

GL9□□3 Series

Triangle Type LED Lamps

T-41-23

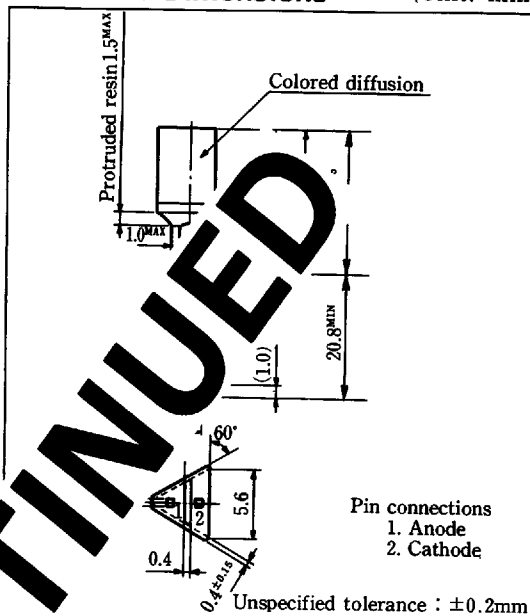
■ Model No.

GL9PR3 Red
 GL9HY3 Yellow
 GL9EG3 Yellow-green

GaP
 GaAsP/GaP
 GaP

■ Outline Dimensions

(Unit: mm)



■ Features

1. Equilateral triangle type all resin mold
2. Colored diffusion lens type

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL9PR3	GL9HY3			Unit
			GL9EG3			
Power dissipation	P	23	84			mW
Continuous forward current	I _F	10	30			mA
*1 Peak forward current	I _{FM}	50	50			mA
Derating factor	DC	—	0.13	0.40		mA/°C
	Pulse	—	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
*2 Soldering temperature	T _{sol}	260(within 5 seconds)				°C

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

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

LED Lamps

51E D ■ 8180798 0007080 T14 ■ SRPJ

GL9PR3 (Red)

T-41-23

Electro-optical Characteristics

(Ta = 25°C)

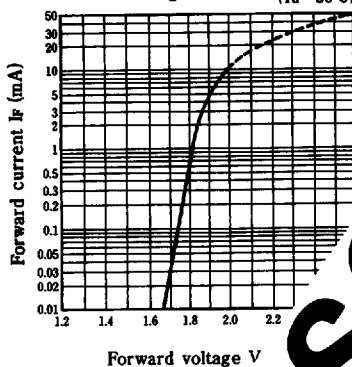
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL9PR3	$I_F = 5\text{mA}$	—	1.9	2.3	V
※3 Luminous intensity	I_v	GL9PR3	$I_F = 5\text{mA}$	0.30	0.80	—	mcd
Peak emission wavelength	λ_p	GL9PR3	$I_F = 5\text{mA}$	—	695	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL9PR3	$I_F = 5\text{mA}$	—	100	—	nm
Reverse current	I_R	GL9PR3	$V_R = 4\text{V}$	—	—	10	μA
Terminal capacitance	C_t	GL9PR3	$V = 0\text{V}$	—	55	—	pF
Response frequency	f_c	GL9PR3	—	—	4	—	MHz

※3 Tolerance: $\pm 30\%$

Characteristics Diagrams

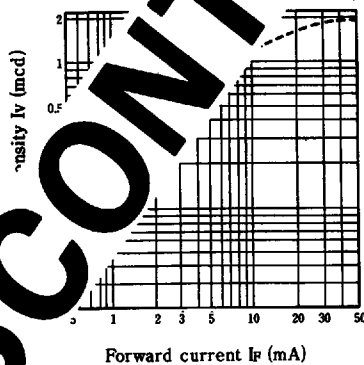
Forward Current vs. Forward Voltage

(Ta = 25°C)

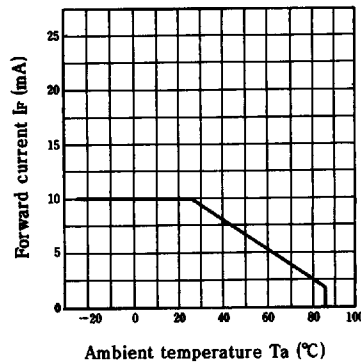


Luminous Intensity vs. Forward Current

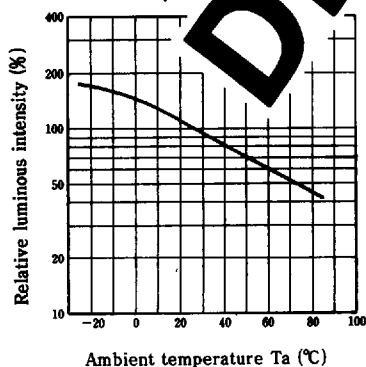
(Ta = 25°C)



Forward Current Derating Curve

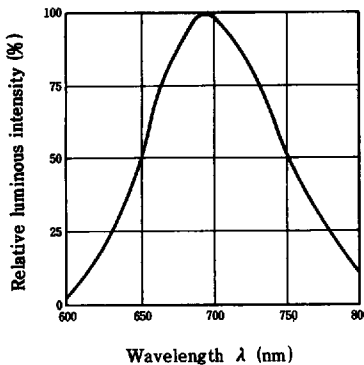


Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution

(Ta = 25°C)



