20mA	—	660	—	'm
		GL3TR43	IF = 20mA	—	660	—	
Spectrum radiation bandwidth	Δλ	GL3LR43	IF = 20mA	—	20	—	'm
		GL3TR43	IF = 20mA	—	20	—	
Reverse current	IR	GL3LR43	VR = 4V	—	—	10	μA
		GL3TR43	VR = 4V	—	—	10	
Terminal capacitance	Ct	GL3LR43	V = 0V f = 1MHz	—	30	—	pF
		GL3TR43	V = 0V f = 1 MHz	—	30	—	
Response frequency	fc	GL3LR43	—	—	8	—	MHz
		GL3TR43	—	—	8	—	

※3 Tolerance: ±30%

Characteristics Diagrams



GL3PR43 (Red) / GL3HD43 (Red)

■ Electro-optical Characteristics

(Ta = 25°C)

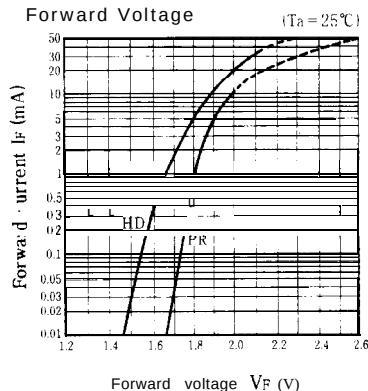
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL3PR43	$I_F = 5\text{mA}$	—	1.9	2.3	V
		GL3HD43	$I_F = 20\text{mA}$	—	2.0	2.8	
※3 Luminous intensity	I_V	GL3PR43	$I_F = 5\text{mA}$	1.0	3.0	—	mcd
		GL3HD43	$I_F = 20\text{mA}$	7.0	25	—	
Peak emission wavelength	λ_p	GL3PR43	$I_F = 5\text{mA}$	—	695	—	nm
		GL3HD43	$I_F = 20\text{mA}$	—	635	—	
Spectrum radiation bandwidth	$\Delta\lambda$	GL3PR43	$I_F = 5\text{mA}$	—	100	—	nm
		GL3HD43	$I_F = 20\text{mA}$	—	35	—	
Reverse current	I_R	GL3PR43	$V_R = 4\text{V}$	—	—	10	μA
		GL3HD43	$V_R = 4\text{V}$	—	—	10	
Terminal capacitance	C_t	GL3PR43	$V = 0\text{V}$ $f = 1\text{MHz}$	—	55	—	pF
		GL3HD43	$V = 0\text{V}$ $f = 1\text{MHz}$	—	20	—	
Response frequency	f_c	GL3PR43	—	—	4	—	MHz
		GL3HD43	—	—	4	—	

※3 Tolerance: $\pm 30\%$

■ Characteristics Diagrams

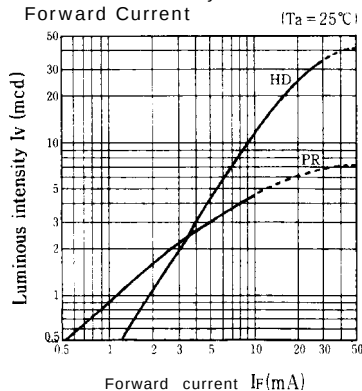
Forward Current vs.

Forward Voltage

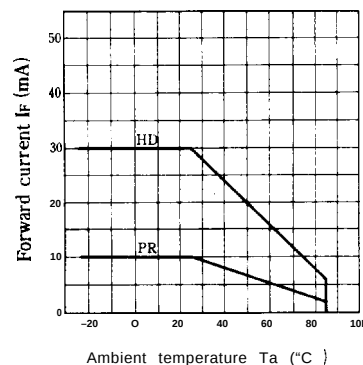
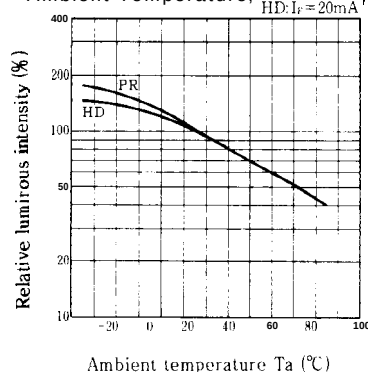


Luminous Intensity vs.

