

GL3U412 GL3D411 Series

6.2mm Character Height
Numeric LEDs

■ Model No.

GL3P412/GL3P4 11
GL3H4 12/GL3H411
GL3E412/GL3E411

Red
Yellow
Yellow-green

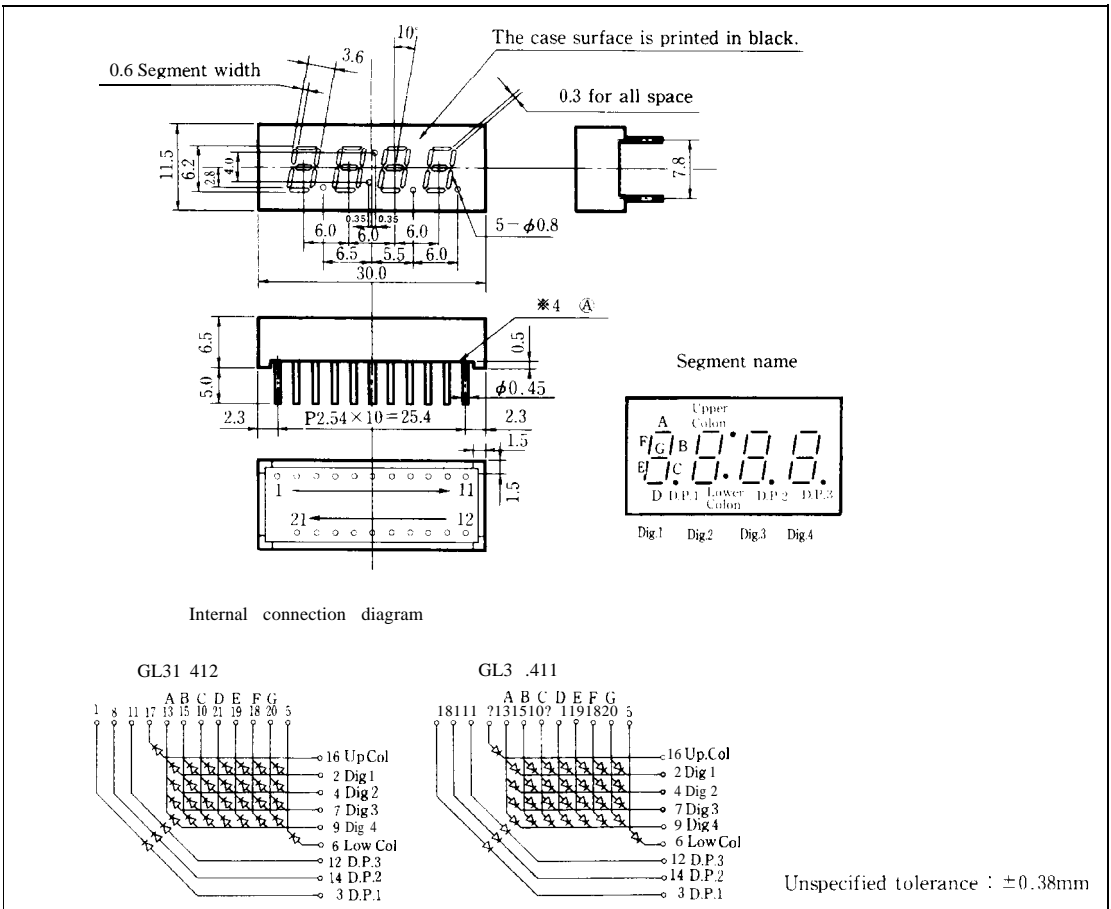
GaP
GaAsP/GaP
GaP

■ Features

1. Character height : 6.2mm
2. 4 digits
3. Case mold type
4. Diamond cut type segments

■ Outline Dimensions

(Unit: mm)



