

LT5107ED/LT5108ED 4×4 Dot Matrix LEDs

Dichromatic T-41-31

Model No.

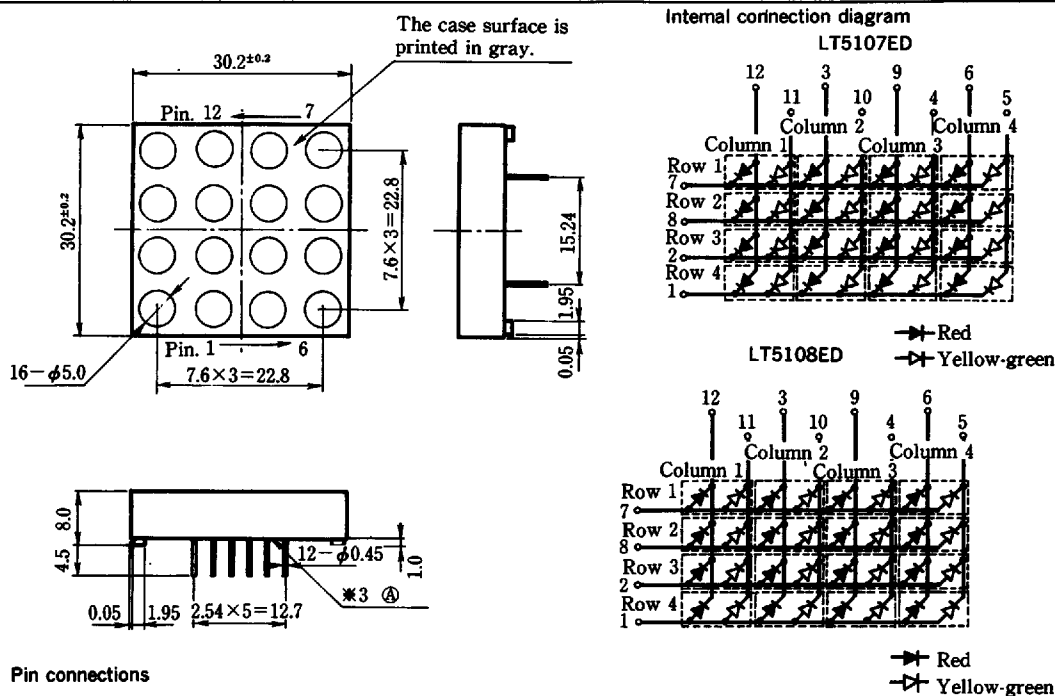
LT5107ED/LT5108ED Yellow-green GaP
 Red GaAsP/GaP

Features

1. Case mold type
2. 0.9" character height
3. Radiation color : Red, yellow-green and orange (mixed color)

Outline Dimensions

(Unit: mm)



Pin connections

LT5107ED

No.	FUNCTION	No.	FUNCTION
1	Row 4 Cathode	7	Row 1 Cathode
2	Row 3 Cathode	8	Row 2 Cathode
3	Column 2 R Anode	5	Column 3R Anode
4	Column 3 Yg Anode	10	Column 2Yg Anode
5	Column 4Yg Anode	11	Column 1Yg Anode
6	Column 4R Anode	12	Column 1R Anode

R : Red
 Yg : Yellow-green

LT5108ED

No.	FUNCTION	No.	FUNCTION
1	Row 4 Anode	7	Row 1 Anode
2	Row 3 Anode	8	Row 2 Anode
3	Column 2R Cathode	9	Column 3R Cathode
4	Column 3Yg Cathode	10	Column 2Yg Cathode
5	Column 4Yg Cathode	11	Column 1Yg Cathode
6	Column 4R Cathode	12	Column 1R Cathode

R : Red
 Yg : Yellow-green

■ Absolute Maximum Ratings

(Ta=25°C)

Parameter			Symbol	LT5107ED LT5108ED				Unit
				Yellow-green	Red			
※1 Power dissipation			P	1600	1600			mW
Continuous forward current	Per dot		I _F	20	20			mA
※2 Peak forward current	Per dot		I _{FM}	50	50			mA
Derating factor	Per dot	DC	—	0.36	0.36			mA/°C
		Pulse	—	0.91	0.91			mA/°C
Reverse voltage	Per dot		V _R	5	5			V
Operating temperature			T _{opr}	-20 to +70				°C
Storage temperature			T _{stg}	-20 to +80				°C
※3 Soldering temperature			T _{sol}	260 (within 5 seconds)				°C

※1 Per character : 32chips (16chips each for red and yellow-green)

※2 Duty ratio=1/10, Pulse width=0.1ms

※3 At the position of 2.6 mm from (A) level of outline dimensions

■ Electro-optical Characteristics ※4

(Ta = 25°C)

