

# GL8□□25 Series Rectangle "p"ED 'amps

## Model No.

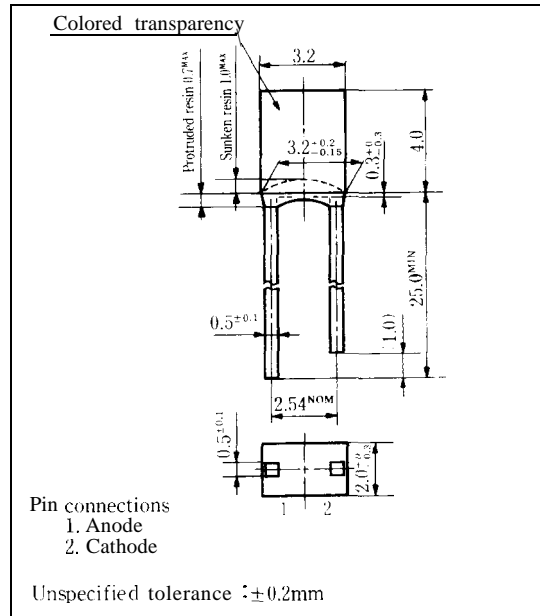
**GL8PR25** Red  
 GL8HD25 Red  
 GL8HS25 Sunset orange  
 GL8HY25 Yellow  
 GL8EG25 Yellow-green  
 GL8KG25 Green

GaP  
 GaAsP/GaP  
 GaAsP/GaP  
 GaAsP/GaP  
 GaP  
 GaP

## Features

- 2.0mm×3.2mm rectangle type  
all resin mold
- Colored transparency lens type

## Outline Dimensions (Unit: mm)



## Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL8PR25	GL8HD25	GL8EG25	Unit
			GL8HS25	GL8KG25	
			GL8HY25		
Power dissipation	P	48	84	84	mW
Continuous forward current	I <sub>F</sub>	20	30	30	mA
*1 Peak forward current	I <sub>FM</sub>	50	50	50	mA
Derating factor	DC	0.27	0.40	0.40	mA/°C
	Pulse	—	0.67	0.67	mA/°C
Reverse voltage	V <sub>R</sub>	5	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

GL8PR25 (Red) / GL8HD25 (Red)

■ Electro-optical Characteristics

(Ta=25°C)

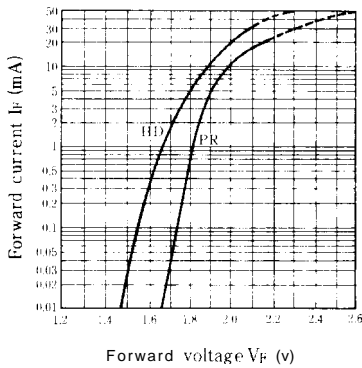
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V <sub>F</sub>	GL8PR25	I <sub>F</sub> = 10mA		2.0	2.4	V
		GL8HD25	I <sub>F</sub> = 20mA		2.0	2.8	
*3 Luminous intensity	I <sub>v</sub>	GL8PR25	I <sub>F</sub> = 10mA	0.70	1.8	—	mcd
		GL8HD25	I <sub>F</sub> = 20mA	4.0	15	—	
Peak emission wavelength	λ <sub>p</sub>	GL8PR25	I <sub>F</sub> = 10mA	—	695	—	nm
		GL8HD25	I <sub>F</sub> = 20mA	—	635	—	
Spectrum radiation bandwidth	Δλ	GL8PR25	I <sub>F</sub> = 10mA		100	—	nm
		GL8HD25	I <sub>F</sub> = 20mA		35	—	
Reverse current	I <sub>R</sub>	GL8PR25	V <sub>R</sub> = 4V			10	μA
		GL8HD25	V <sub>R</sub> = 4V			10	
Terminal capacitance	C <sub>t</sub>	GL8PR25	V = 0V f = 1MHz	—	55	—	pF
		GL8HD25	V = 0V f = 1 MHz	—	20	—	
Response frequency	f <sub>c</sub>	GL8PR25	—	—	4	—	MHz
		GL8HD25	—	—	4	—	

\*3 Tolerance: ±30%

□ Characteristics Diagrams

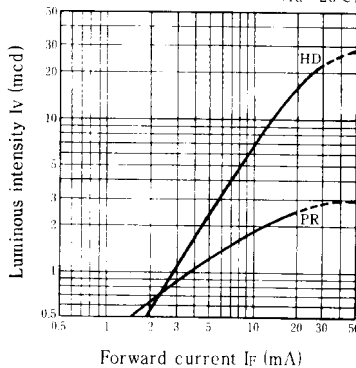
Forward Current vs. Forward Voltage

(Ta = 25°C)

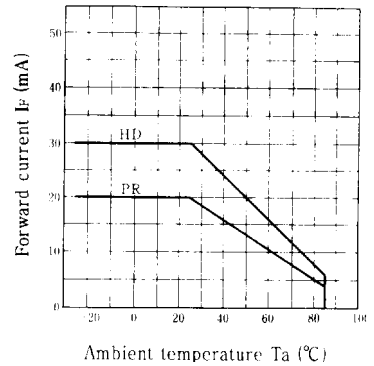


Luminous Intensity vs. Forward Current

(Ta = 25°C)

