

GL8□□28 Series "91, Type 'ED 'amps

■ Model No.

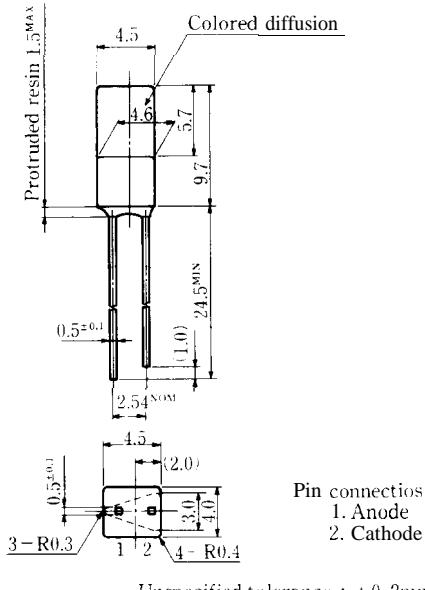
GL8PR28 Red	GaP
GL8HD28 Red	GaAsP/GaP
GL8HS28 Sunset orange	GaAsP/GaP
GL8HY28 Yellow	GaAsP/GaP
GL8EG28 Yellow-green	GaP
GL8KG28 Green	GaP

■ Features

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

■ Outline Dimensions

(Unit: mm)

Unspecified tolerance : $\pm 0.2\text{mm}$

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter	Symbol	GL8PR28 GL8HD28 GL8EG28				Unit	
		GL8HS28 GL8KG28					
		GL8HY28					
Power dissipation	P	23	84	84		mW	
Continuous forward current	I _F	10	30	30		mA	
*1 Peak forward current	I _{FM}	50	50	50		mA	
Derating factor	DC	0.13	0.40	0.40		m A/°C	
	Pulse	—	0.67	0.67	0.67	mA/°C	
Reverse voltage	V _R	5	5	5		V	
Operating temperature	T _{opr}	-25 to +85				°C	
Storage temperature	T _{stg}	-25 to +100				°C	
*2 Soldering temperature	T _{sot}	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

SHARP

"In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that occur in equipment using any of SHARP's devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest version of the device specification sheets before using any SHARP's device."

GL8PR28 (Red) / GL8HD28 (Red)

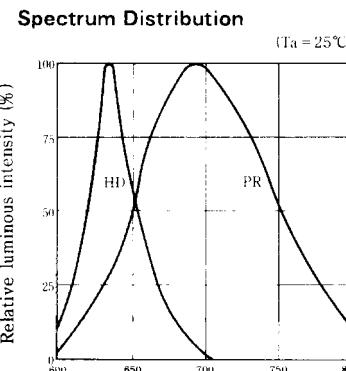
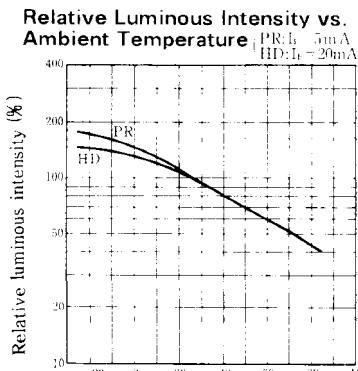
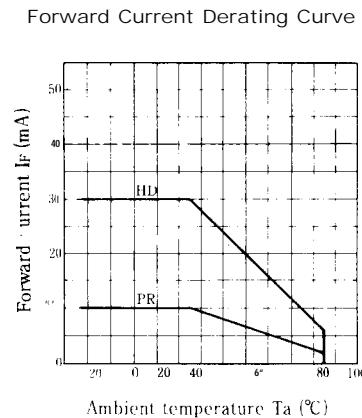
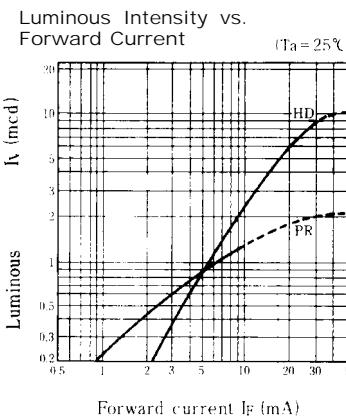
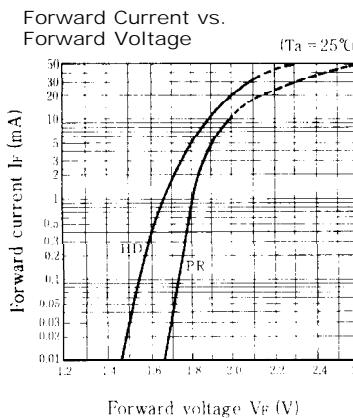
■ Electro-optical Characteristics

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	GL8PR28	I _F = 5mA	—	1.9	2.3	V
		GL8HD28	I _F = 20mA	—	2.0	2.8	
*3 Luminous intensity	I _V	GL8PR28	I _F = 5mA	0.45	0.9	—	mcd
		GL8HD28	I _F = 20mA	2.5	6.0	—	
Peak emission wavelength	λ_p	GL8PR28	I _F = 5mA	—	695	—	nm
		GL8HD28	I _F = 20mA	—	635	—	
Spectrum radiation bandwidth	$\Delta\lambda$	GL8PR28	I _F = 5mA	—	100	—	nm
		GL8HD28	I _F = 20mA	—	35	—	
Reverse current	I _R	GL8PR28	V _R = 4V	—	—	10	μA
		GL8HD28	V _R = 4V	—	—	10	
Terminal capacitance	C _t	GL8PR28	V = 0V f = 1 MHz	—	55	—	pF
		GL8HD28	V = 0V f = 1 MHz	—	20	—	
Response frequency	f _c	GL8PR28	—	—	4	—	'Hz
		GL8HD28	—	—	4	—	

