

GL9□ 056/ GL8□ 056 Series

1 4.22mm Character Height
Numeric LEDs

■ Model No.

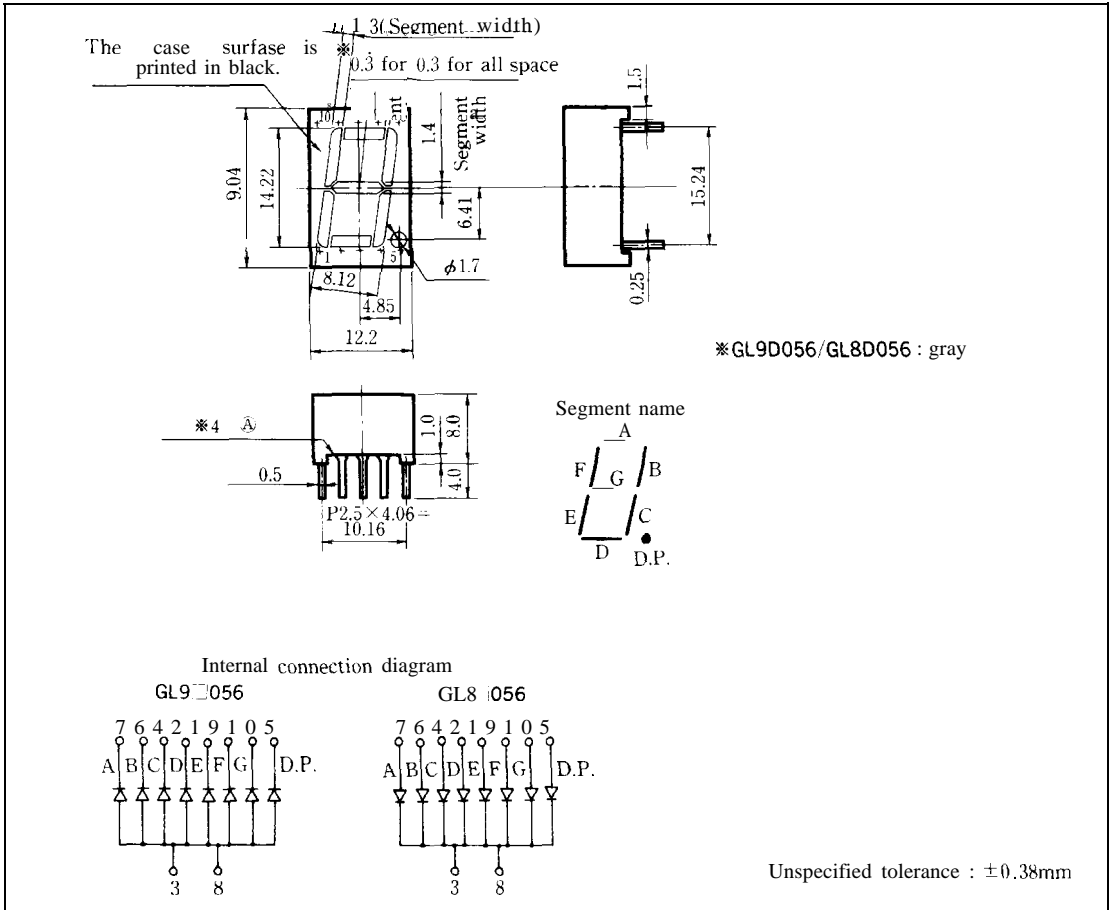
GL9P056/GL8P056	Red	GaP
GL9D056/GL8D056	Red	GaAsP/GaP
GL9H056/GL8H056	Yellow	GaAsP/GaP
GL9E056/GL8E056	Yellow-green	GaP

■ Features

1. Character height : 14.22mm
2. 1 digit
3. Case mold type
4. Small package

■ Outline Dimensions

(Unit: mm)



