GL1 ❑ 0135 Series Colored Diffusion Mini-mold LED Lamps,Forming Type

■ Model No.

GL1PR135 Red	GaP
GL1HD135 Red	GaAsP/GaP
GL1HS135 Sunset orange	GaAsP/GaP
GL1HY135 YeHow	GaAsP/GaP
GL1EG135 Yellow-green	GaP

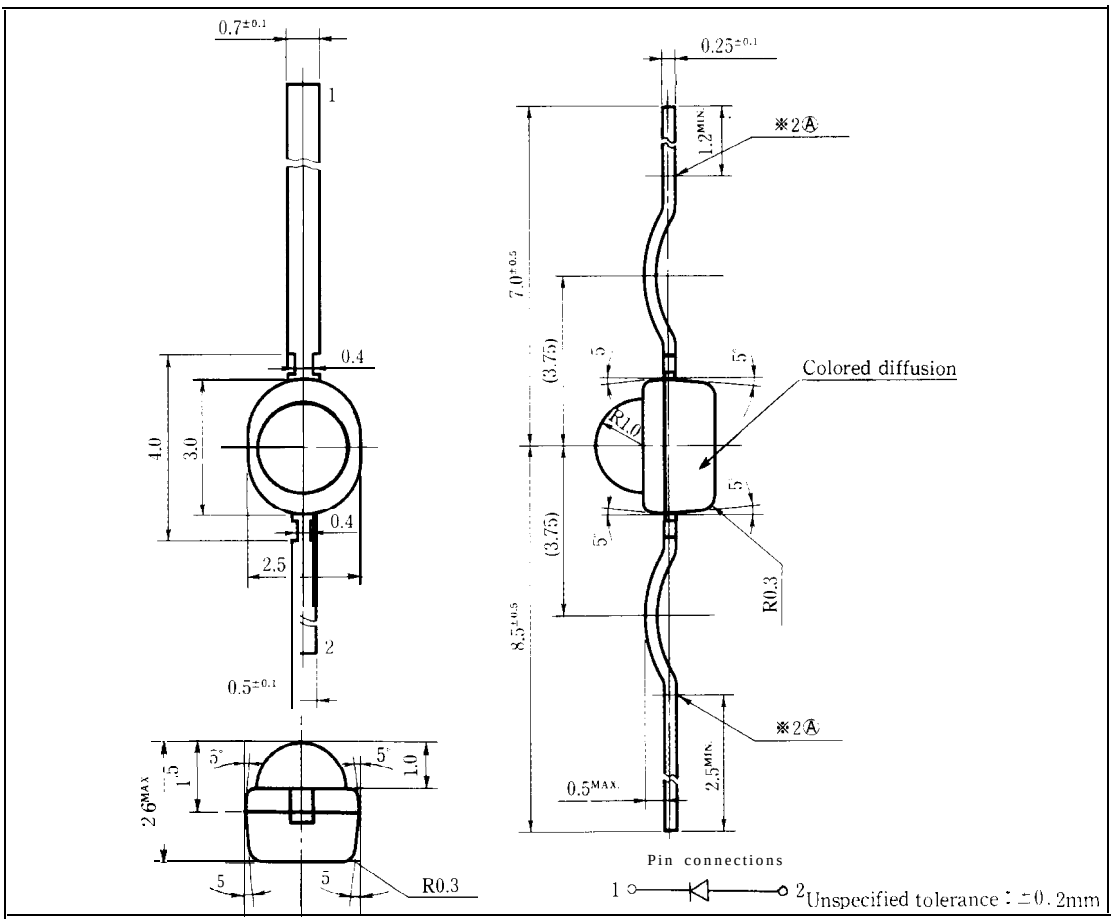
■ Features

1. ϕ 2mm all resin mold
2. "R" type forming lead pins
3. Colored diffusion lens type

3

■ Outline Dimensions

(Unit: mm)



GL1□□135

■ Absolute Maximum Ratings

(Ta = 25°C)

Parameter		Symbol	GL1PR135	GL1HD135	GL1HY135			Unit
				GL1HS135	GL1EG135			
Power dissipation		P	23	84	50			mW
Continuous forward current		I_F	10	30	20			mA
※1 Peak forward current		I_{FM}	50	50	50			mA
Derating factor	DC		0.13	0.40	0.26			mA/°C
	Pulse		0.67	0.67	0.67			mA/°C
Reverse voltage		V_R	5	5	5			V
Operating temperature		T_{opr}	–25 to +85					°C
Storage temperature		T_{stg}	–25 to +100					°C
※2 Soldering temperature		T_{sol}	260 (within 5 seconds)					°C

※1 Duty ratio = 1/10, Pulse width = 0.1ms
※2 At the Ⓐ position of outline dimensions

GL1PR135 (Red) / GL1HD135 (Red)