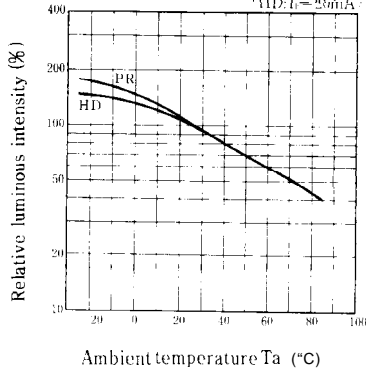


Forward Current Derating Curve



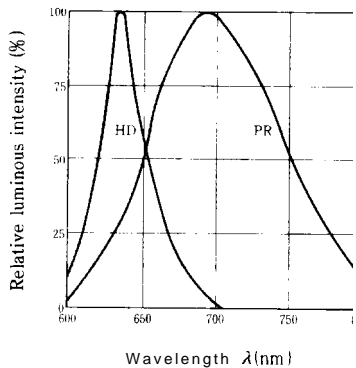
Relative Luminous Intensity vs. Ambient Temperature

(P<sub>RI</sub> = 10mA, I<sub>FD</sub> = 20mA)



Spectrum Distribution

(Ta = 25°C)



GL8HS25 (Sunset orange) / GL8HY25 (Yellow)

Electro-optical Characteristics

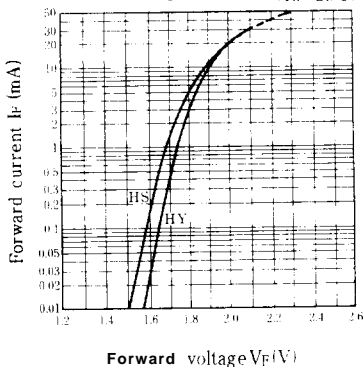
(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V <sub>F</sub>	GL8HS25	I <sub>F</sub> = 20mA		2.0	2.8	V
		GL8HY25	I <sub>F</sub> = 20mA	-	2.0	2.8	
※3 Luminous intensity	I <sub>v</sub>	GL8HS25	I <sub>F</sub> = 20mA	3.0	15	-	mcd
		GL8HY25	I <sub>F</sub> = 20mA	3.0	10	-	
Peak emission wavelength	λ <sub>p</sub>	GL8HS25	I <sub>F</sub> = 20mA		610	-	nm
		GL8HY25	I <sub>F</sub> = 20mA		585	-	
Spectrum radiation bandwidth	Δλ	GL8HS25	I <sub>F</sub> = 20mA		35		nm
		GL8HY25	I <sub>F</sub> = 20mA		30		
Reverse current	I <sub>R</sub>	GL8HS25	V <sub>R</sub> = 4V			10	μA
		GL8HY25	V <sub>R</sub> = 4V			10	
Terminal capacitance	C <sub>t</sub>	GL8HS25	V = 0V f = 1 MHz		15		pF
		GL8HY25	V = 0V f = 1 MHz		35		
Response frequency	f <sub>c</sub>	GL8HS25	-		4		MHz
		GL8HY25	-				

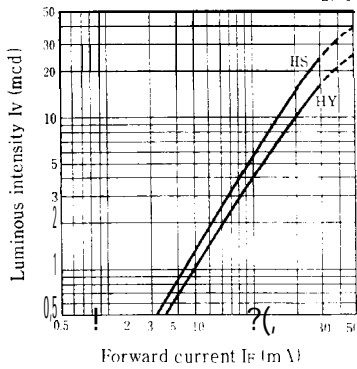
※3 Tolerance: ±30%

Characteristics Diagrams

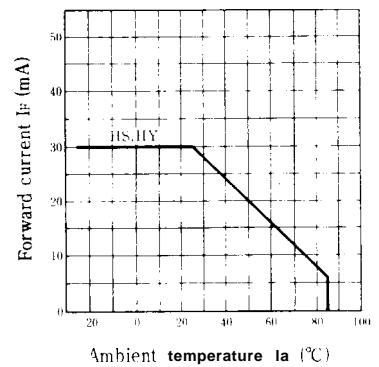
Forward Current vs. Forward Voltage (Ta = 25°C)



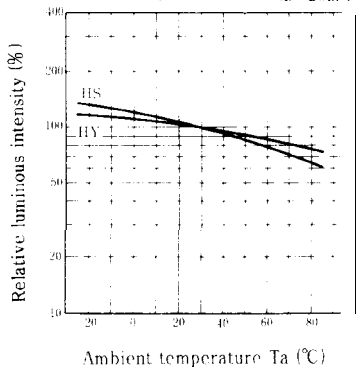
Luminous Intensity vs. Forward Current (Ta = 25°C)