*3 Tolerance: ±30%

■ Characteristics Diagrams



GL8HS28 (Sunset orange) / GL8HY28 (Yellow)

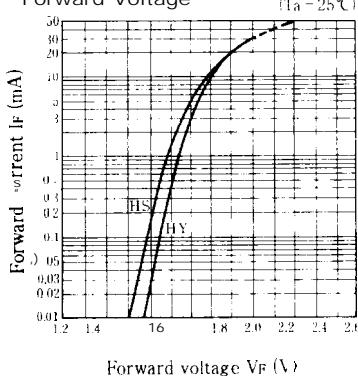
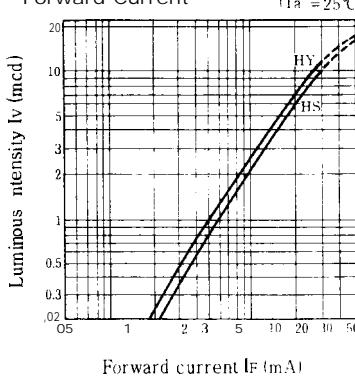
■ Electro-optical Characteristics

(Ta=25°C)

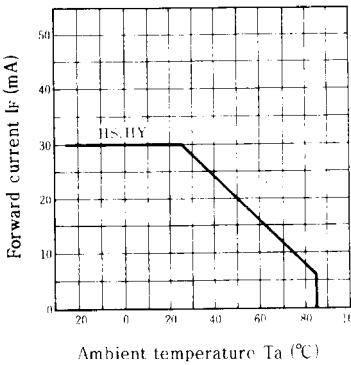
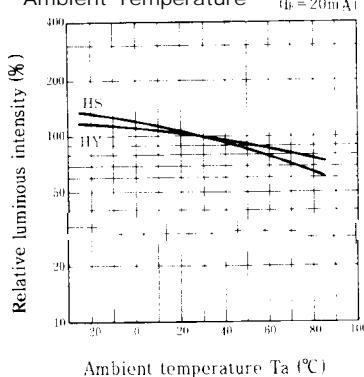
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL8HS28	$I_F = 20\text{mA}$	—	2.0	2.8	"
		GL8HY28	$I_F = 20\text{mA}$	—	2.0	2.8	
*3 Luminous intensity	I_V	GL8HS28	$I_F = 20\text{mA}$	2.5	6.0	—	mcd
		GL8HY28	$I_F = 20\text{mA}$	3.0	7.0	—	
Peak emission wavelength	λ_p	GL8HS28	$I_F = 20\text{mA}$	—	610	—	nm
		GL8HY28	$I_F = 20\text{mA}$	—	585	—	
Spectrum radiation bandwidth	$\Delta \lambda$	GL8HS28	$I_F = 20\text{mA}$	—	35	—	'm
		GL8HY28	$I_F = 20\text{mA}$	—	30	—	
Reverse current	I_R	GL8HS28	$V_R = 4\text{V}$	—	—	10	μA
		GL8HY28	$V_R = 4\text{V}$	—	—	10	
Terminal capacitance	C_t	GL8HS28	$V = 0\text{V} f = 1\text{MHz}$	—	15	—	pF
		GL8HY28	$V = 0\text{V} f = 1\text{MHz}$	—	35	—	
Response frequency	f_c	GL8HS28	—	—	4	—	MHz
		GL8HY28	—	—	4	—	

※3 Tolerance: ±30%

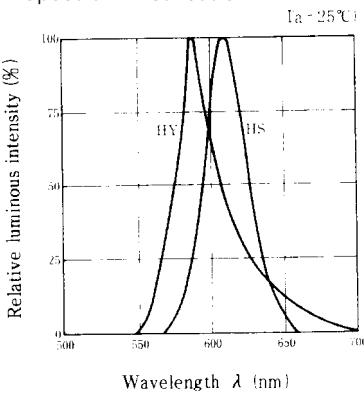
■ Characteristics Diagrams

Forward Current vs.
Forward VoltageLuminous Intensity vs.
Forward Current

Forward Current Derating Curve

Relative Luminous Intensity vs.
Ambient Temperature

Spectrum Distribution



GL8EG28 (Yellow-green) / GL8KG28 (Green)**■ Electro-optical Characteristics**

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	GL8EG28	I _F = 20mA	—	2.1	2.8	V
		GL8KG28	I _F = 20mA	—	2.1	2.8	
*3 Luminous intensity	I _V	GL8EG28	I _F = 20mA	3.5	6.0	—	mcd
		GL8KG28	I _F = 20mA	1.0	2.0	—	
Peak emission wavelength	λ_p	GL8EG28	I _F = 20mA	—	565	—	'm
		GL8KG28	I _F = 20mA	—	555	—	
Spectrum radiation bandwidth	$\Delta\lambda$	GL8EG28	I _F = 20mA	30	—	—	'm
		GL8KG28	I _F = 20mA	25	—	—	
Reverse current	I _R	GL8EG28	V _R = 4V	—	10	—	μ A
		GL8KG28	V _R = 4V	—	10	—	
Terminal capacitance	C _t	GL8EG28	V = 0V f = 1 MHz	—	35	—	pF
		GL8KG28	V = 0V f = 1MHz	—	40	—	
Response frequency	f _c	GL8EG28	—	—	4	—	'Hz
		GL8KG28	—	—	4	—	

*3 Tolerance: ±30%

■ Characteristics Diagrams