

LT9010 Series

Case Mold Type
LED Panel Displays

■ Model No.

LT9010D Red

GaAsP/GaP

LT9010H Yellow

GaAsP/GaP

LT9010E Yellow-green

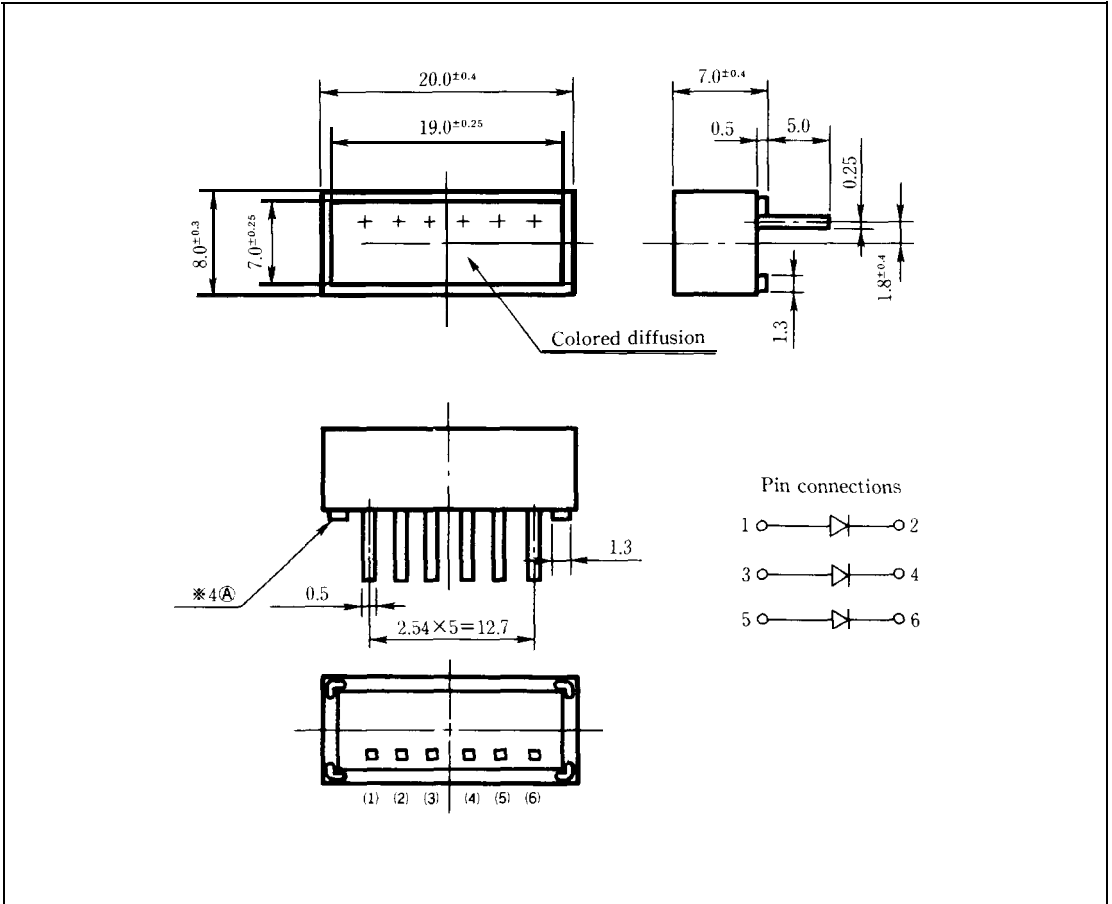
GaP

■ Features

1. Radiation size 7.0 × 19.0mm
2. Case mold type

■ Outline Dimensions

(Unit: mm)



SHARP

LT901 on

■ Absolute Maximum Ratings ※1

(Ta = 25°C)

Parameter	Symbol	LT9010D LT9010H				Unit
		LT9010E				
※2 Power dissipation	P	252	150			mW
Continuous forward current	I _F	30	20			mA
※3 Peak forward current	I _{FM}	50	50			mA
Derating factor	DC	0.55	0.36			nA/°C
	Pulse	—	0.91	0.91		nA/°C
Reverse voltage	V _R	5	5			V
Operating temperature	T _{opr}	-20 to +70				°C
Storage temperature	T _{stg}	-30 to +80				°C
※4 Soldering temperature	T _{sol}	260 (within 5 seconds)				°C

※1 Per chip

※2 Per lamp : 3 chips

※3 Duty ratio= 1/10. Pulse width = 0.1ms

※4 At the position of 1.6 mm from (A) level of outline dimensions

4

LT9010D (Red)

Electro-optical Characteristics *1

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT9010D	$I_F = 20\text{mA}$		2.0	2.8	V
*5 Luminous intensity	I_V	LT9010D	$I_F = 20\text{mA}$	7.0	15	—	mcd
Peak emission wavelength	λ_p	LT9010D	$I_F = 20\text{mA}$		635	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT9010D	$I_F = 20\text{mA}$	—	35	—	nm
Reverse current	I_R	LT9010D	$V_R = 4\text{V}$		—	10	μA
Response frequency	f_c	LT9010D	—		4	—	MHz

