

51E D ■ 8180798 0007281 712 ■ SRPJ

LT9315□ Series**Thin Case Mold Type
LED Panel Displays**

T-41-25

■ Model No.

LT9315D Red
 LT9315H Yellow
 LT9315E Yellow-green

GaAsP/GaP
 GaAsP/GaP
 GaP

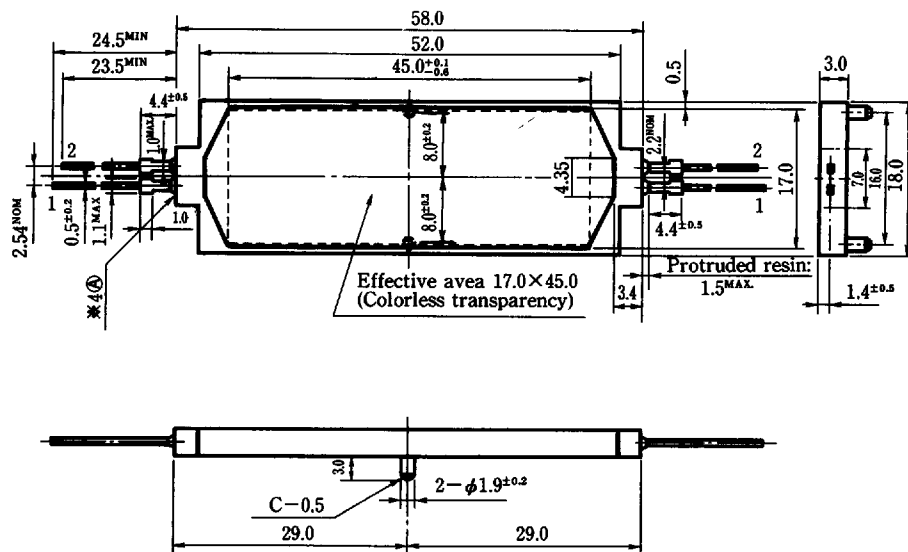
■ Features

1. Radiation size 17.0 × 45.0mm
2. Thin case mold type

■ Outline Dimensions

(Unit: mm)

4



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LT9315□

T-41-25

■ Absolute Maximum Ratings ※1

(Ta=25°C)

Parameter	Symbol	LT9315D	LT9315H				Unit
		LT9315E					
※2 Power dissipation	P	336	200				mW
Continuous forward current	I _F	60	40				mA
※3 Peak forward current	I _{FM}	100	100				mA
Derating factor	DC	—	1.09	0.73			mA/°C
	Pulse	—	1.82	1.82			mA/°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 : 2 chips

※3 Duty ratio=1/10, Pulse width=0.1ms

※4 At the position of 4.1 mm from (A) level of outline dimensions

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LT9315D (Red)

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■ Electro-optical Characteristics ※1

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT9315D	$I_F = 40\text{mA}$	—	2.0	2.8	V
※5 Luminous intensity	I_V	LT9315D	$I_F = 40\text{mA}$	7.0	20	—	mcd
Peak emission wavelength	λ_p	LT9315D	$I_F = 40\text{mA}$	—	635	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT9315D	$I_F = 40\text{mA}$	—	35	—	nm
Reverse current	I_R	LT9315D	$V_R = 4\text{V}$	—	—	10	μA
Response frequency	f_c	LT9315D	—	—	4	—	MHz

※1 Per chip

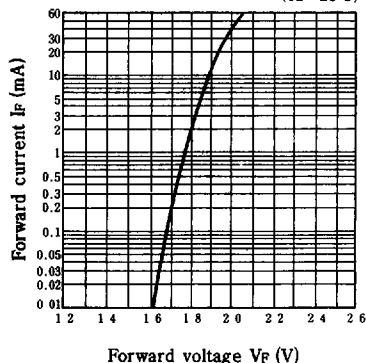
※5 Per lamp : 2 chips

Effective area : $17.0 \times 45.0\text{mm}$ Tolerance : $\pm 30\%$

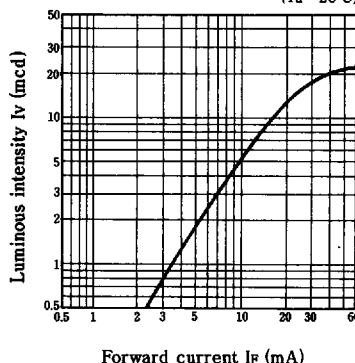
■ Characteristics Diagrams

Forward Current vs.
Forward Voltage

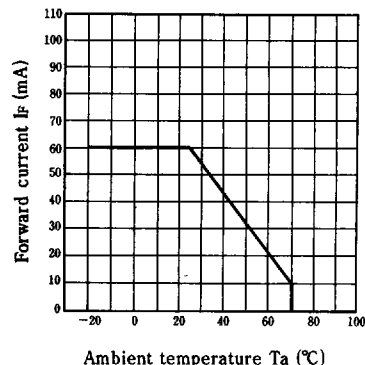
(Ta = 25°C)

Luminous Intensity vs.
Forward Current

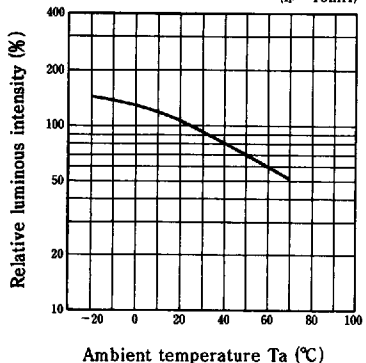
(Ta = 25°C)



Forward Current Derating Curve

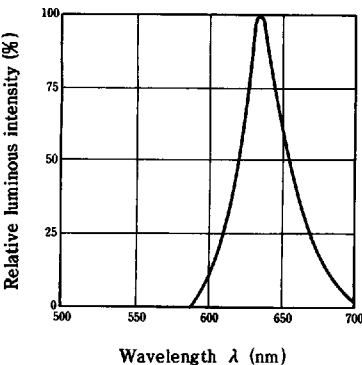
Relative Luminous Intensity vs.
Ambient Temperature

(IF = 40mA)



Spectrum Distribution

(Ta = 25°C)



SHARP

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LT9315H (Yellow) / LT9315E (Yellow-green)

T-41-25

■ Electro-optical Characteristics ※1

(Ta = 25°C)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT9315H	$I_F = 20\text{mA}$	—	1.9	2.5	V
		LT9315E	$I_F = 40\text{mA}$	—	2.2	2.8	
※5 Luminous intensity	I_V	LT9315H	$I_F = 20\text{mA}$	5.0	15	—	mcd
		LT9315E	$I_F = 40\text{mA}$	10	30	—	
Peak emission wavelength	λ_p	LT9315H	$I_F = 20\text{mA}$	—	585	—	nm
		LT9315E	$I_F = 40\text{mA}$	—	565	—	
Spectrum radiation bandwidth	$\Delta\lambda$	LT9315H	$I_F = 20\text{mA}$	—	35	—	nm
		LT9315E	$I_F = 40\text{mA}$	—	30	—	
Reverse current	I_R	LT9315H	$V_R = 4\text{V}$	—	—	10	μA
		LT9315E	$V_R = 4\text{V}$	—	—	—	
Response frequency	f_c	LT9315H	—	—	4	—	MHz
		LT9315E	—	—	4	—	

※1 Per chip

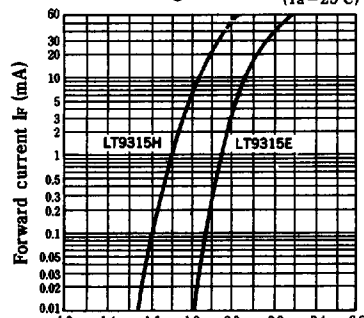
※5 Per lamp : 2 chips

Effective area : $17.0 \times 45.0\text{mm}$ Tolerance : $\pm 30\%$

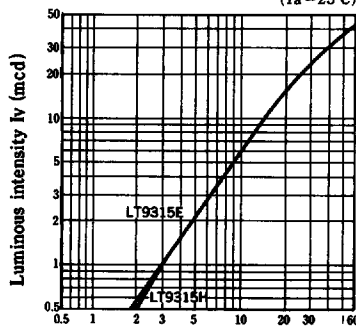
■ Characteristics Diagrams

Forward Current vs.
Forward Voltage

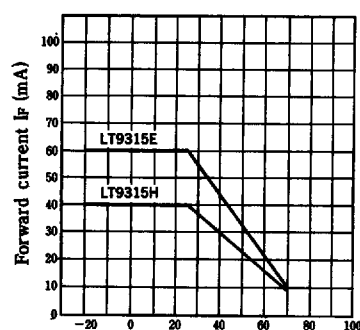
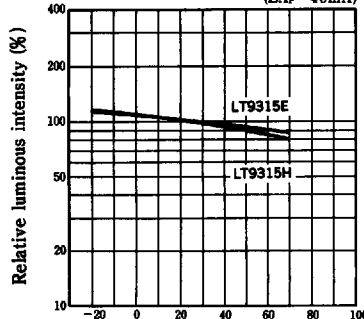
(Ta = 25°C)

Forward voltage V_F (V)Luminous Intensity vs.
Forward Current

(Ta = 25°C)

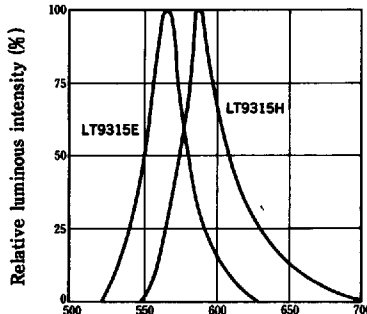
Forward current I_F (mA)

Forward Current Derating Curve

Ambient temperature T_a (°C)Relative Luminous Intensity vs.
Ambient Temperature (H: $I_F = 20\text{mA}$
E: $I_F = 40\text{mA}$)Ambient temperature T_a (°C)

Spectrum Distribution

(Ta = 25°C)

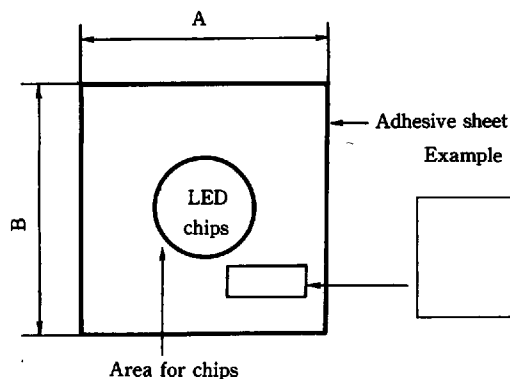
Wavelength λ (nm)

Packing Specifications for LED Chips

T-90-20

1. Chip Packing

The chips are pasted up on the center of an adhesive sheet, then covered with a protective sheet.



Example

Model No. chip packing classification No.

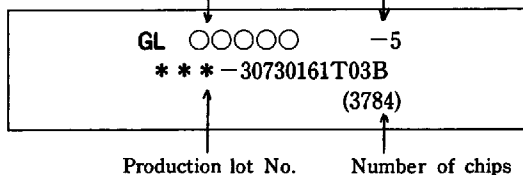


Fig. 1

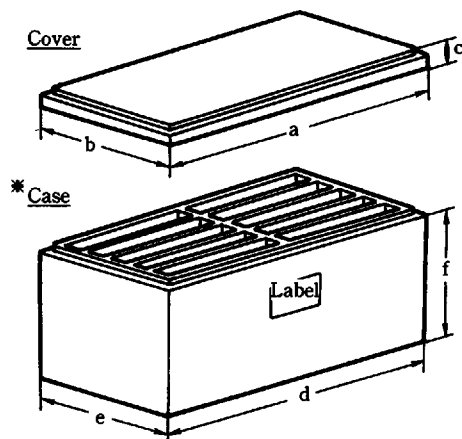
2. Sheet Packing

PART No.	
QUANTITY	00 pcs. (UNITS)
ID No.	
SHARP CORPORATION	

Put the chip-pasted sheet into a dedicated styrol case, then paste up a label shown in Fig. 2 on its side.

Fig. 2

3. Styrol Case



*Divided into 10 divisions

Fig. 3

LED Chips

SHARP CORP

Packing Specifications

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(Unit : mm)

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Adhesive sheet size A × B	Cover			Case			1 division		
	a	b	c	d	e	f	Length	Width	Depth
110×110	265	170	22.5	265	170	125	115	22.5	115
150×150	350	170	22.5	350	170	165	155	22.5	155
180×180	465	200	22.5	465	200	220	205	25	205
200×200	465	200	22.5	465	200	220	205	25	205

As to details such as materials, colors and paste intensity of chip-pasted sheets, etc., please contact our sales department.