GL3□412 / GL3□411

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	GL3P41 2	GL3H41 2	GL3E41 2			Unit	
			GL3P41 1	GL3H41 1	GL3E41 1				
Power dissipation	*1 Per digit	P	175	350	263			mW	
Continuous forward current	*1 Per digit	I _F	70	140	105			mA	
	*2	I _F	10	20	15			mA	
*3 Peak forward current	*2	I _{FM}	50	50	50			mA	
Derating factor	*2 DC	—	0.18	0.36	0.27			mA/°C	
	*2 Pulse	—	0.91	0.91	0.91			mA/°C	
Reverse voltage	Per segment	V _R	5	5	5			v	
	Per decimal point	V _R	5	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 2.1 mm from (A) level of outline dimensions

GL3P412/GL3P41 1(Red)

■ Electro-optical Characteristics

(Ta = 25°C)

Parameter		Symbol	Model No	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V_F	GL3P412/GL3P411	$I_F = 5\text{mA}$		1.9	2.5	V
	Per decimal point		GL3P412/GL3P411	$I_F = 5\text{mA}$		1.9	2.5	V
※5 Luminous intensity	Per segment	I_V	GL3P412/GL3P411	$I_F = 5\text{mA}$	0.10	0.25	—	mcd
	Per decimal point		GL3P412/GL3P411	$I_F = 5\text{mA}$	0.05	0.10	—	mcd
※2 Peak emission wavelength		λ_p	GL3P412/GL3P411	$I_F = 5\text{mA}$		695	—	nm
※2 Spectrum radiation bandwidth		$\Delta\lambda$	GL3P412/GL3P411	$I_F = 5\text{mA}$		—	100	—
Reverse current	Per segment	I_R	GL3P412/GL3P411	$V_R = 4\text{V}$			10	μA
	Per decimal point		GL3P412/GL3P411	$V_R = 4\text{V}$			10	μA
※2 Response frequency		f_c	GL3P412/GL3P411	—		4	—	MHz

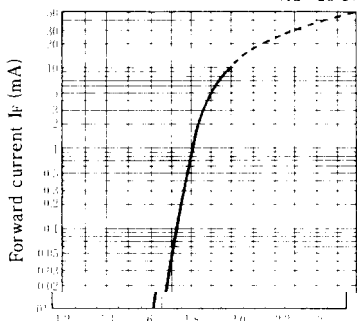
※2 Per segment, or per decimal point

※5 Tolerance: ±30%

■ Characteristics Diagrams

Forward Current vs. Forward Voltage

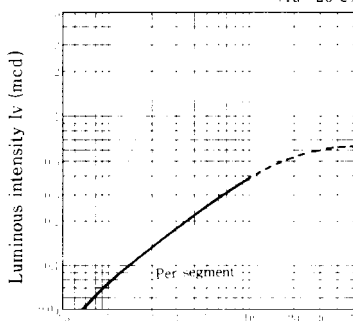
(Ta = 25°C)



Forward voltage V_F (V)

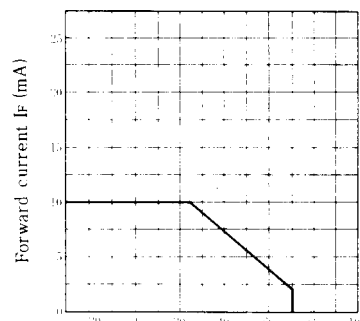
Luminous Intensity vs. Forward Current

(Ta = 25°C)



Forward current I_F (mA)

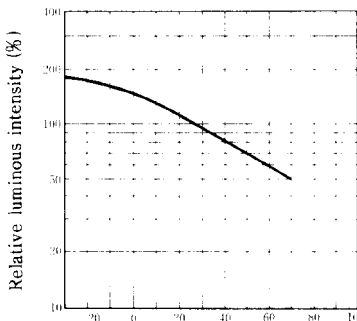
Forward Current Derating Curve



Ambient temperature T_a (°C)

