SHARP CORP 51E D 8180798 0007426 691 SRPJ

LT5103D/LT5104D

5×7 Dot Matrix LEDs

T-41-31

■ Model No.

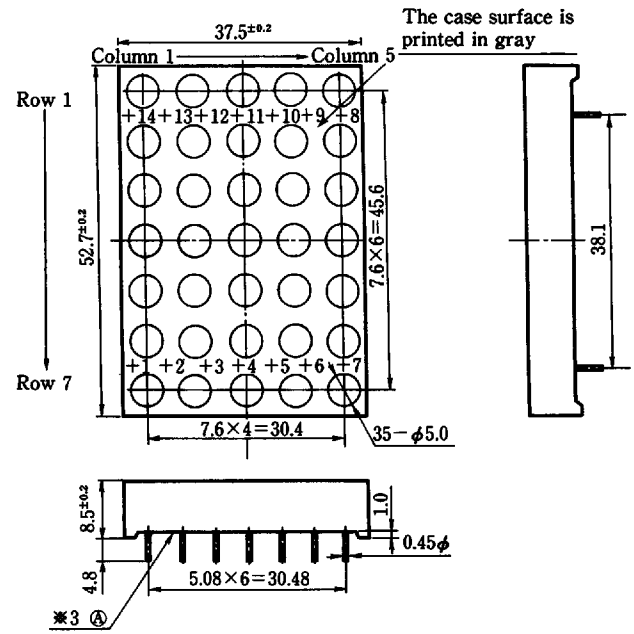
LT5103D/LT5104D	Red	GaAsP/GaP

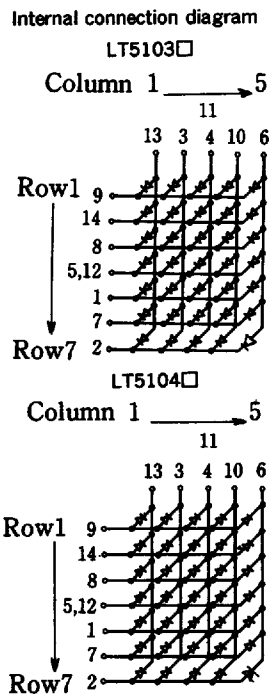
■ Features

1. Case mold type
2. 1.8" character height

■ Outline Dimensions

(Unit: mm)





Pin connections

LT5103□

No.	FUNCTION	No.	FUNCTION
1	Row 5 Cathode	8	Rom 3 Cathode
2	Row 7 Cathode	9	Row 1 Cathode
3	Column 2 Anode	10	Column 4 Anode
4	Column 3 Anode	11	Column 3 Anode
5	Row 4 Cathode	12	Row 4 Cathode
6	Column 5 Anode	13	Column 1 Anode
7	Row 6 Cathode	14	Row 2 Cathode

LT5104□

No.	FUNCTION	No.	FUNCTION
1	Row 5 Anode	8	Row 3 Anode
2	Row 7 Anode	9	Row 1 Anode
3	Column 2 Cathode	10	Column 4 Cathode
4	Column 3 Cathode	11	Column 3 Cathode
5	Row 4 Anode	12	Row 4 Anode
6	Column 5 Cathode	13	Column 1 Cathode
7	Row 6 Anode	14	Row 2 Anode

■ Absolute Maximum Ratings

(Ta=25℃)

Parameter			Symbol	LT5103D LT5104D					Unit
※1 Power dissipation			P	1540					mW
Continuous forward current	Per dot		I_F	20					mA
※2 Peak forward current	Per dot		I_{FM}	50					mA
Derating factor	Per dot	DC	−	0.36					mA/℃
		Pulse	−	0.91					mA/℃
Reverse voltage	Per dot		V_R	5					V
Operating temperature			T_{opr}	−20 to +70					℃
Storage temperature			T_{stg}	−20 to +80					℃
※3 Soldering temperature			T_{sol}	260 (within 5 seconds)					℃

※1 Per character : 35dots
※2 Duty ratio=1/10, Pulse width=0.1ms
※3 At the position of 2.6 mm from Ⓐ level of outline dimensions

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Electro-optical Characteristics ※4

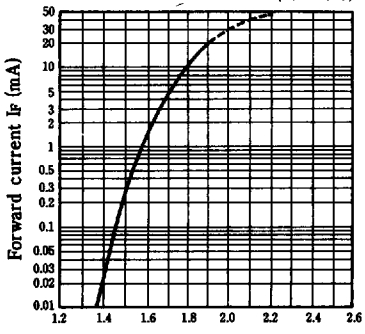
(Ta=25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT5103D/LT5104D	I_F=10mA	–	1.8	2.2	V
※5 Luminous intensity	I_V	LT5103D/LT5104D	I_F=10mA	0.5	1.0	–	mcd
Peak emission wavelength	λ_p	LT5103D/LT5104D	I_F=10mA	–	635	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT5103D/LT5104D	I_F=10mA	–	35	–	nm
Reverse current	I_R	LT5103D/LT5104D	V_R=4V	–	–	10	μA
Response frequency	f_c	LT5103D/LT5104D	–	–	4	–	MHz