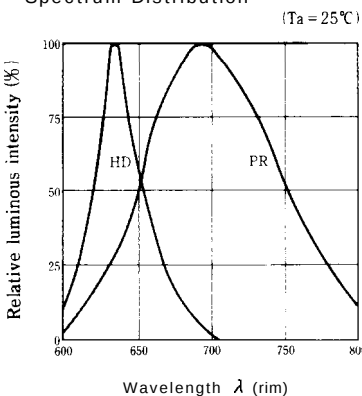
Forward Current



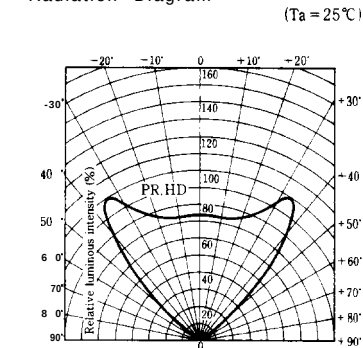
Forward Current Derating Curve

Relative Luminous Intensity vs.
Ambient Temperature, PR: $I_F = 5\text{mA}$
HD: $I_F = 20\text{mA}$ 

Spectrum Distribution



Radiation Diagram



GL3HS43 (Sunset orange) / GL3HY43 (Yellow)

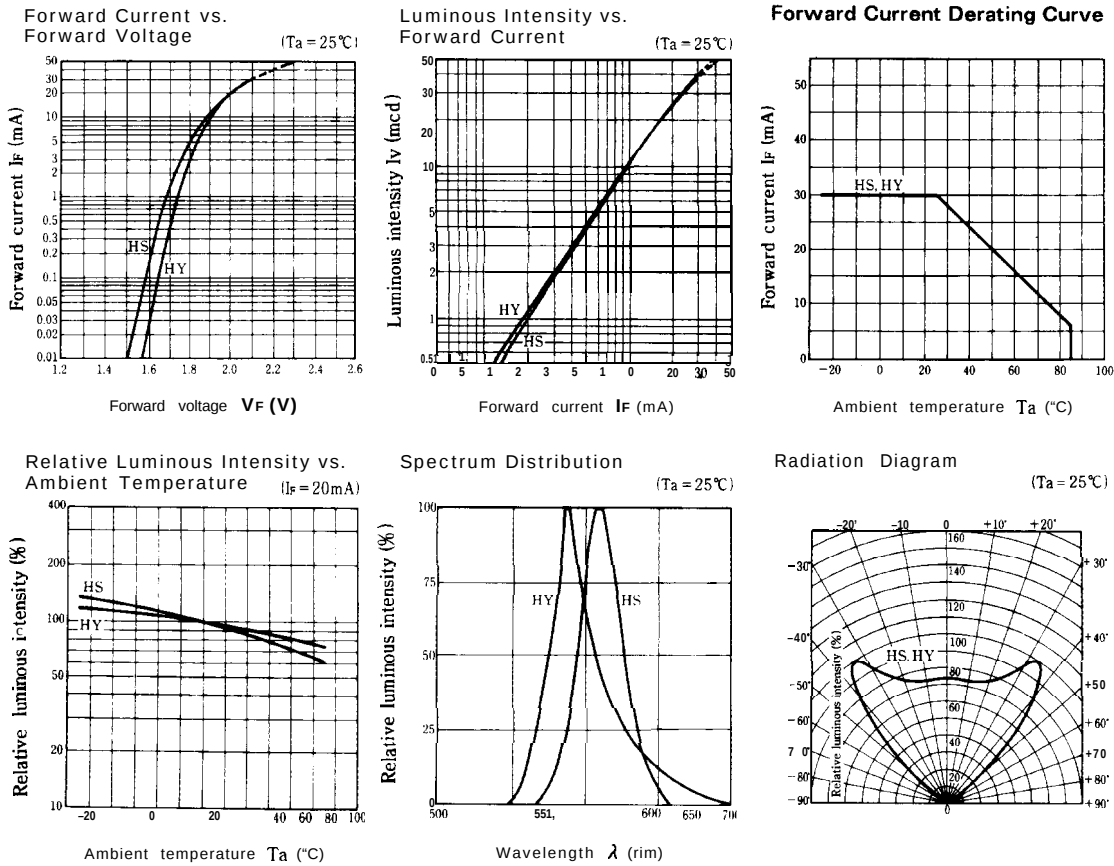
■ Electro-optical Characteristics

(Ta=25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	VF	GL3HS43	IF=20mA	—	2.0	2,8	V
		GL3HY43	IF=20mA	—	2.0	2.8	
*3 Luminous intensity	IV	GL3HS43	IF=20mA	7,0	25	—	‘cd
		GL3HY43	IF=20mA	7.0	25	—	
Peak emission wavelength	λp	GL3HS43	IF=20mA	—	610	—	‘m
		GL3HY43	IF=20mA	—	585	—	
Spectrum radiation bandwidth	Δλ	GL3HS43	IF=20mA	—	35	—	‘m
		GL3HY43	IF=20mA	—	30	—	
Reverse current	IR	GL3HS43	VR=4V	—	—	10	μA
		GL3HY43	VR=4V	—	—	10	
Terminal capacitance	Ct	GL3HS43	V=0V f=1 MHz	—	15	—	pF
		GL3HY43	V=0V f=1MHz	—	35	—	
Response frequency	fc	GL3HS43	—	—	4	—	‘Hz
		GL3HY43	—	—	4	—	

