

GL9U100 / GL8U100 Series

25.4mm Character Height
Numeric LEDs

■ Model No.

GL9L100/GL8L100
GL9T100/GL8T100
GL9D100/GL8D100
GL9E100/GL8E100

Red (High-luminosity)
Red (High-luminosity)
Red
Yellow-green

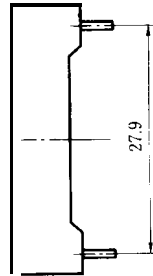
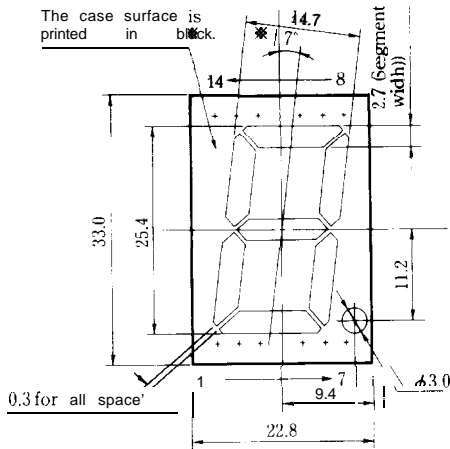
GaAlAs/GaAs
GaAlAs/GaAs
GaAsP/GaP
GaP

■ Features

1. Character height : 25.4mm
2. 1 digit
3. Case mold type
4. Diamond cut type segments

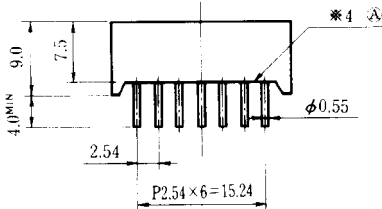
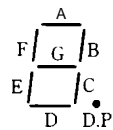
■ Outline Dimensions

(Unit: mm)

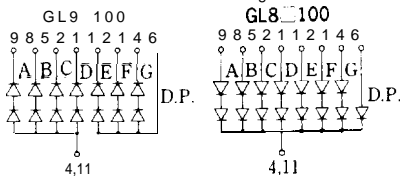


※ GL9L 100/GL8L 100, GL9T100/GL8T100,
GL9D100/GL8D100 :gray

Segment name



Internal connection diagram



Unspecified tolerance : ±0.38mm

GL90100 / GL80100

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	GL9L100	GL9D100				Unit
			GL8L100	GL8D100				
			GL9T100	GL9E100				
			GL8T100	GL8E100				
Power dissipation	*1 Per digit	P	616	700				mW
Continuous forward current	*1 Per digit	I _F	140	140				mA
	*2	I _F	20	20				mA
*3 Peak forward current	*2	I _{FM}	100	50				mA
Derating factor	*1 Per digit	DC	—	2.54	2.54			mA/°C
		Pulse	—	12.73	6.36			mA/°C
Reverse voltage	Per segment	V _R	6	6				v
	Per decimal point	V _R	5	5				v
Operating temperature		T _{opr}	-30 to +70					°C
Storage temperature		T _{stg}	-40 to +80					°C
*4 Soldering temperature		T _{sol}	260 (within 5 seconds)					°C

*1 Per digit: 7 segments

*2 Per segment, or per decimal point

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

*4 At the position of 3.1 mm from (A) level of outline dimensions

GL9L100/GL8L100(Red), **GL9T100/GL8T100(Red)**

■ **Electro-optical** Characteristics

(Ta=25°C)