GL9□056 / GL8□056

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	GL9P056	GL9D056	GL9H056			Unit
			GL8P056	GL8D056	GL8H056			
			GL9E056					
			GL8E056					
Power dissipation	XI Per digit	P	263	322	350			mW
Continuous forward current	*1 Per digit	I _F	105	140	140			mA
	*2	I _F	15	20	20			mA
*3 Peak forward current	*2	I _{FM}	50	50	50			mA
Derating factor	*2	DC	—	0.27	0.36	0.36		mA/°C
		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 2.6 mm from (A) level of outline dimensions



GL9P056/GL8P056{ Red }, GL9D056/GL8D056 (Red)

■ Electro-optical Characteristics

(Ta = 25°C)

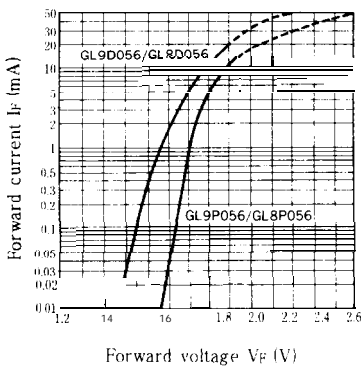
Parameter		Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V _F	GL9P056/GL8P056	I _F = 5mA	—	1.9	2.5	V
			GL9D056/GL8D056	I _F = 10mA	—	1.85	2.3	
	Per decimal point		GL9P056/GL8P056	I _F = 5mA	—	1.9	2.5	V
			GL9D056/GL8D056	I _F = 10mA	—	1.85	2.3	
*5 Luminous intensity	Per segment	I _v	GL9P056/GL8P056	I _F = 5mA	0.3	1.0	—	mcd
			GL9D056/GL8D056	I _F = 10mA	0.6	3.0	—	
	Per decimal point		GL9P056/GL8P056	I _F = 5mA	0.1	0.3	—	mcd
			GL9D056/GL8D056	I _F = 10mA	0.3	1.2	—	
*2 Peak emission wavelength		λ _p	GL9P056/GL8P056	I _F = 5mA	—	635	—	nm
*2 Spectrum radiation bandwidth		Δλ	GL9P056/GL8P056	I _F = 5mA	—	100	—	nm
Reverse current	Per segment	I _R	GL9P056/GL8P056	V _R = 4V	—	—	10	μA
			GL9D056/GL8D056	V _R = 4V	—	—	10	
	Per decimal point		GL9P056/GL8P056	V _R = 4V	—	—	10	μA
			GL9D056/GL8D056	V _R = 4V	—	—	10	
*2 Response frequency		f _c	GL9P056/GL8P056	—	—	4	—	MHz
			GL9D056/GL8D056	—	—	4	—	MHz

*2 Per segment, or per decimal point

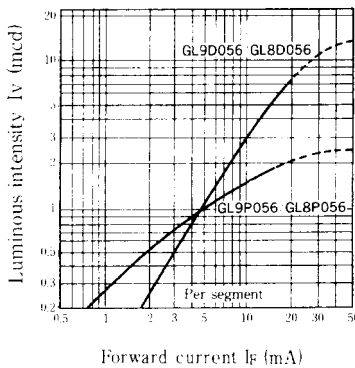
*5 Tolerance: ±30%

■ Characteristics Diagrams

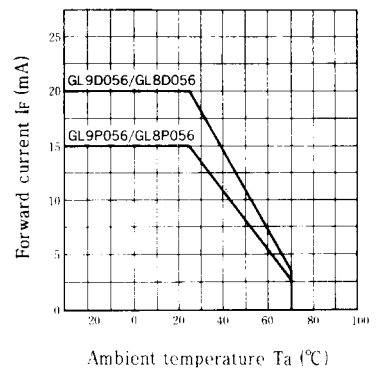
Forward Current vs. Forward Voltage (Ta = 25°C)



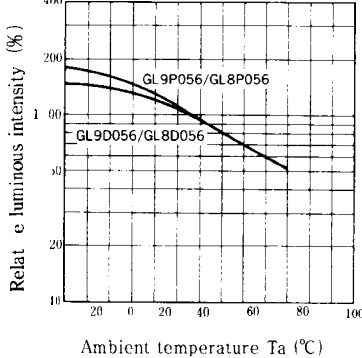
Luminous Intensity vs. Forward Current (Ta = 25°C)