Relative Luminous Intensity vs. Ambient Temperature

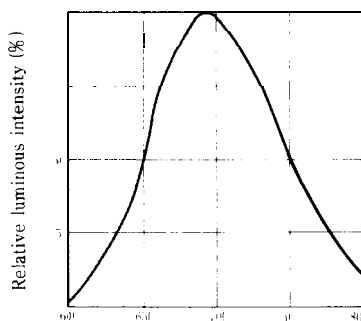
($I_F = 5\text{mA}$)



Ambient temperature T_a (°C)

Spectrum Distribution

(Ta = 25°C)



Wavelength λ (nm)

GL3H412/GL3H41 1(Yellow)

■ Electro-optical Characteristics

(Ta = 25°C)

Parameter		Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V _F	GL3H412/GL3H411	I _F = 10mA	—	1.9	2.5	V
	Per decimal point		GL3H412i/GL3H411	I _F = 10mA	—	1.9	2,5	V
*5 Luminous intensity	Per segment	I _v	GL3H412/GL3H411	I _F = 10mA	0.15	0.60	—	mcd
	Per decimal point		GL3H412i/GL3H411	I _F = 10mA	0.05	0.20	—	mcd
*2 Peak emission wavelength		λ _p	GL3H412/GL3H411	I _F = 10mA	—	585	—	nm
*2 Spectrum radiation bandwidth		Δλ	GL3H412/GL3H411	I _F = 10mA	—	30	—	nm
Reverse current	Per segment	I _R	GL3H412/GL3H411	V _R = 4V	—	—	10	μA
	Per decimal point		GL3H412/GL3H411	V _R = 4V	—	—	10	μA
*2 Response frequency		f _c	GL3H412/GL3H411	—	—	4	—	MHz

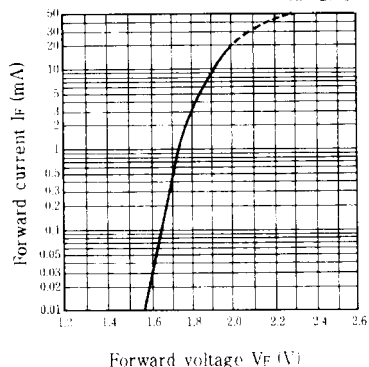
*2 Per segment, or per decimal point

*5 Tolerance: ±30%

■ Characteristics Diagrams

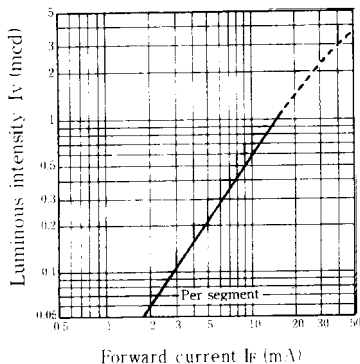
Forward Current vs. Forward Voltage

(Ta = 25°C)

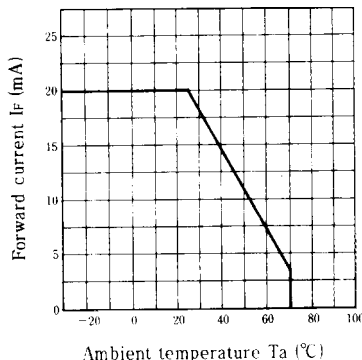


Luminous Intensity vs. Forward Current

(Ta = 25°C)