Parameter		Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V _F	GL9L100/GL8L100	I _F =10mA	-	3.4	4.4	V
			GL9T100/GL8T100	I _F =10mA	-	3.4	4.4	
	Per decimal point		GL9L100/GL8L100	I _F =10mA	-	1.7	2.2	v
			GL9T100/GL8T100	I _F =10mA	-	1.7	2.2	
※5 Luminous intensity	Per segment	I _v	GL9L100/GL8L100	I _F =10mA	5.71	16.8	-	mcd
			GL9T100/GL8T100	I _F =10mA	2.0	4.8	-	
	Per decimal point		GL9L100/GL8L100	I _F =10mA	1.7	4.6	-	mcd
			GL9T100/GL8T100	I _F =10mA	1.7	4.6	-	
※2 Peak emission wavelength		λ _p	GL9L100/GL8L100	I _F =10mA	-	660	-	nm
			GL9T100/GL8T100	I _F =10mA	-	660	-	
※2 Spectrum radiation bandwidth		Δλ	GL9L100/GL8L100	I _F =10mA	-	20	-	nm
			GL9T100/GL8T100	I _F =10mA	-	20	-	
Reverse current	Per segment	I _R	GL9L100/GL8L100	V _R =5V	-	-	10	μA
			GL9T100/GL8T100	V _R =5V	-	-	10	
	Per decimal point		GL9L100/GL8L100	V _R =4V	-	-	10	μA
			GL9T100/GL8T100	V _R =4V	-	-	10	
			GL9L100/GL8L100	V _R =4V	-	-	10	
※2 Response frequency		f _c	GL9L100/GL8L100	=	-	8	-	MHz
			GL9T100/GL8T100	=	-	8	-	

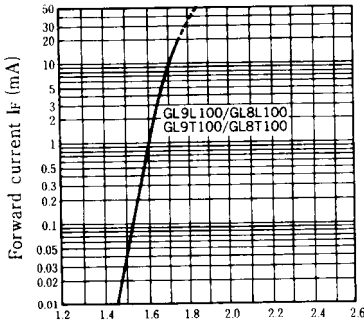
※2 Per segment, or per decimal point

※5 Tolerance: ±30%

■ **Characteristics Diagrams**

Forward Current vs. Forward Voltage

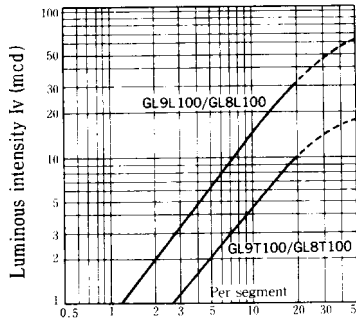
(Ta=25°C)



Forward voltage V_F(V)

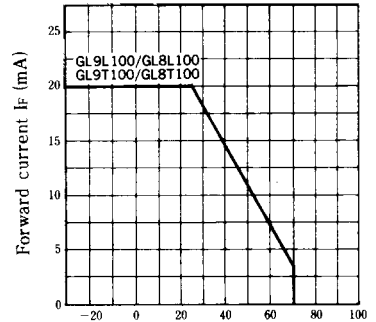
Luminous Intensity vs. Forward Current

(Ta=25°C)



Forward current I_F(mA)

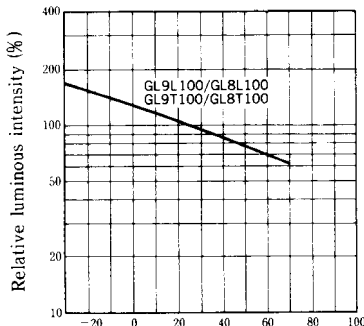
Forward Current Derating Curve



Ambient temperature T_a (°C)

Relative Luminous Intensity vs. Ambient Temperature

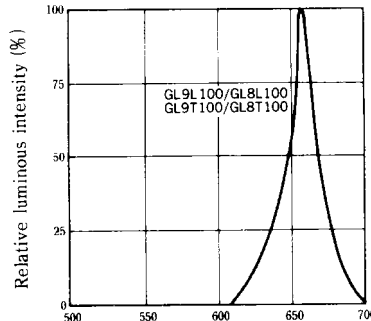
(I_F=10mA)



Ambient temperature T_a (°C)

Spectrum Distribution

(Ta=25°C)