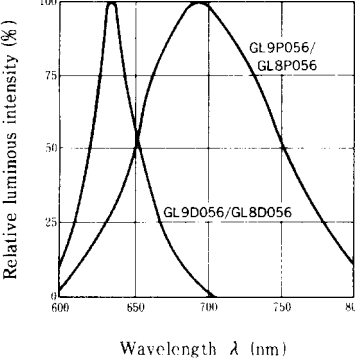
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature (I_F = 5mA, I_D = 10mA)



Spectrum Distribution (Ta = 25°C)



GL9H056/GL8H056(Yellow)

(Ta = 25°C)

■ Electro-optical Characteristics

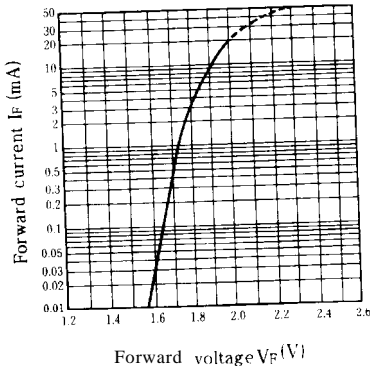
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit	
Forward voltage	Per segment Per decimal point	V _F	GL9H056/GL8H056	I _F = 10mA	—	1.9	2.5	V
			GL9H056/GL8H056	I _F = 10mA	—	1.9	2.5	V
※5 Luminous intensity	Per segment per decimal point	I _v	GL9H056/GL8H056	I _F = 10mA	1.01	3.6	—	mcd
			GL9H056/GL8H056	I _F = 10mA	0.45	1.3	—	mcd
※2 Peak emission wavelength	λ _p	GL9H056/GL8H056	I _F = 10mA	—	585	—	nm	
※2 Spectrum radiation bandwidth	Δλ	GL9H056/GL8H056	I _F = 10mA	—	30	—	nm	
Reverse current	Per segment Per decimal point	I _R	GL9H056/GL8H056	V _R = 4V	—	—	10	μA
			GL9H056/GL8H056	V _R = 4V	—	—	10	μA
※2 Response frequency	f _c	GL9H056/GL8H056	—	—	4	—	MHz	

※2 Per segment, or per decimal point
 ※5 Tolerance: ±30%

■ Characteristics Diagrams

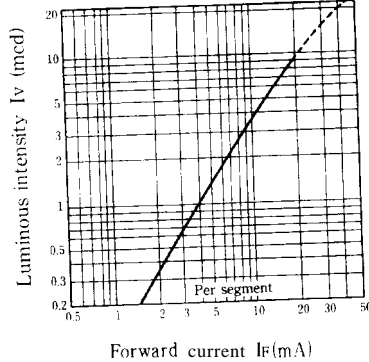
Forward Current vs. Forward Voltage

(Ta = 25°C)

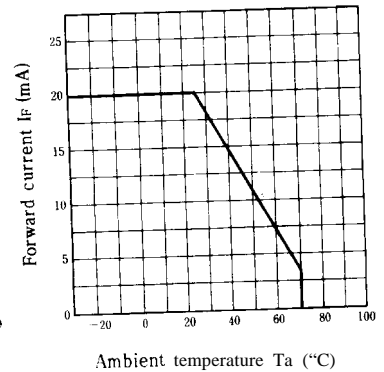


Luminous Intensity vs. Forward Current

(Ta = 25°C)

