LT51 05□/
LT51 06□ Series

8 x 8 Dot Matrix LEDs

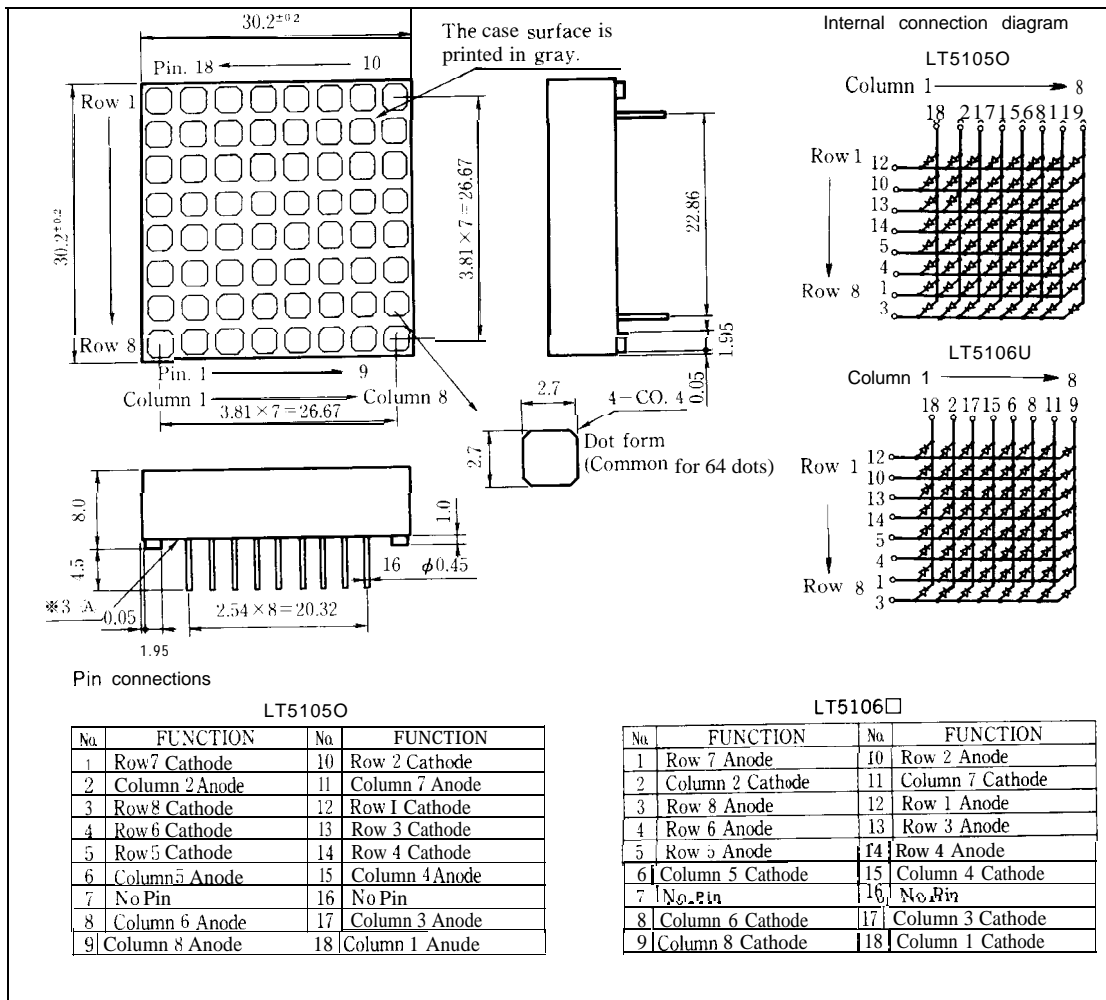## ■ Model No.