■ Electro-optical Characteristics

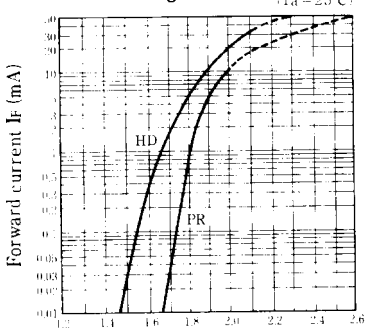
(Ta=25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL1PR135	I_F=5mA	—	1.9	2.3	V
		GL1HD135	I_F=20mA	—	2.0	2.8	
*3 Luminous intensity	I_V	GL1PR135	I_F=5mA	1.0	2.6	—	mcd
		GL1HD135	I_F=20mA	4.2	8.8	—	
Peak emission wavelength	λ_p	GL1PR135	I_F=5mA	—	695	—	nm
		GL1HD135	I_F=20mA	—	635	—	
Spectrum radiation bandwidth	$\Delta\lambda$	GL1PR135	I_F=5mA	—	100	—	nm
		GL1HD135	I_F=20mA	—	35	—	
Reverse current	I_R	GL1PR135	V_R=4V	—	—	10	μA
		GL1HD135	V_R=4V	—	—	10	
Terminal capacitance	C_t	GL1PR135	V=0V f=1MHz	—	55	—	pF
		GL1HD135	V=0V f=1MHz	—	20	—	
Response frequency	f_c	GL1PR135	—	—	4	—	MHz
		GL1HD135		—	4	—	

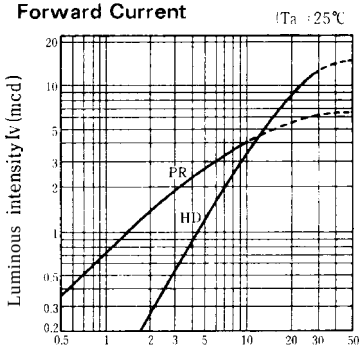
※3 Tolerance: ±30%

■ Characteristics Diagrams

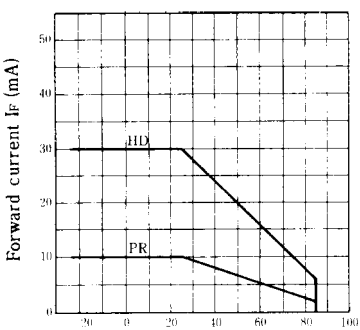
Forward Current vs. Forward Voltage



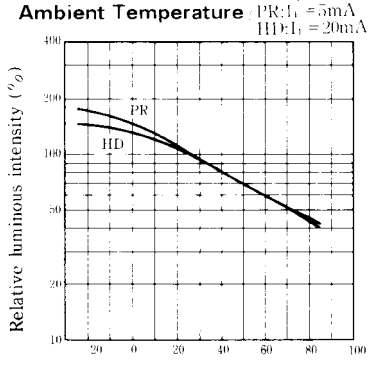
Luminous Intensity vs. Forward Current



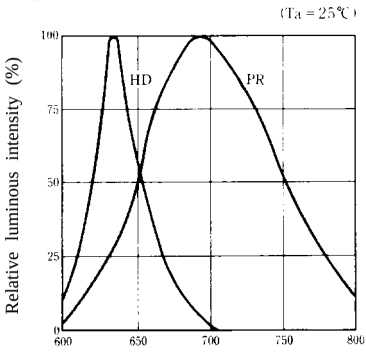
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution



GL1HS135 (Sunset orange) / GL1HY135 (Yellow)

■ Electro-optical Characteristics

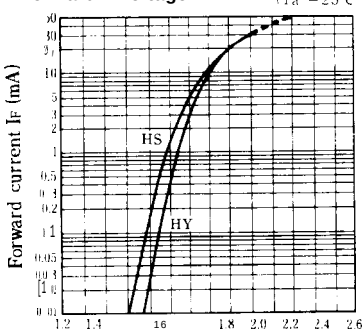
(Ta = 25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	GL1HS135	I_F = 20mA	–	2.0	2.8	V
		GL1HY135	I_F = 10mA		1.9	2.5	
※3 Luminous intensity	I_V	GL1HS135	I_F = 20mA	4.0	10	–	mcd
		GL1HY135	I_F = 10mA	1.5	4.5	–	
Peak emission wavelength	λ_p	GL1HS135	I_F = 20mA	–	610	–	‘m
		GL1HY135	I_F = 10mA	–	585	–	
Spectrum radiation bandwidth	$\Delta\lambda$	GL1HS135	I_F = 20mA		35	–	‘m
		GL1HY135	I_F = 10mA	–	30	–	
Reverse current	I_R	GL1HS135	V_R = 4V		–	10	μA
		GL1HY135	V_R = 4V	–	–	10	
Terminal capacitance	C_t	GL1HS135	V=0V f=1 MHz	–	15	–	‘F
		GL1HY135	V=0V f=1 MHz	–	35	–	
Response frequency	f_c	GL1HS135	–	–	4	–	MHz
		GL1HY135	-	–	4	–	