*3 Tolerance: ±30%

■ Characteristics Diagrams



GL3EG43 (Yellow-green) / GL3KG43 (Green)

■ Electro-optical Characteristics

(Ta = 25°C)

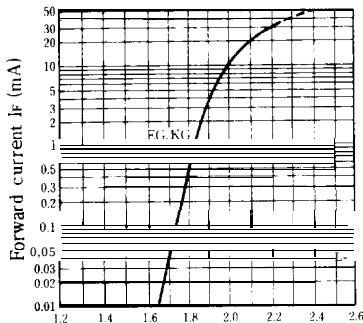
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL3EG43	$I_F = 20\text{mA}$		2.1	2.8	V
		GL3KG43	$I_F = 20\text{mA}$	—	2.1	2.8	
※3 Luminous intensity	I_V	GL3EG43	$I_F = 20\text{mA}$	10	25	—	'cd
		GL3KG43	$I_F = 20\text{mA}$	8.0	20	—	
Peak emission wavelength	λ_p	GL3EG43	$I_F = 20\text{mA}$	—	565	—	nm
		GL3KG43	$I_F = 20\text{mA}$	—	555	—	
Spectrum radiation bandwidth	$\Delta\lambda$	GL3EG43	$I_F = 20\text{mA}$	—	30	—	'm
		GL3KG43	$I_F = 20\text{mA}$	—	25	—	
Reverse current	I_R	GL3EG43	$V_R = 4\text{V}$	—	—	10	μA
		GL3KG43	$V_R = 4\text{V}$	—	—	10	
Terminal capacitance	C_t	GL3EG43	$V = 0\text{V}$ $f = 1\text{MHz}$	—	35	—	pF
		GL3KG43	$V = 0\text{V}$ $f = 1\text{MHz}$	—	4(1)	—	
Response frequency	f_c	GL3EG43	—	—	4	—	MHz
		GL3KG43	—	—	4	—	

※3 Tolerance: $\pm 30\%$

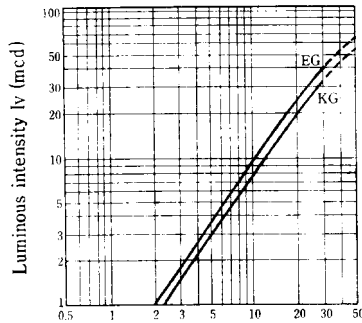
■ Characteristics Diagrams

Forward Current vs.
Forward Voltage

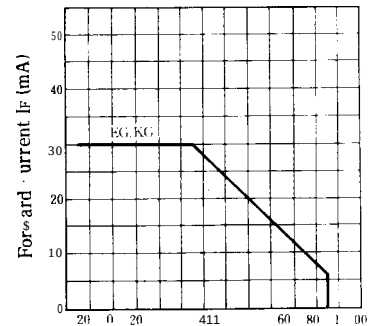
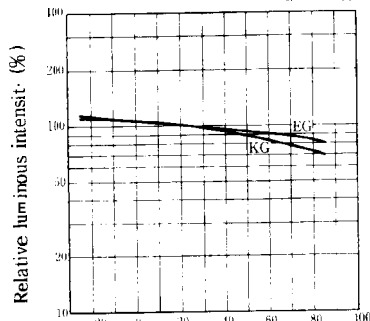
(Ta = 25°C)

Forward voltage V_F (V)Luminous Intensity vs.
Forward Current

(Ta = 25°C)

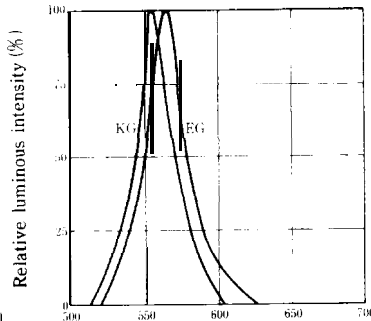
Forward current I_F (mA)

Forward Current Derating Curve

Ambient temperature T_a (°C)Relative Luminous Intensity vs.
Ambient Temperature(I_F = 20mA)Ambient temperature T_a (°C)

Spectrum Distribution

(Ta = 25°C)

Wavelength λ (nm)

Radiation Diagram

(Ta = 25°C)