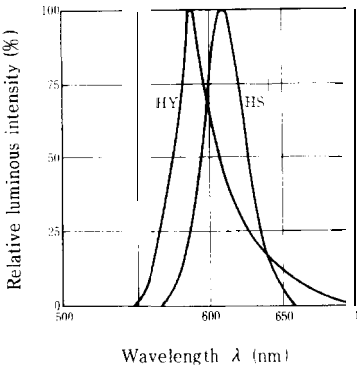
Forward Current Derating Curve



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



Spectrum Distribution (Ta = 25°C)



## GL8EG25 (Yellow-green) / GL8KG25 (Green)

## ■ Electro-optical Characteristics

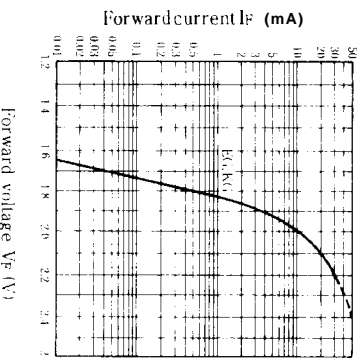
(T<sub>a</sub> = 25°C)

PARAMETER	SYMBOL	UNIT	TYPICAL VALUE		MINIMUM VALUE		MAXIMUM VALUE	
			GL8EG25	GL8KG25	GL8EG25	GL8KG25	GL8EG25	GL8KG25
Forward voltage	V <sub>F</sub>	V	I <sub>F</sub> = 20mA	—	2.1	2.8	—	—
			I <sub>F</sub> = 90mA	—	2.1	2.8	—	—
*3 Luminous intensity	I <sub>v</sub>	mcd	I <sub>F</sub> = 20mA	3.0	2.0	—	—	
			I <sub>F</sub> = 90mA	3.5	2.0	—	—	
Peak emission wavelength	λ <sub>p</sub>	nm	GL8EG25	—	565	—	—	
			GL8KG25	—	565	—	—	
Spectrum radiation bandwidth	Δλ	nm	I <sub>F</sub> = 20mA	—	30	—	—	
			I <sub>F</sub> = 90mA	—	30	—	—	
Reverse current	I <sub>R</sub>	μA	GL8EG25	—	—	10	—	
			GL8KG25	—	—	10	—	
Terminal capacitance	C <sub>t</sub>	pF	GL8EG25	V = 0V, f = 1MHz	—	35	—	
			GL8KG25	V = 0V, f = 1MHz	—	40	—	
Response frequency	f <sub>c</sub>	MHz	GL8EG25	I <sub>F</sub> = 1mA, V <sub>R</sub> = 1V	1	4	1	
			GL8KG25	I <sub>F</sub> = 1mA, V <sub>R</sub> = 1V	1	4	1	

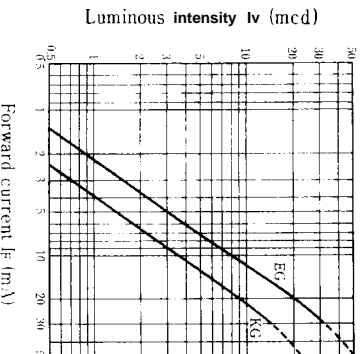
\*3 Tolerance: ±30%

## ■ Characteristics Diagrams

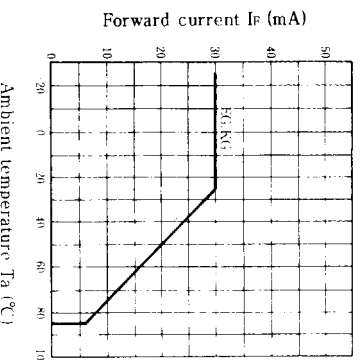
Forward Current vs.  
Forward Voltage

(T<sub>a</sub> = 25°C)

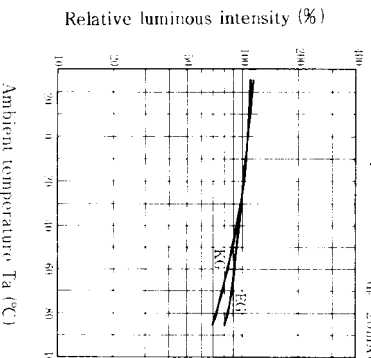
Luminous Intensity vs.  
Forward Current

(T<sub>a</sub> = 25°C)

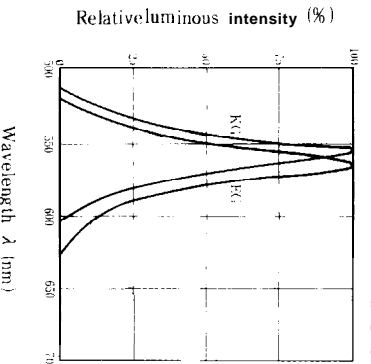
Forward Current Derating Curve



Relative Luminous Intensity vs.  
Ambient Temperature

(I<sub>F</sub> = 20mA)

Spectrum Distribution

(T<sub>a</sub> = 25°C)

Wavelength λ (nm)

SHARP