Wavelength λ (nm)

GL9D100/GL8DI 00(Red)

■ Electro-optical Characteristics

(Ta = 25°C)

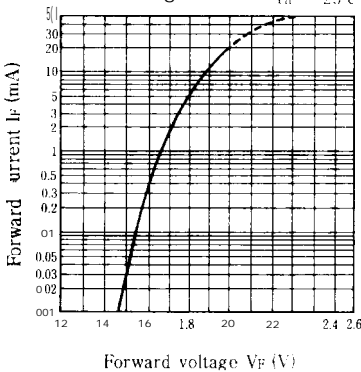
Parameter		Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V_F	GL9D100, GL8DI00	$I_F = 10\text{mA}$		3.7	5.0	V
	Per decimal point		GL9D100, GL8DI00	$I_F = 10\text{mA}$		1.85	2.5	V
*5 Luminous intensity	Per segment	I_v	GL9D100, GL8DI00	$I_F = 10\text{mA}$	1.7	3.5	-	mcd
	Per decimal point		GL9D100, GL8DI00	$I_F = 10\text{mA}$	0.3	0.7	-	mcd
*2 Peak emission wavelength		λ_p	GL9D100, GL8DI00	$I_F = 10\text{mA}$		635	-	nm
*2 Spectrum radiation bandwidth		$\Delta\lambda$	GL9D100, GL8DI00	$I_F = 10\text{mA}$		35	-	nm
Reverse current	Per segment	I_R	GL9D100, GL8DI00	$V_R = 5\text{V}$	-	-	10	μA
	Per decimal point		GL9D100, GL8DI00	$V_R = 4\text{V}$	-	-	10	μA
*2 Response frequency		f_c	GL9D100, GL8DI00	-		4		MHz

*2 Per segment, or per decimal point

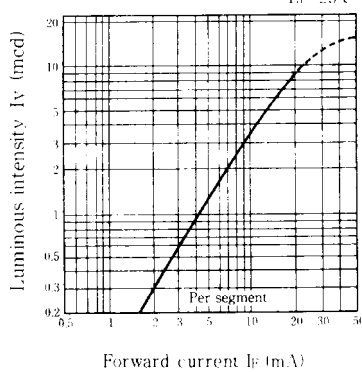
*5 Tolerance: $\pm 30\%$

■ Characteristics Diagrams

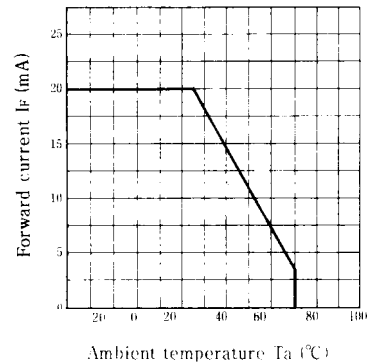
Forward Current vs. Forward Voltage



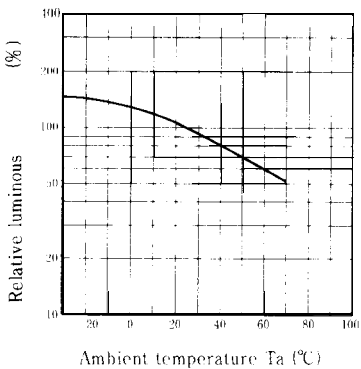
Luminous Intensity vs. Forward Current



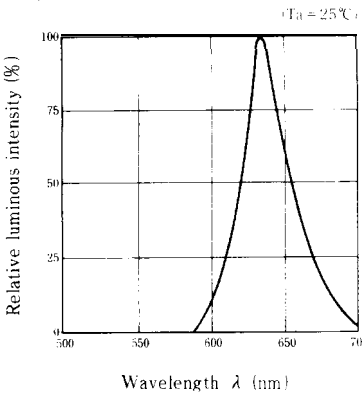
Forward Current Derating Curve



Relative Luminous intensity vs. Ambient Temperature, $I_F = 10\text{mA}$



Spectrum Distribution



GL9E100/GL8E100 (Yellow-green)