■ Electro-optical Characteristics

(Ta = 25°C)

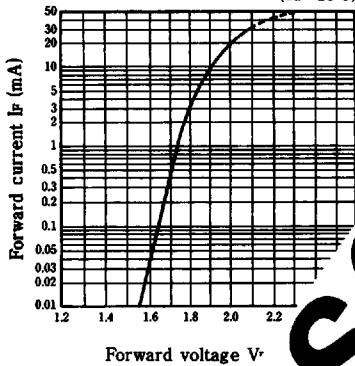
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	GL9HY3	I _F = 20mA	—	2.0	2.8	V
※3 Luminous intensity	I _v	GL9HY3	I _F = 20mA	0.6	2.0	—	mcd
Peak emission wavelength	λ _p	GL9HY3	I _F = 20mA	—	585	—	nm
Spectrum radiation bandwidth	Δλ	GL9HY3	I _F = 20mA	—	30	—	nm
Reverse current	I _R	GL9HY3	V _R = 4V	—	—	10	μA
Terminal capacitance	C _t	GL9HY3	V = 0V	—	35	—	pF
Response frequency	f _c	GL9HY3	—	—	4	—	MHz

※3 Tolerance: ±30%

■ Characteristics Diagrams

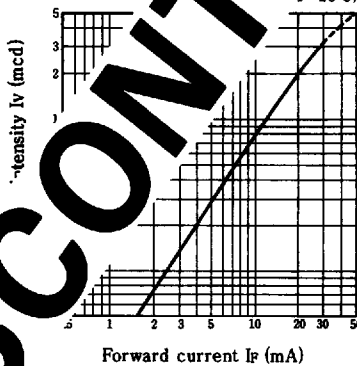
Forward Current vs. Forward Voltage

(Ta = 25°C)

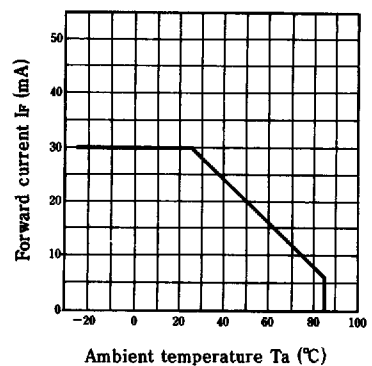


Luminous Intensity vs. Forward Current

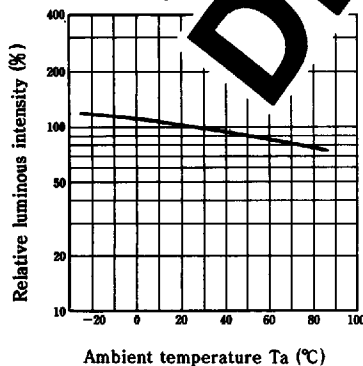
(Ta = 25°C)



Forward Current Derating Curve

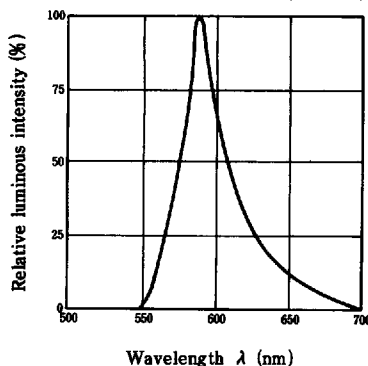


Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution

(Ta = 25°C)



Wavelength λ (nm)

SHARP CORP
GL9EG3 (Yellow-green)

T-41-23

■ Electro-optical Characteristics

(Ta = 25°C)

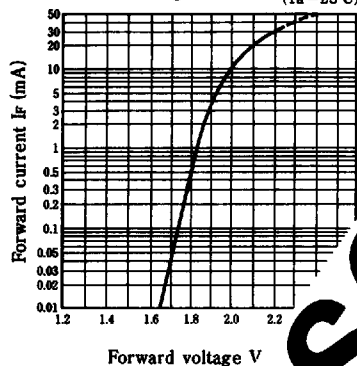
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL9EG3	$I_F = 20\text{mA}$	—	2.1	2.8	V
※3 Luminous intensity	I_v	GL9EG3	$I_F = 20\text{mA}$	2.0	4.0	—	mcd
Peak emission wavelength	λ_p	GL9EG3	$I_F = 20\text{mA}$	—	565	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL9EG3	$I_F = 20\text{mA}$	—	30	—	nm
Reverse current	I_R	GL9EG3	$V_R = 4\text{V}$	—	—	10	μA
Terminal capacitance	C_t	GL9EG3	$V = 0\text{V}$	—	35	—	pF
Response frequency	f_c	GL9EG3	—	—	4	—	MHz

※3 Tolerance: $\pm 30\%$

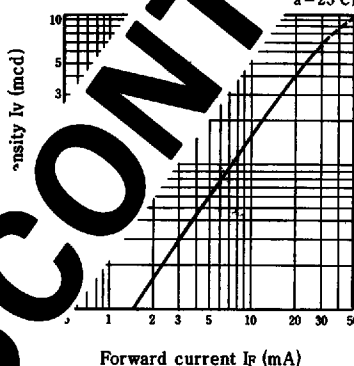
■ Characteristics Diagrams

Forward Current vs.
Forward Voltage

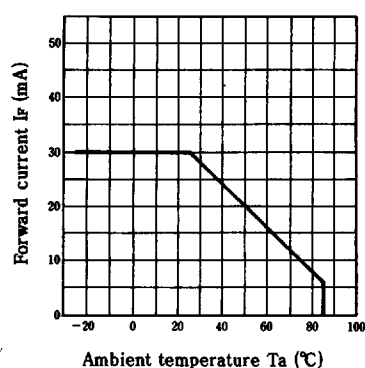
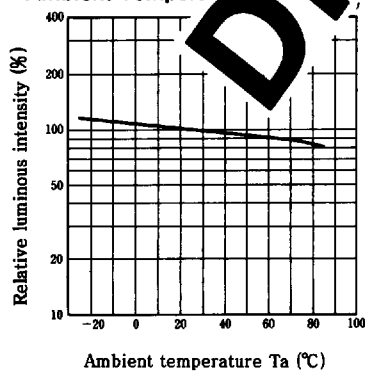
(Ta = 25°C)

Luminous Intensity vs.
Forward Current

(Ta = 25°C)

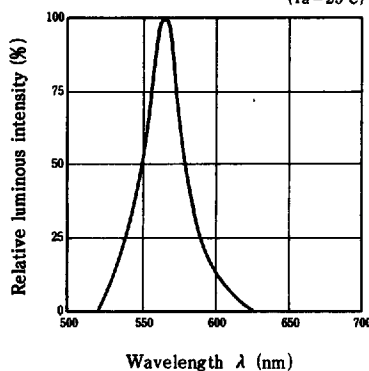


Forward Current Derating Curve

Relative Luminous Intensity vs.
Ambient Temperature

Spectrum Distribution

(Ta = 25°C)



Radiation Diagram

(Ta = 25°C)

Packing Specifications for LED Chips

T-90-20

1. Chip Packing

The chips are pasted up on the center of an adhesive sheet, then covered with a protective sheet.

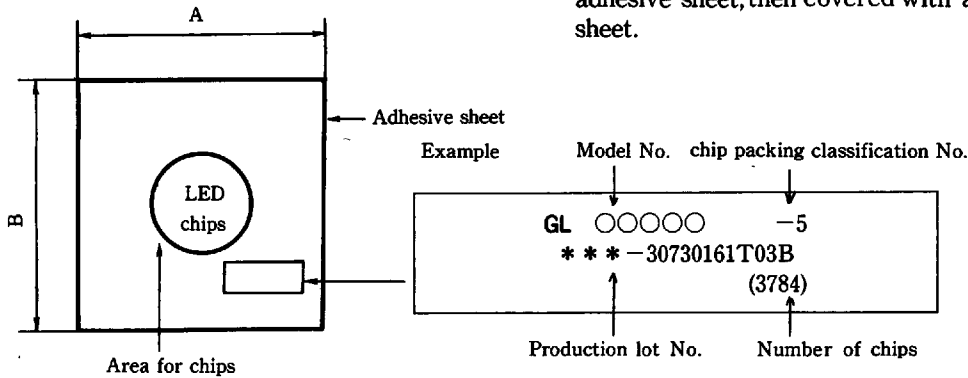


Fig. 1

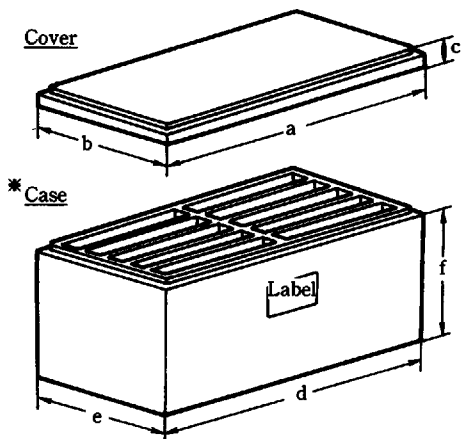
2. Sheet Packing

Put the chip-pasted sheet into a dedicated styrol case, then paste up a label shown in Fig. 2 on its side.

PART No.	
QUANTITY	00 pcs.
(UNITS)
ID No.	
SHARP CORPORATION	

Fig. 2

3. Styrol Case



*Divided into 10 divisions

Fig. 3

T-90-20

Adhesive sheet size A × B	Cover			Case			1 division		
	a	b	c	d	e	f	Length	Width	Depth
110×110	265	170	22.5	265	170	125	115	22.5	115
150×150	350	170	22.5	350	170	165	155	22.5	155
180×180	465	200	22.5	465	200	220	205	25	205
200×200	465	200	22.5	465	200	220	205	25	205

As to details such as materials, colors and paste intensity of chip-pasted sheets, etc., please contact our sales department.