

GL1 12□ 13 Series

12-Dots Array LED

Model No.

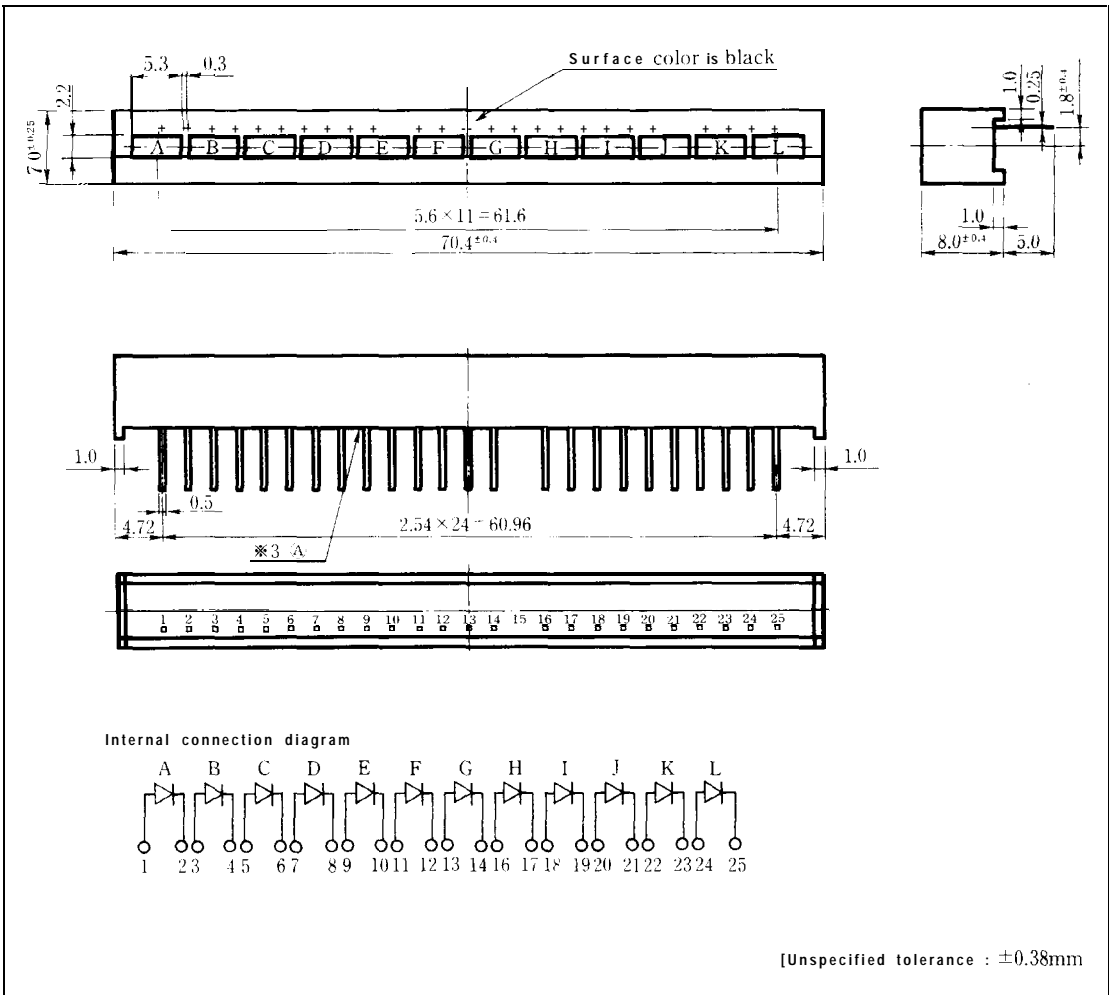
GL112R13 Red GaP
GL1 12H13 Yellow GaAsP/GaP

Features

1. Radiation shape per dots $2.2 \times 5.3\text{mm}$
2. Outline dimensions $7.0 \times 70.4\text{mm}$
3. 12 dots case mold type

Outline Dimensions

(Unit: mm)



7

SHARP

GL112□13

■ Absolute Maximum Ratings *1

(Ta=25°C)

Parameter	Symbol	GL112R13	GL112H13				Unit	
Power dissipation	P	25	50				mW	
Continuous forward current	I _F	10	20				mA	
*2 Peak forward current	I _{FM}	50	50				mA	
Derating factor	DC	—	0.18	0.36			mA/°C	
	Pulse	—	0.91	0.91			mA/°C	
Reverse voltage	V _R	5	5				V	
Operating temperature	T _{opr}	-20 to +70						°C
Storage temperature	T _{stg}	-30 to +80						°C
*3 Soldering temperature	T _{sol}	260 (within 5 seconds)						°C

*1 Per dot

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

*3 At the position of 2.6 mm from (A) level of outline dimensions

GL1 12R13(Red)

■ **Electro-optical** Characteristics ※1

(Ta = 25°C)

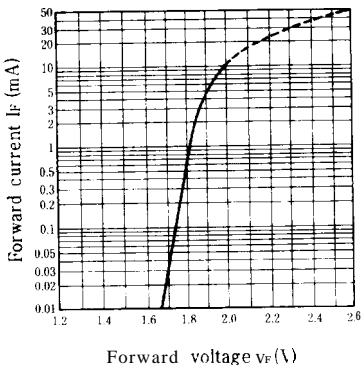
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL112R13	$I_F = 5\text{mA}$		1.9	2.5	v
※4 Luminous intensity	I_V	GL112R13	$I_F = 5\text{mA}$	0.15	0.3	-	mcd
Peak emission wavelength	λ_p	GL112R13	$I_F = 5\text{mA}$	-	695	-	nm
Spectrum radiation band width	$\Delta\lambda$	GL112R13	$I_F = 5\text{mA}$	-	100	-	nm
Reverse current	I_R	GL112R13	$V_R = 4\text{V}$	-	-	10	μA
Response frequency	f_c	GL112R13	-	-	4	-	MHz