■ Electro-optical Characteristics

(Ta = 25°C)

Parameter		Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V _F	GL9E100/GL8E100	I _F = 10mA	—	4.0	5.0	V
	Per decimal point		GL9E100 'GL8E100	I _F = 10mA	—	2.0	2.5	"
*5 Luminous intensity	Per segment	I _V	GL9E100/GL8E100	I _F = 10mA	1.7	3.5	—	mcd
	Per decimal point		GL9E100IGL8E100	I _F = 10mA	0.3	0.7	—	mcd
*2 Peak emission wavelength		λ _p	GL9E100/GL8E100	I _F = 10mA		565	—	nm
*2 Spectrum radiation bandwidth		Δλ	GL9E100 'GL8E100	I _F = 10mA		30	—	nm
Reverse current	Per segment	I _R	GL9E100/GL8E100	V _R = 5V	—	—	10	μA
	Per decimal point		GL9E100/GL8E100	V _R = 4V			10	μA
*2 Response frequency		f _c	GL9E100/GL8E100	—		4	—	MHz

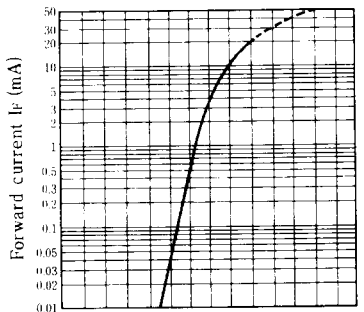
*2 Per segment, or per decimal point

*5 Tolerance: ±30%

■ Characteristics Diagrams

Forward Current vs. Forward Voltage

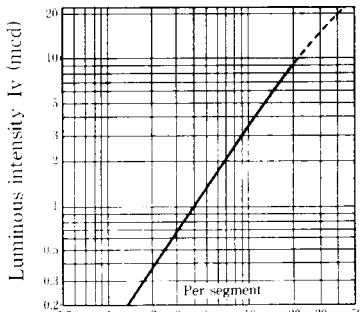
(Ta = 25°C)



Forward voltage V_F (V)

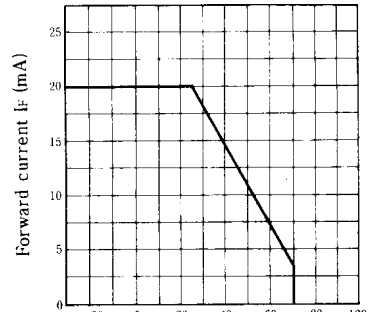
Luminous Intensity vs. Forward Current

(Ta = 25°C)



Forward current I_F (mA)

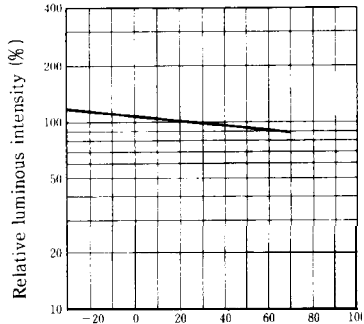
Forward Current Derating Curve



Ambient temperature T_a (°C)

Relative Luminous Intensity vs. Ambient Temperature

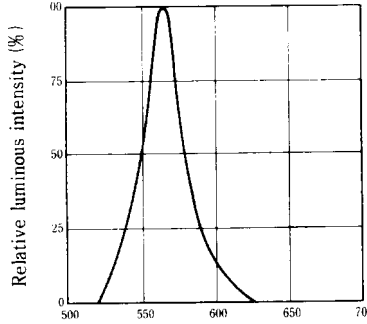
(I_F = 10mA)



Ambient temperature T_a (°C)

Spectrum Distribution

(Ta = 25°C)



Wavelength λ (nm)