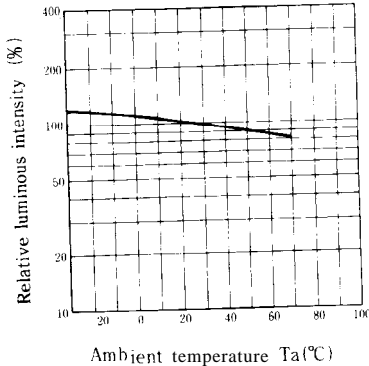


Forward Current Derating Curve



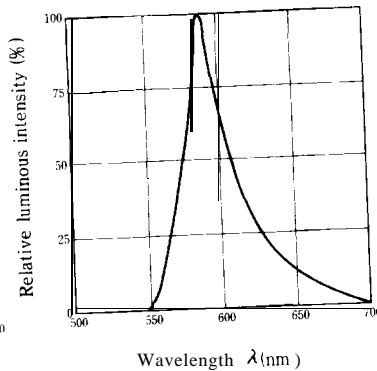
Relative Luminous Intensity vs. Ambient Temperature

(I_F = 10mA)



Spectrum Distribution

(Ta = 25°C)



GL9E056/GL8E056(Yellow-green)

■ Electro-optical Characteristics

(Ta = 25°C)

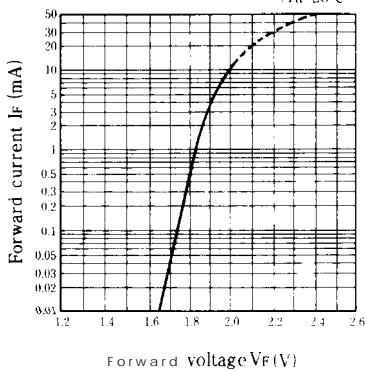
Parameter		Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	Per segment	V _F	GL9E056/GL8E056	I _F = 10mA	—	2.0	2.5	V
	Per decimal point		GL9E056/GL8E056	I _F = 10mA		2.0	2.5	V
*5 Luminous intensity	Per segment	I _v	GL9E056/GL8E056	I _F = 10mA	1.0	3.0	—	mcd
	Per decimal point		GL9E056/GL8E056	I _F = 10mA	0.3	0.9	—	mcd
*2 Peak emission wavelength		λ _p	GL9E056/GL8E056	I _F = 10mA	—	565	—	nm
*2 Spectrum radiation bandwidth		Δλ	GL9E056/GL8E056	I _F = 10mA		30	—	nm
Reverse current	Per segment	I _R	GL9E056/GL8E056	V _R = 4V	—	—	10	μA
	Per decimal point		GL9E056/GL8E056	V _R = 4V	—	—	10	μA
*2 Response frequency		f _c	GL9E056/GL8E056	—	—	4.0	—	MHz

*2 Per segment, or per decimal point

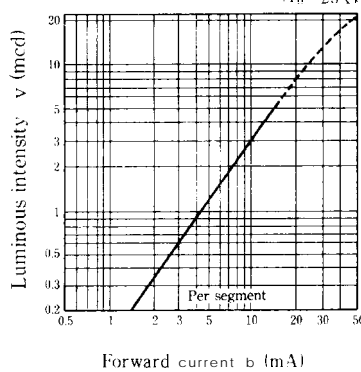
*5 Tolerance: ±30%

■ Characteristics Diagrams

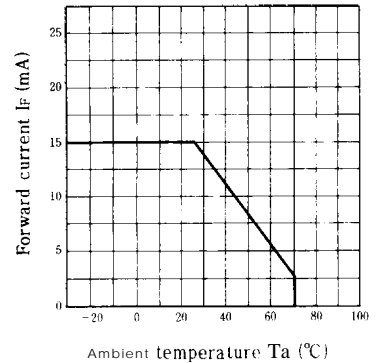
Forward Current vs. Forward Voltage



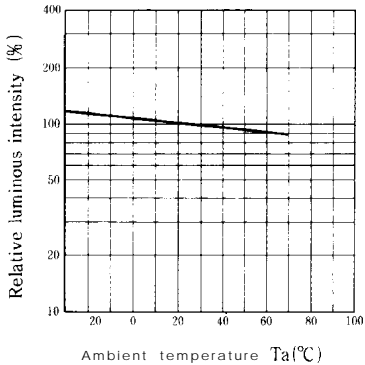
Luminous Intensity vs. Forward Current



Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature, I_F = 10mA



Spectrum Distribution