Parameter	Symbol	Radiation color	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V _F	Yellow-green	I _F = 10mA	—	2.0	2.5	V
		Red	I _F = 10mA	—	1.9	2.5	
※5 Luminous intensity	I _v	Yellow-green	I _F = 10mA	1.7	4.0	—	mcd
		Red	I _F = 10mA	1.2	3.5	—	
Peak emission wavelength	λ _p	Yellow-green	I _F = 10mA	—	565	—	nm
		Red	I _F = 10mA	—	635	—	
Spectrum radiation bandwidth	Δλ	Yellow-green	I _F = 10mA	—	30	—	nm
		Red	I _F = 10mA	—	35	—	
Reverse current	I _R	Yellow-green	V _R = 4V	—	—	10	μA
		Red	V _R = 4V	—	—	10	
Response frequency	f _c	Yellow-green	—	—	4	—	MHz
		Red	—	—	4	—	

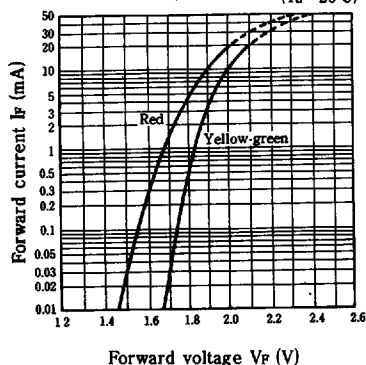
※4 Per dot

※5 Tolerance: ±30%

■ Characteristics Diagrams

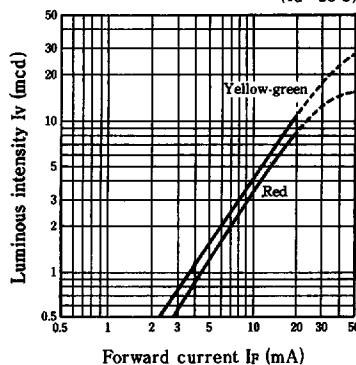
Forward Current vs.
Forward Voltage

(Ta = 25°C)

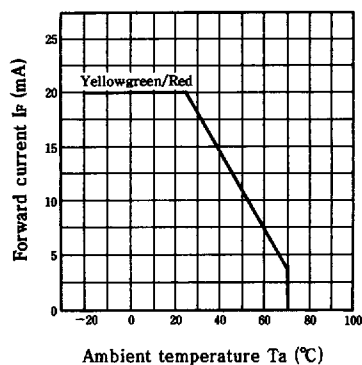


Luminous Intensity vs.
Forward Current

(Ta = 25°C)

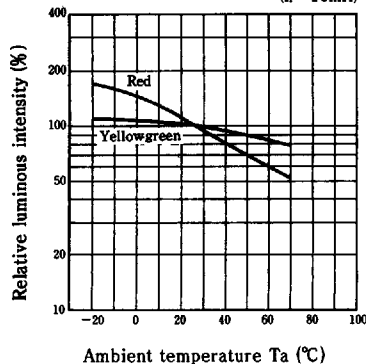


Forward Current Derating Curve



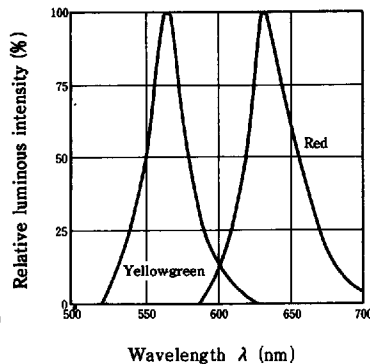
Relative Luminous Intensity vs.
Ambient Temperature

(I_F = 10mA)



Spectrum Distribution

(Ta = 25°C)

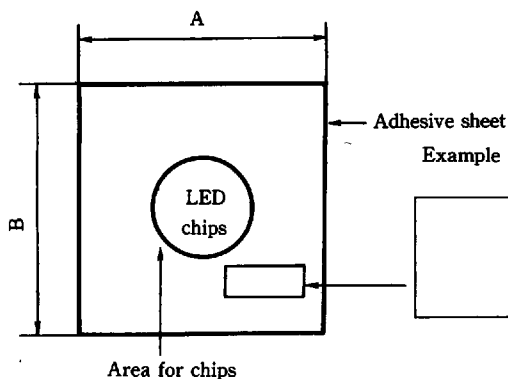


Packing Specifications for LED Chips

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.

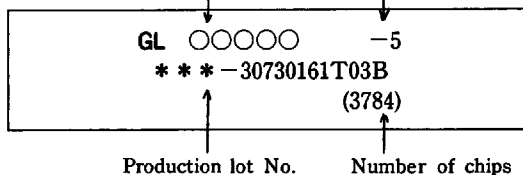


Fig. 1

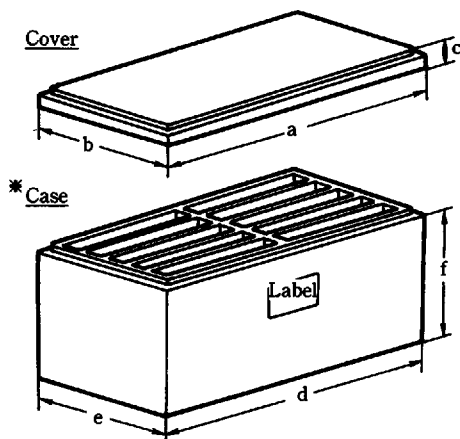
2. Sheet Packing

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

51E D ■ 8180798 0007557 146 ■ SRPJ

(Unit : mm)

T-90-20

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.