※1 Per dot

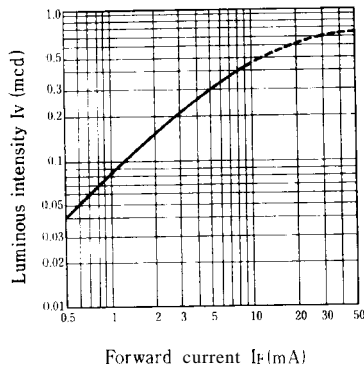
※4 Tolerance: $\pm 30\%$

■ Characteristics Diagrams

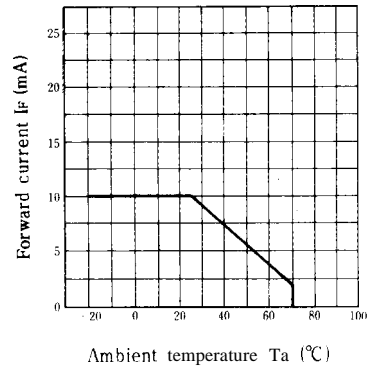
Forward Current vs. Forward Voltage (Ta = 25°C)



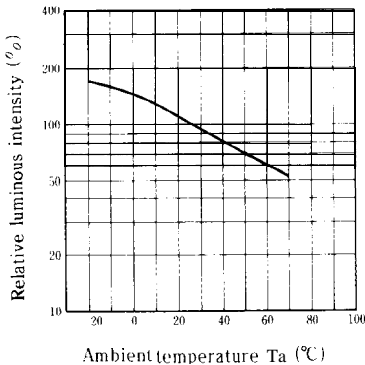
Luminous Intensity vs. Forward Current (Ta = 25°C)



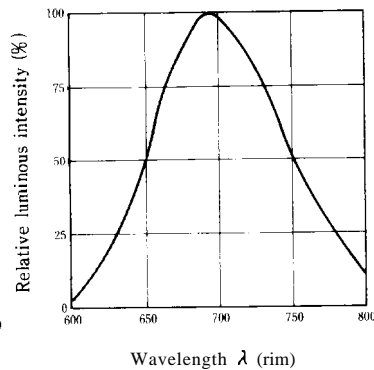
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature (If = 5mA)



Spectrum Distribution (Ta = 25°C)



7

GL1 12H13(Yellow)

■ Electro-optical Characteristics "

(Ta=25°C)

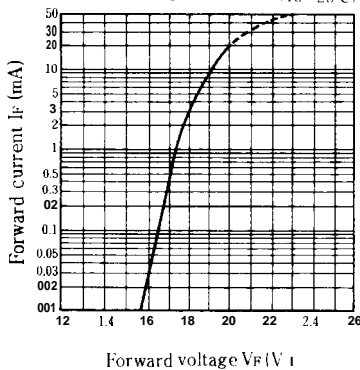
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL112H13	$I_F = 10\text{mA}$	—	1.9	2.5	v
※4 Luminous intensity	I_v	GL112H13	$I_F = 10\text{mA}$	0.2	0.5	—	mcd
Peak emission wavelength	λ_p	GL112H13	$I_F = 10\text{mA}$	—	585	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL112H13	$I_F = 10\text{mA}$	—	30	—	nm
Reverse current	I_R	GL112H13	$V_R = 4\text{V}$	—	—	10	μA
Response frequency	f_c	GL112H13	—	—	4	—	MHz

※1 Per lot

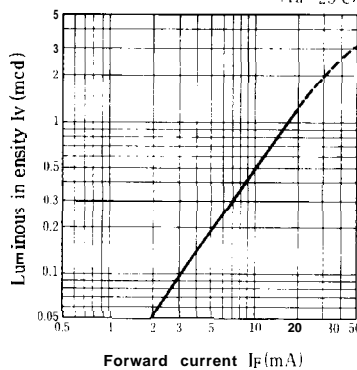
※4 Tolerance: $\pm 30\%$

■ Characteristics Diagrams

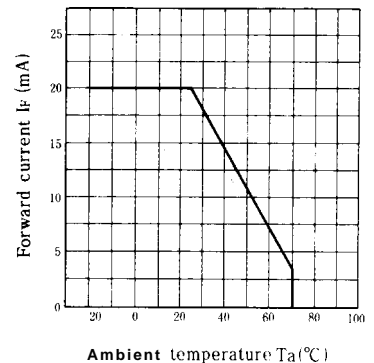
Forward Current vs. Forward Voltage (Ta = 25°C)



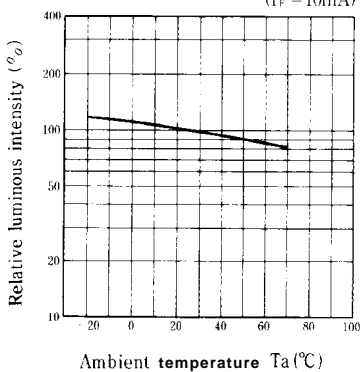
Luminous Intensity vs. Forward Current (Ta = 25°C)



Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature (I_F = 10mA)



Spectrum Distribution (Ta = 25°C)