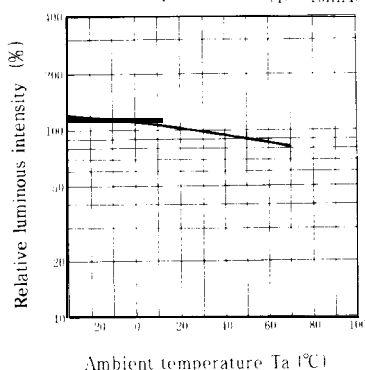


Forward Current Derating Curve



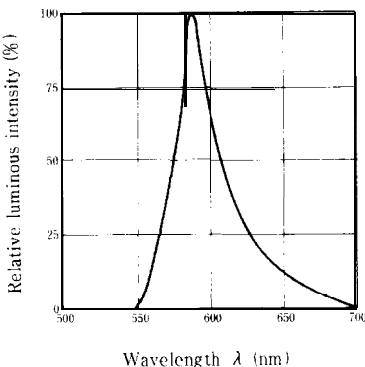
Relative Luminous Intensity vs. Ambient Temperature

(I_F = 10mA)



Spectrum Distribution

(Ta = 25°C)



GL3E412/GL3E41 1 (Yellow-green)

■ **Electro-optical** Characteristics

(Ta=25°C)

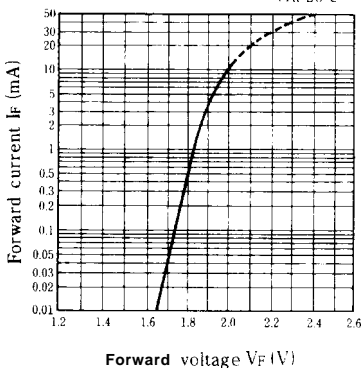
Parameter		Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V _F	GL3E412/GL3E411	I _F = 10mA		2.0	2.5	V
	Per decimal point		GL3E412/GL3E41 1	I _F = 10mA		2.0	2.5	V
*5 Luminous intensity	Per segment	I _v	GL3E412:GL3E411	I _F = 10mA	0.30	0.70	—	mcd
	Per decimal point		GL3E412/GL3E411	I _F = 10mA	0.15	0.30	—	mcd
*2 Peak emission wavelength		λ _p	GL3E412/GL3E411	I _F = 10mA		565	—	nm
*2 Spectrum radiation bandwidth		Δλ	GL3E412:GL3E411	I _F = 10mA		30	—	nm
Reverse current	Per segment	I _R	GL3E412/GL3E41 1	V _R = 4V	--		10	μA
	Per decimal point		GL3E412/GL3E411	V _R = 4V			10	μA
*2 Response frequency		f _c	GL3E412/GL3E41 1			4	—	MHz

*2 Per segment, or per decimal point

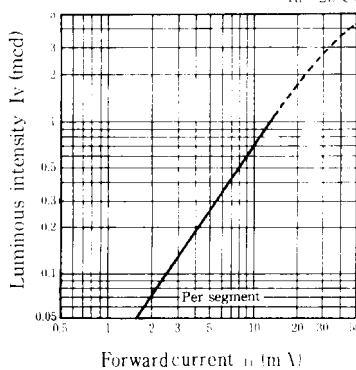
*5 Tolerance: ±30%

■ **Characteristics Diagrams**

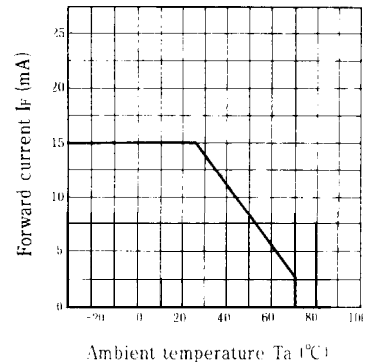
Forward Current vs. Forward Voltage



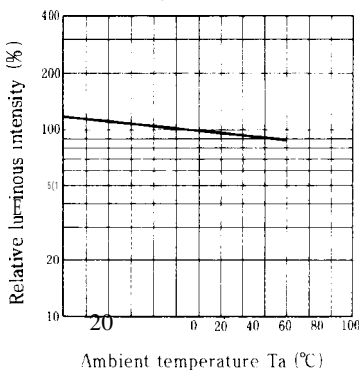
Luminous Intensity vs. Forward Current



Forward Current Derating Curve



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



Spectrum Distribution