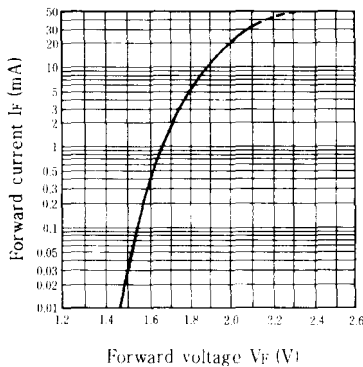
*1 Per chip

*5 Per lamp : 3 chips, Tolerance : $\pm 30\%$

Characteristics Diagrams

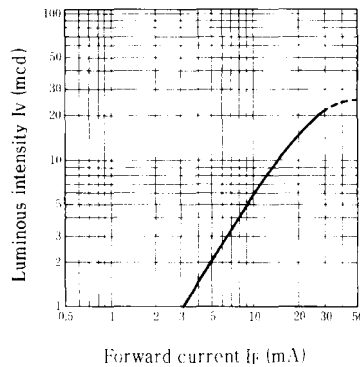
Forward Current vs. Forward Voltage

(Ta = 25°C)

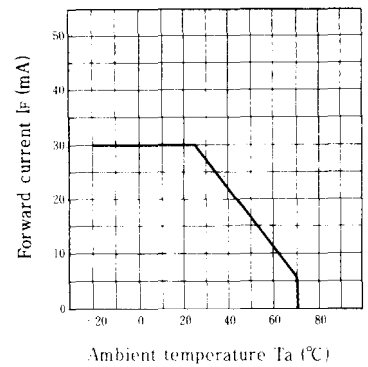


Luminous Intensity vs. Forward Current

Ta = 25°C

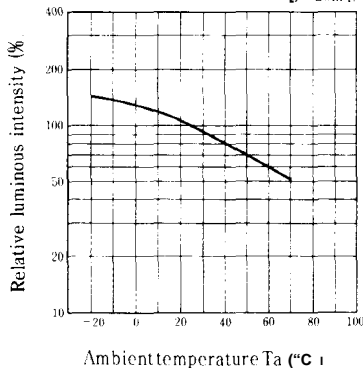


Forward Current Derating Curve



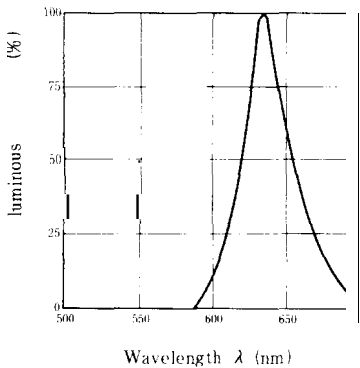
Relative Luminous Intensity vs. Ambient Temperature

$I_F = 20\text{mA}$



Spectrum Distribution

(Ta = 25°C)



LT901 OH (Yellow) / **LT901** OE (Yellow-green)

■ **Electro-optical** Characteristics *1

(Ta = 25°C)

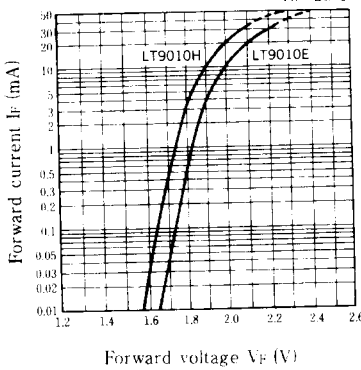
Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	LT901OH	I _F = 10mA	—	1.9	2.5	V
		LT901OE	I _F = 20mA	—	2.1	2.8	
*5 Luminous intensity	I _v	LT901OH	I _F = 10mA	2.0	5.0	—	mcd
		LT901OE	I _F = 20mA	16	35	—	
Peak emission wavelength	λ _p	LT901OH	I _F = 10mA	—	585	—	nm
		LT901OE	I _F = 20mA	—	565	—	
Spectrum radiation bandwidth	Δλ	LT901OH	I _F = 10mA	—	30	—	nm
		LT901OE	I _F = 20mA	—	30	—	
Reverse current	I _R	LT901OH	V _R = 4V	—	—	10	μA
		LT901OE	V _R = 4V	—	—	10	
Response frequency	f _c	LT901OH	—	—	4	—	kHz
		LT901OE	—	—	4	—	

*1 Per chip

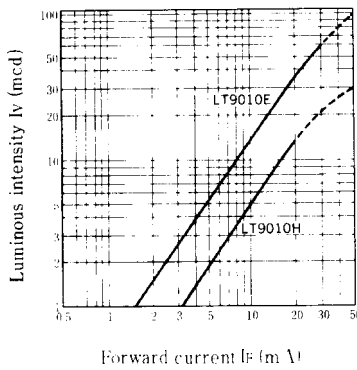
*5 Per lamp : 3 chips, Tolerance: ±30%

■ **Characteristics Diagrams**

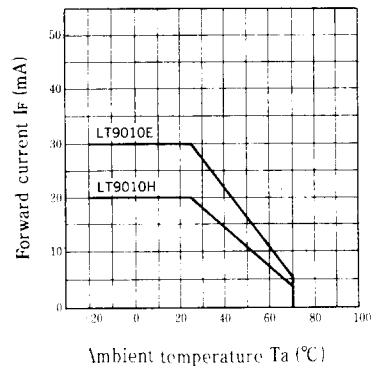
Forward Current vs. Forward Voltage



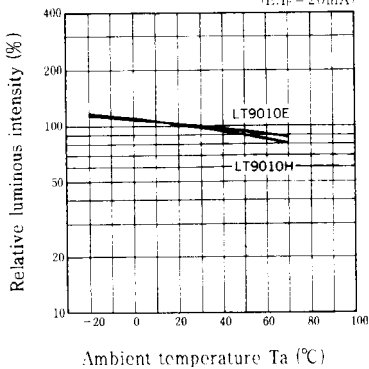
Luminous Intensity vs. Forward Current



Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature



Spectrum Distribution

