

# GL8□□1 Series

## Rectangle Type LED Lamps

T-41-23

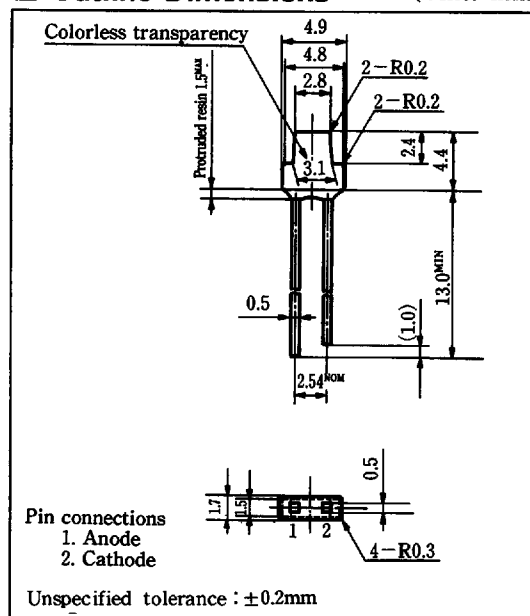
### ■ Model No.

GL8HD1 Red  
GL8HY1 Yellow

GaAsP/GaP  
GaAsP/GaP

### ■ Outline Dimensions

(Unit: mm)



### ■ Features

- 1.5mm × 2.8mm rectangle type all resin mold
- Colorless transparency lens type

### ■ Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	GL8HD1	GL8HY1				Unit	
Power dissipation	P	84	84				mW	
Continuous forward current	I <sub>F</sub>	30	30				mA	
*1 Peak forward current	I <sub>FM</sub>	50	50				mA	
Derating factor	DC	—	0.40	0.40			mA/°C	
	Pulse	—	0.67	0.67			mA/°C	
Reverse voltage	V <sub>R</sub>	5	5				V	
Operating temperature	T <sub>opr</sub>	-25 to +85						°C
Storage temperature	T <sub>stg</sub>	-25 to +100						°C
*2 Soldering temperature	T <sub>sol</sub>	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

51E D ■ 8180798 0007000 751 ■ SRPJ

GL8HD1 (Red)

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(Ta=25°C)

## ■ Electro-optical Characteristics

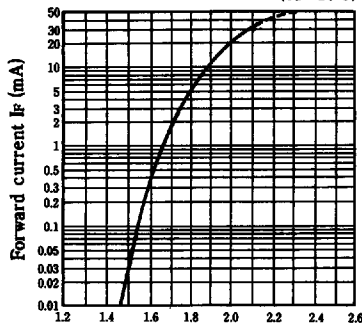
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	$V_F$	GL8HD1	$I_F=20\text{mA}$	—	2.0	2.8	V
※3 Luminous intensity	$I_v$	GL8HD1	$I_F=20\text{mA}$	2.5	10	—	mcd
Peak emission wavelength	$\lambda_p$	GL8HD1	$I_F=20\text{mA}$	—	635	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL8HD1	$I_F=20\text{mA}$	—	35	—	nm
Reverse current	$I_R$	GL8HD1	$V_R=4\text{V}$	—	—	10	$\mu\text{A}$
Terminal capacitance	$C_t$	GL8HD1	$V=0\text{V}$ $f=1\text{MHz}$	—	20	—	pF
Response frequency	$f_c$	GL8HD1	—	—	4	—	MHz

※3 Tolerance:  $\pm 30\%$ 

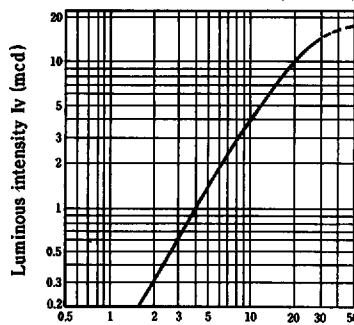
## ■ Characteristics Diagrams

Forward Current vs.  
Forward Voltage

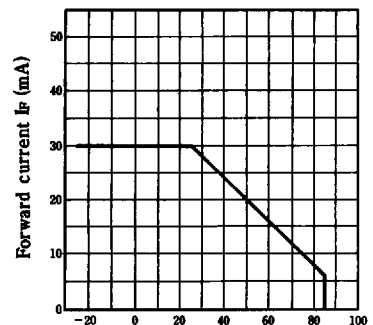
(Ta=25°C)

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

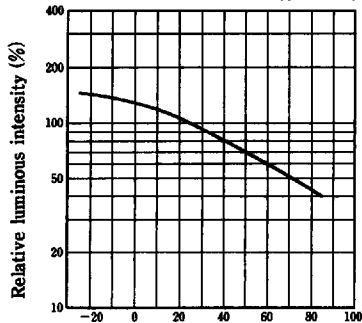
(Ta=25°C)

Forward current  $I_F$  (mA)

Forward Current Derating Curve

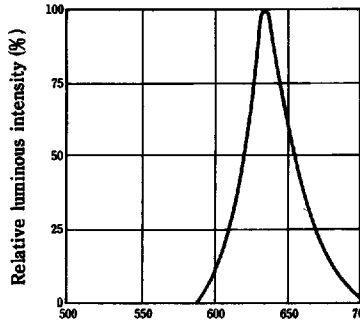
Ambient temperature  $T_a$  (°C)Relative Luminous Intensity vs.  
Ambient Temperature

(If=20mA)

Ambient temperature  $T_a$  (°C)

Spectrum Distribution

(Ta=25°C)

Wavelength  $\lambda$  (nm)

51E D ■ 8180798 0007001 698 ■ SRPJ  
GL8HY1 (Yellow)