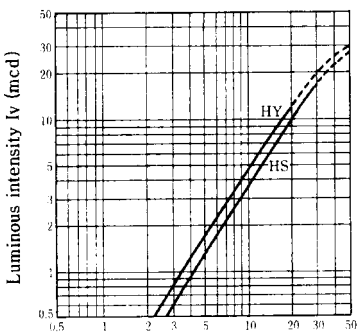
※3 Tolerance: ±30%

■ Characteristics Diagrams

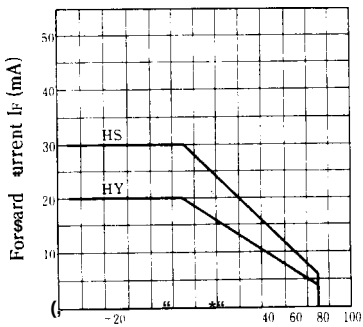
Forward Current vs. Forward Voltage (Ta = 25℃)



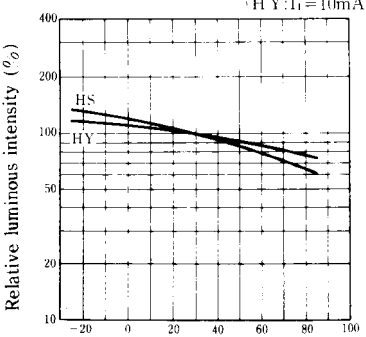
Luminous Intensity vs. Forward Current (Ta = 25℃)



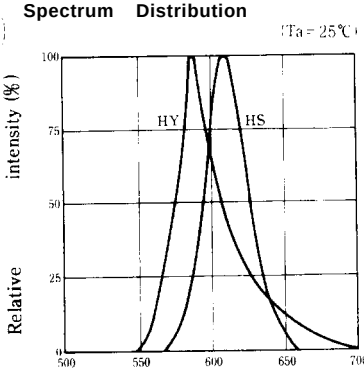
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature (HS: I_F = 20mA, HY: I_F = 10mA)



Spectrum Distribution (Ta = 25℃)



GL1EG135 (Yellow-green)

■ Electro-optical Characteristics

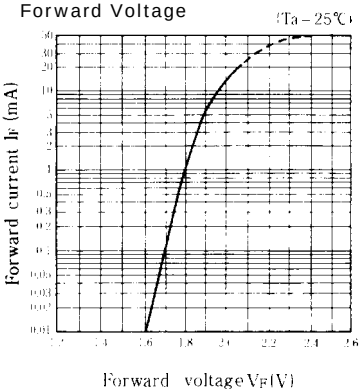
(Ta = 25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX,	Unit
Forward voltage	V_F	GL1EG135	I_F = 10mA	–	1.95	2.5	V
※3 Luminous intensity	Iv	GL1EG135	I_F = 10mA	2,2	4.3	–	mcd
Peak emission wavelength	λ_p	GL1EG135	I_F = 10mA	–	565	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	GL1EG135	I_F = 10mA		30	–	nm
Reverse current	I_R	GL1EG135	V_R = 4V		–	10	μA
Terminal capacitance	C_t	GL1EG135	V = 0V f = 1 MHz	–	35	–	pF
Response frequency	f_c	GL1EG135	–	–	4	–	MHz

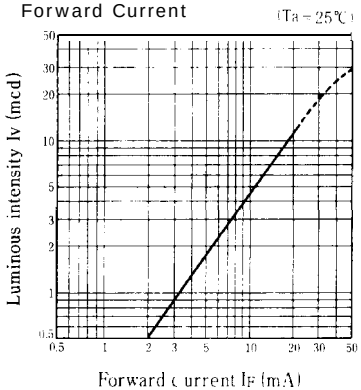
※3 Tolerance: ±30%

■ Characteristics Diagrams

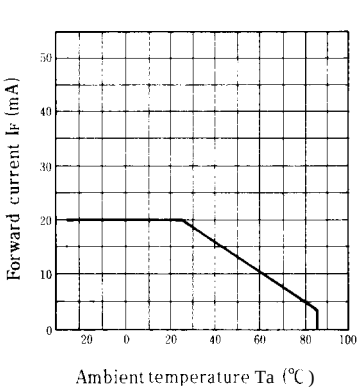
Forward Current vs. Forward Voltage



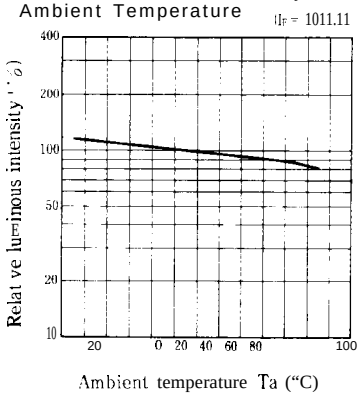
Luminous Intensity vs. Forward Current



Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution