

# LT9400□ Series

## Thin and Insert Molding Package LED Panel Displays

### ■ Model No.

LT9400D Red

GaAsP/GaP

LT9400E Yellow-green

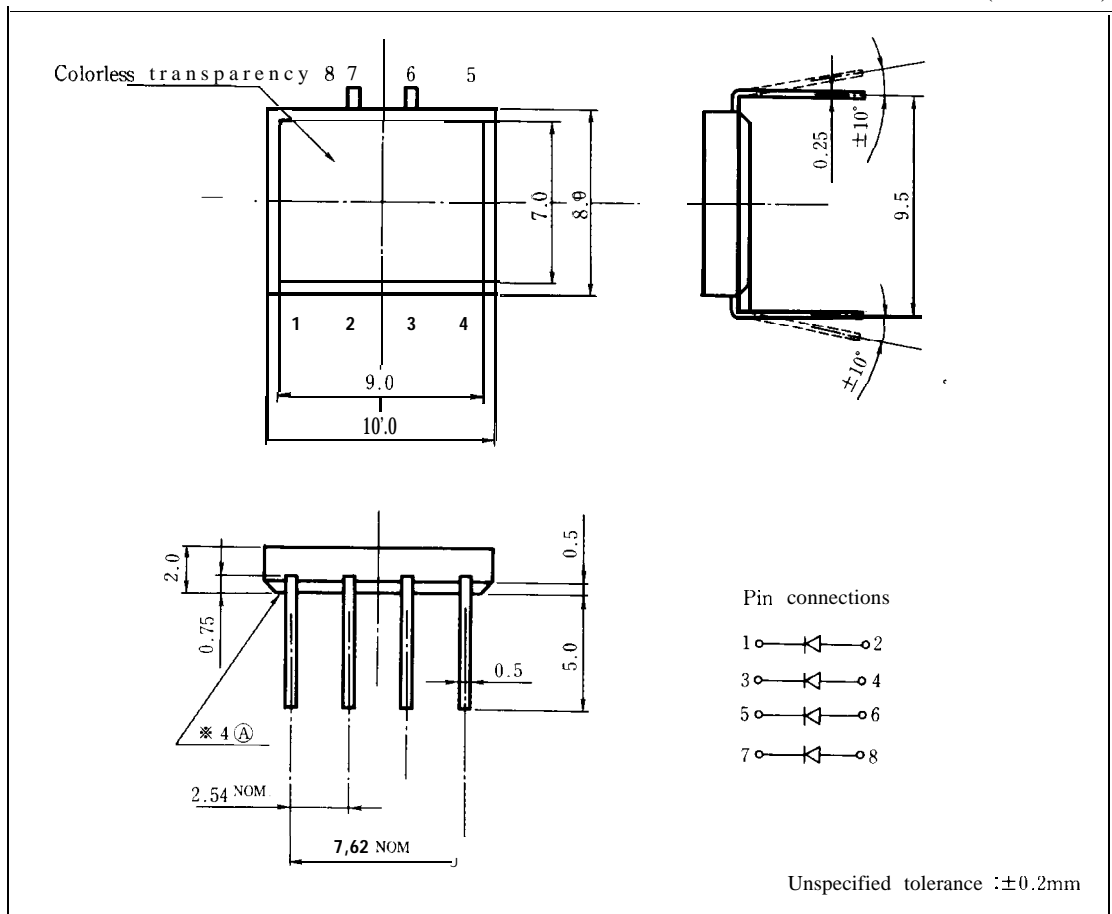
GaP

### ■ Features

1. Radiation size  $7.0 \times 9.0$ mm
2. Thin and insert molding package (2.0mm thickness)

### ■ Outline Dimensions

(Unit: mm)



**SHARP**

## LT9400 □

## ■ Absolute Maximum Ratings ※1

(Ta=25°C)

Parameter	Symbol	LT9400D				Unit
		LT9400E				
※2 Power dissipation	P	336				mW
Continuous forward current	I <sub>F</sub>	30				mA
※3 Peak forward current	I <sub>FM</sub>	50				mA
Denting factor	DC	—	0.55			nA/°C
	Pulse	—	0.91			nA/°C
Reverse voltage	V <sub>R</sub>	5				V
Operating temperature	T <sub>opr</sub>	-20 to +70				°C
Storage temperature	T <sub>stg</sub>	-30 to +80				°C
※4 Soldering temperature	T <sub>sol</sub>	260 (within 5 seconds)				°C

※1 Per chip

※2 Per lamp : 4 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

**LT9400D** (Red)

■ **Electro-optical** Characteristics ※1

(Ta=25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V <sub>F</sub>	LT9400D	I <sub>F</sub> = 20mA	—	2.0	2.8	V
※5 Luminous intensity		I <sub>V</sub>	LT9400D	I <sub>F</sub> = 20mA	20	52	
Peak emission wavelength	λ <sub>p</sub>	LT9400D	I <sub>F</sub> = 20mA	—	635	—	nm
Spectrum radiation bandwidth	Δλ	LT9400D	I <sub>F</sub> = 20mA	—	35	—	nm
Reverse current	I <sub>R</sub>	LT9400D	V <sub>R</sub> = 4V	—	—	10	μA
Response frequency		f <sub>c</sub>	LT9400D	—	—	4	

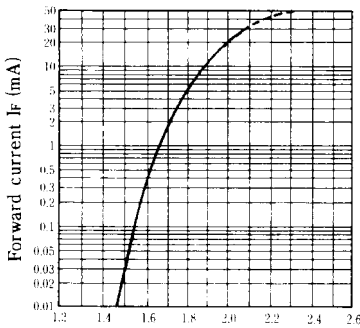
※1 Per chip

※5 Per lamp : 4 chips, Tolerance : ±30%

■ **Characteristics Diagrams**

Forward Current vs. Forward Voltage

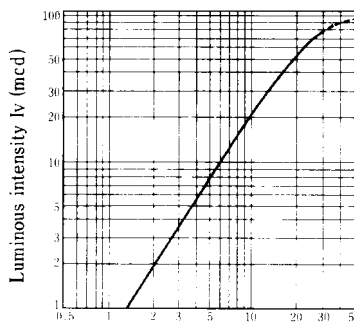
(Ta = 25°C)



Forward voltage V<sub>F</sub>(V)

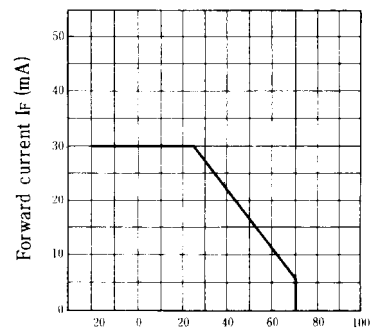
Luminous Intensity vs. Forward Current

(Ta = 25°C)



Forward current I<sub>F</sub>(mA)

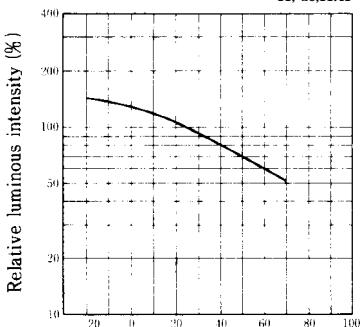
Forward Current Derating Curve



Ambient temperature T<sub>a</sub> (°C)

Relative Luminous Intensity vs. Ambient Temperature

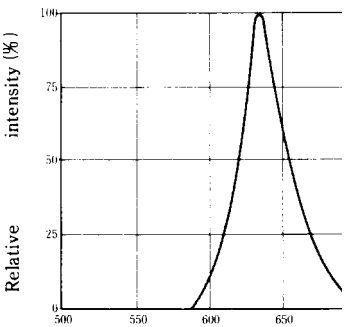
11-20,11.41



Ambient temperature T<sub>a</sub> (°C)

Spectrum Distribution

(Ta = 25°C)



Wavelength λ (nm)

LT9400E (Yellow-green)

■ Electro-optical Characteristics \*1

(Ta=25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	$V_F$	LT9400E	$I_F = 20\text{mA}$	-	2.1	2.8	V
*5 Luminous intensity	$I_V$	LT9400E	$I_F = 20\text{mA}$	32	70	-	mcd
Peak emission wavelength	$\lambda_p$	LT9400E	$I_F = 20\text{mA}$	-	565	-	nm
Spectrum radiation bandwidth	$\Delta \lambda$	LT9400E	$I_F = 20\text{mA}$	-	30	-	nm
Reverse current	$I_R$	LT9400E	$V_R = 4\text{V}$	-	-	10	$\mu\text{A}$
Response frequency	$f_c$	LT9400E	-	-	4	-	MHz

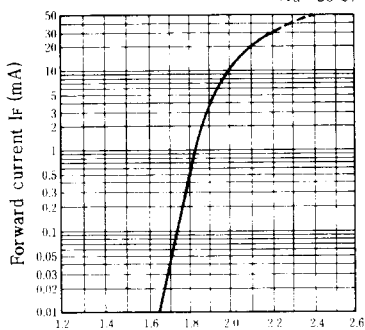
\*1 Per chip

\*5 Per lamp : 4 chips, Tolerance :  $\pm 30\%$

■ Characteristics Diagrams

Forward Current vs. Forward Voltage

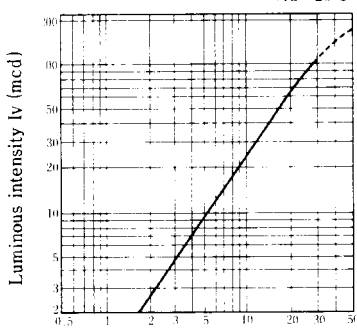
(Ta = 25°C)



Forward voltage  $V_F$  (V)

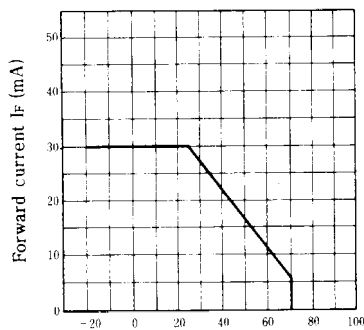
Luminous Intensity vs. Forward Current

(Ta = 25°C)



Forward current  $I_F$  (mA)

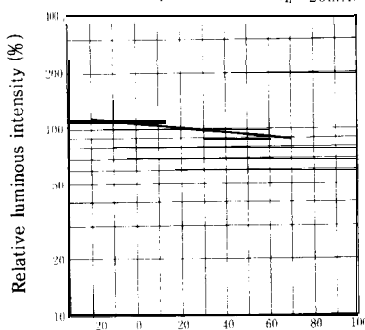
Forward Current Derating Curve



Ambient temperature  $T_a$  (°C)

Relative Luminous Intensity vs. Ambient Temperature

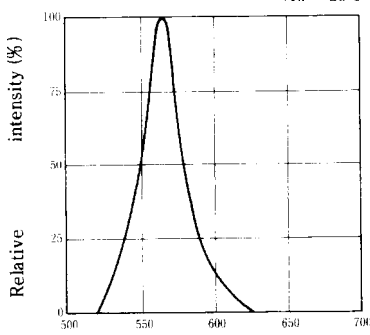
( $I_F = 20\text{mA}$ )



Ambient temperature  $T_a$  (°C)

Spectrum Distribution

(Ta = 25°C)



Wavelength  $\lambda$  (nm)