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### ■ Electro-optical Characteristics

(Ta = 25°C)

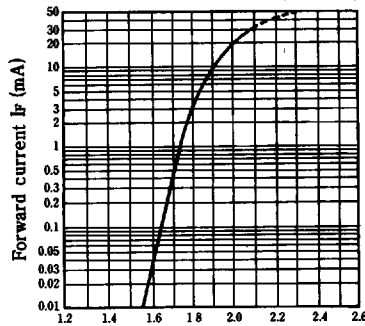
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V <sub>F</sub>	GL8HY1	I <sub>F</sub> = 20mA	—	2.0	2.8	V
※3 Luminous intensity	I <sub>v</sub>	GL8HY1	I <sub>F</sub> = 20mA	1.5	10	—	mcd
Peak emission wavelength	λ <sub>p</sub>	GL8HY1	I <sub>F</sub> = 20mA	—	585	—	nm
Spectrum radiation bandwidth	Δλ	GL8HY1	I <sub>F</sub> = 20mA	—	30	—	nm
Reverse current	I <sub>R</sub>	GL8HY1	V <sub>R</sub> = 4V	—	—	10	μA
Terminal capacitance	C <sub>t</sub>	GL8HY1	V = 0V f = 1MHz	—	35	—	pF
Response frequency	f <sub>c</sub>	GL8HY1	—	—	4	—	MHz

※3 Tolerance: ±30%

### ■ Characteristics Diagrams

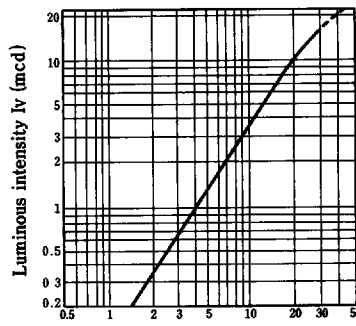
Forward Current vs.  
Forward Voltage

(Ta = 25°C)

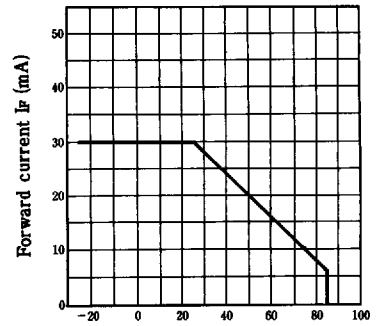
Forward voltage V<sub>F</sub> (V)

Luminous Intensity vs.  
Forward Current

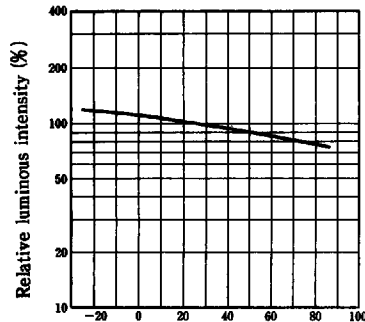
(Ta = 25°C)

Forward current I<sub>F</sub> (mA)

Forward Current Derating Curve

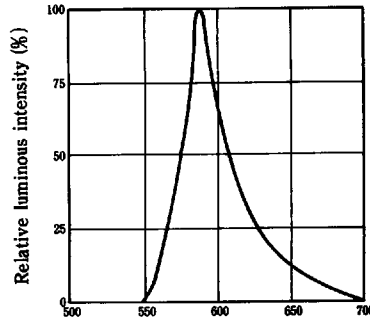
Ambient temperature T<sub>a</sub> (°C)

Relative Luminous Intensity vs.  
Ambient Temperature

(I<sub>F</sub> = 20mA)Ambient temperature T<sub>a</sub> (°C)

Spectrum Distribution

(Ta = 25°C)



Wavelength λ (nm)

SHARP

**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.

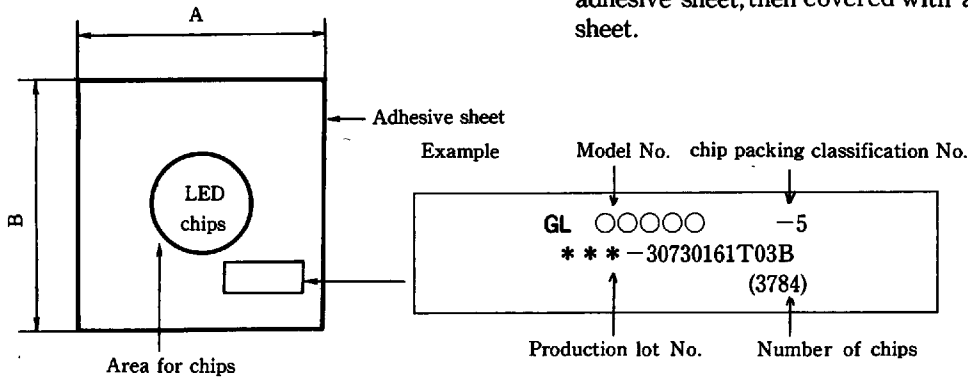


Fig. 1

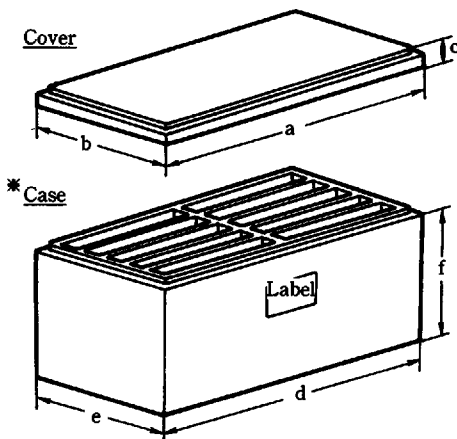
2. Sheet Packing

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

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

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.