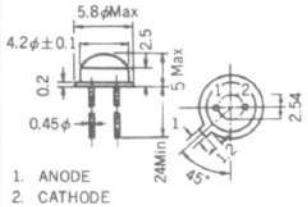
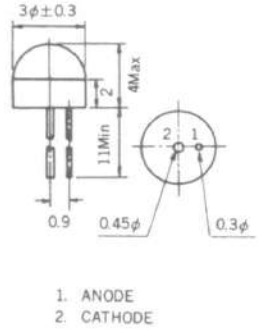
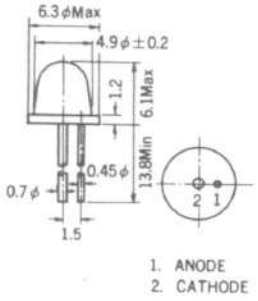
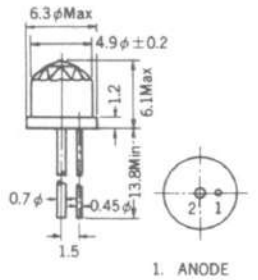
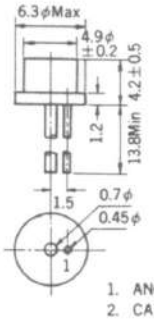
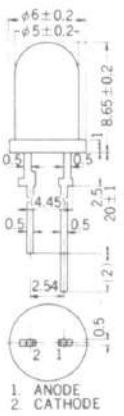
1. GaP LIGHT EMITTING DIODE

	Dimensional drawings : unit in mm	Features	Device		Maximam Ratings (Ta = 25°C)	Characteristic (Ta = 25°C)	
			Red	Green		Red	Green
Plastic lens on a metal header		○ Lens diameter 4.2 mm ○ Metal header type ○ Red diffused lens (wide viewing angle) ○ Usable forward current (DC) 10 ~ 15mA	TLR101	—	I_F 35mA V_R 3V P_D 100mW Topr−20~75°C Tstg−30~100°C Soldering temperature for 3 seconds at 2mm from case : 260°C	○ V_F (I_F=30mA) Typ. 2.0V Max. 2.8V ○ I_R (V_R=3V) Max. 0.5μA ○ I_V (I_F=15mA) Min. 0.15 mcd Typ. 0.7 mcd	—
Plastic lens on a ceramic header		○ Lens diameter 3 mm			I_F 25mA (red) 30mA (green) V_R 4V P_D 75mW (red) 80mW (green) Tops−20~75°C Tstg−30~100°C Soldering temperature for 3 seconds at 2mm from case : 260°C	○ V_F (I_F=20mA) Typ. 1.95V Max. 2.6V ○ I_R (V_R=4V) Max. 5μA ○ I_V (I_F=10mA) Min. Typ. (mcd) TLR102 0.1 0.5 TLR108 0.15 0.7 TLR109 0.1 0.6	○ V_F (I_F=20mA) Typ. 2.0V Max. 2.6V ○ I_R (V_R=4V) Max. 5μA ○ I_V (IF=15mA) Min. Typ. (mcd) TLG102 0.05 0.1 TLG108 0.1 0.3
		○ Diffused lens (wide viewing angle)	TLR102	TLG102			
		○ Clear lens (Point source)	TLR108	TLG108			
		○ Milk white diffused lens (wide viewing angle)	TLR109	—			
		○ Usable forward current (DC) Red ... 5 ~ 10mA Green .... 15 ~ 20mA					
All plastic molded lens		○ Lens diameter 4.9mm			I_F 35mA (Red) 45mA (Green) V_R 4V P_D 100mW (Red) 125mW (Green) Topr−20~75°C Tstg−30~100°C Soldering temperature for 3 seconds at 2mm from case : 260°C (If the lead is formed, the lead should be formed at a distance of 2mm from case. Soldering shall be performed after lead forming.)	○ V_F (I_F=30mA) Typ. 2.0V Max. 2.8V ○ I_R (V_R = 4V) Max. 5μA ○ I_V (I_F=15mA) Min. Typ. (mcd) TLR103 0.5 3.0 TLR104 0.3 1.5 TLR105 0.5 1.7 TLR106 0.3 1.7 TLR107 0.3 1.2 TLR110 0.5 4.0	○ V_F (I_F=40mA) Typ. 2.15V Max. 2.8V ○ I_R (V_R = 4V) Max. 5μA ○ I_V (I_F=20mA) Min. Typ. (mcd) TLG103 0.3 3.0 TLG105 0.2 1.8 TLG107 0.3 1.2
		○ Red clear lens	TLR103	TLG103			
		○ Red diffused lens (wide viewing angle)	TLR104	—			
		○ Milk white diffused lens (wide viewing angle)	TLR106	—			
		○ Colorless clear lens	TLR110	—			
		○ Usable forward current (DC) Red .... 10 ~ 15mA Green .... 15 ~ 20mA		Green clear lens			
All plastic molded lens		○ Lens diameter 4.9mm ○ Red clear diamond cutting shape (wide viewing angle) ○ Usable forward current (DC) Red .... 10 ~ 15mA Green ... 15 ~ 20mA	TLR105	TLG105 Green clear diamond cutting shape			
All plastic molded lens		○ Lens diameter 4.9 mm ○ Red clear flat lens provides a unique surface light source ○ Usable forward current (DC) Red .... 10 ~ 15mA Green .... 15 ~ 20mA	TLR107	TLG107 Green clear flat lens			

All plastic molded lens

Dimensional drawings : unit in mm	Features	Device		Maximam Ratings (Ta = 25°C)	Characteristic (Ta = 25°C)	
		Red	Green		Red	Green
 1. ANODE 2. CATHODE	○ Lens diameter 5mm			I_F 20mA (Red) 25mA (Green) V_R 4V P_D 90m W (Red) 100mW (Green) Topr−20~75°C Tstg−30~100°C ○ Soldering temperature for 3 seconds at 2.5 mm from case : 260°C (If the lead is formed, the lead should be formed at a distance of 2.5mm from case. Soldering shall be performed after lead forming.)	○ V_F (I_F=20mA) Typ. 2.0V Max. 2.8V ○ I_R (V_R=4V) Max. 5μA ○ I_V (I_F=15mA) Min. Typ. (mcd) TLR113 0.5 3.5 TLR114 0.4 1.5 TLR120 0.5 4.0	○ V_F (I_F=20mA) Typ. 2.0V Max. 2.8V ○ I_R (V_R=4V) Max. 5μA ○ I_V (I_F=15mA) Min. Typ. (mcd) TLG113 0.5 3.5
	○ Red clear lens	TLR113	TLG113			
	○ Red diffused lens (wide viewing angle)	TLR114	—			
	○ Colorless clear lens	TLR120	—			
	○ Usable forward current (DC) Red .... 10~15mA Green .... 15~20mA		Green clear lens			