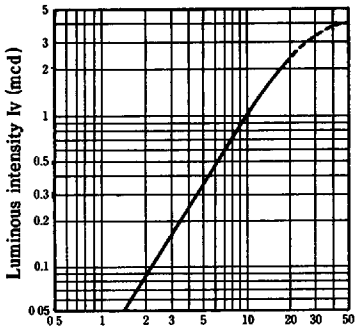
※4 Per dot
※5 Tolerance: ±30%

Characteristics Diagrams

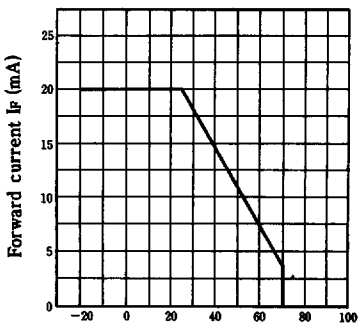
Forward Current vs. Forward Voltage (Ta=25℃)



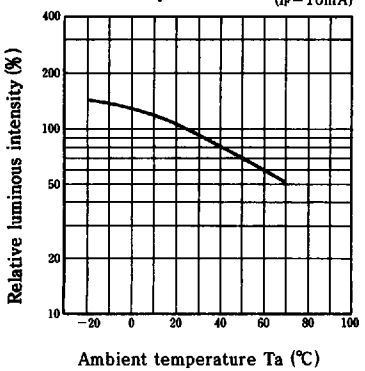
Luminous Intensity vs. Forward Current (Ta=25℃)



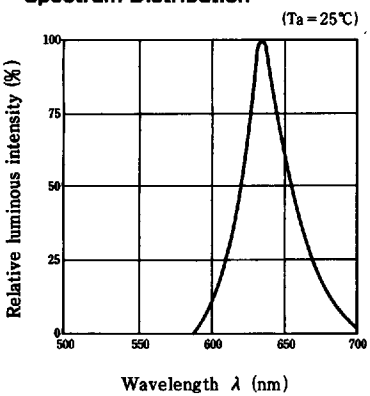
Forward Current Derating Curve



Relative Luminous Intensity vs. Ambient Temperature (I_F=10mA)



Spectrum Distribution (Ta=25℃)



SHARP CORP 51E D 8180798 0007556 20T SRPJ

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.

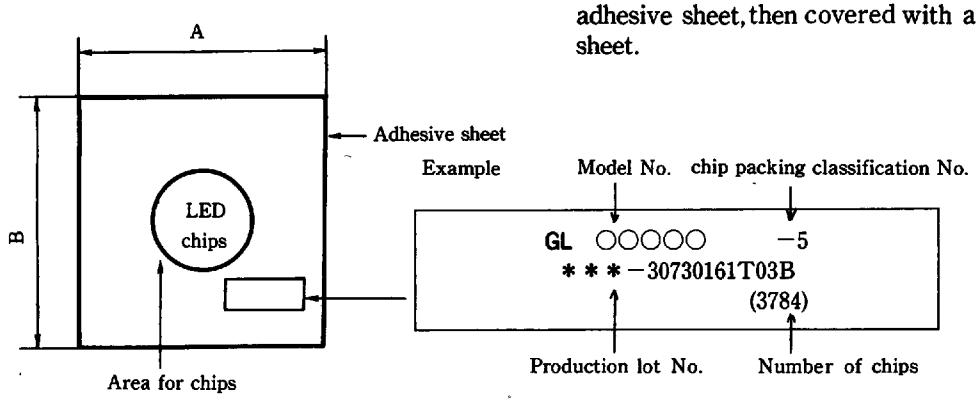


Fig. 1

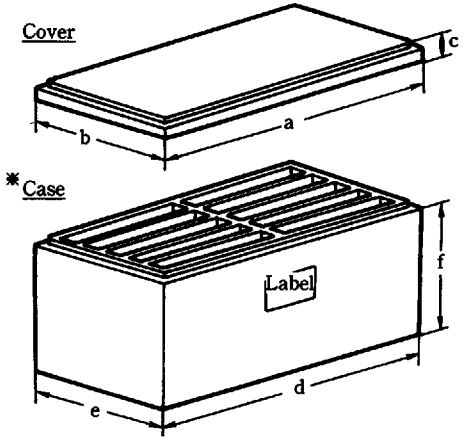
2. Sheet Packing

PART No.	
QUANTITY	0 0 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

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51E D 8180798 0007557 146 SRPJ

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(Unit : mm)

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.