LT5105D/LT5106D   Red   GaAsP/GaP
LT5106S   Sunset orange   GaAsP/GaP
LT5105E/LT5106E   Yellow-green   GaP

■ Features

1. Case mold type
2. 1.05" character height

■ Outline Dimensions   (Unit: mm)

Internal connection diagram

Pin connections

LT5105O

No.	FUNCTION	No.	FUNCTION
1	Row 7 Cathode	10	Row 2 Cathode
2	Column 2 Anode	11	Column 7 Anode
3	Row 8 Cathode	12	Row 1 Cathode
4	Row 6 Cathode	13	Row 3 Cathode
5	Row 5 Cathode	14	Row 4 Cathode
6	Column 5 Anode	15	Column 4 Anode
7	No Pin	16	No Pin
8	Column 6 Anode	17	Column 3 Anode
9	Column 8 Anode	18	Column 1 Anode

LT5106□

No.	FUNCTION	No.	FUNCTION
1	Row 7 Anode	10	Row 2 Anode
2	Column 2 Cathode	11	Column 7 Cathode
3	Row 8 Anode	12	Row 1 Anode
4	Row 6 Anode	13	Row 3 Anode
5	Row 5 Anode	14	Row 4 Anode
6	Column 5 Cathode	15	Column 4 Cathode
7	No Pin	16	No Pin
8	Column 6 Cathode	17	Column 3 Cathode
9	Column 8 Cathode	18	Column 1 Cathode

6

─ SHARP ─

LT5105D / **LT5106☐**

■ **Absolute Maximum Ratings**　　　　　　　　　　　　　　　$(Ta = 25℃)$

Parameter			Symbol	LT5105D LT5106D LT5106S	LT5105E LT5106E				Unit
※1 Power dissipation			P	1500	1500				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/℃
		Pulse	–		0,91	0,91			mA/℃
Reverse voltage	Per dot		V_R	5	.5				v
Operating temperature			T_{opr}	–20 to +70					℃
Storage temperature			T_{stg}	–20 to +80					"c
※3 Soldering temperature			T_{sol}	260 (within 5 seconds)					'c

※1 Per character : 64dots
※2 Duty ratio = 1/10, Pulse width = 0.1ms
※3 At the position of 2.6 mm from Ⓐ level of outline dimensions

LT5105D/LT5106D(Red)

■Electro-optical Characteristics ※4　　　　　　　　　　　　　　　　(Ta＝25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT5105D/LT5106D	$I_F＝10mA$	—	1.9	2.5	V
※5 Luminous intensity	$l_\setminus$	LT5105D/LT5106D	$I_F＝10mA$	0.5	1.4	—	mcd
Peak emission wavelength	λ_p	LT5105D/LT5106D	$I_F＝10mA$	—	635	—	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT5105D/LT51 06D	$I_F＝10mA$		35	—	nm
Reverse current	I_R	LT5105D/LT5106D	$V_R＝4V$	—		10	μA
Response frequency	f_c	LT5105D/LT5106D	—	—	4	—	MHz

※4 **Per dot**
※5 **Tolerance:** $\pm 30\%$

■ Characteristics Diagrams

Forward Current vs.
Forward Voltage　(Ta＝25℃)
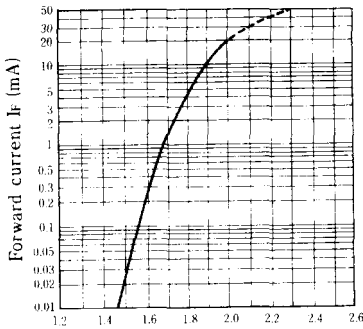
For ward voltage VF (V)

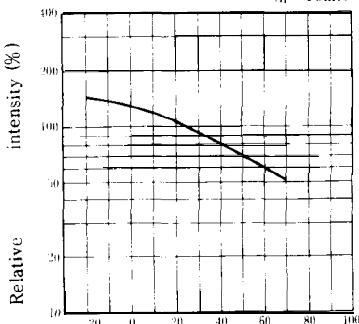**Luminous Intensity vs.**
Forward Current　(Ta＝25℃)
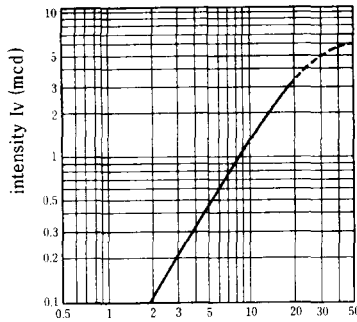
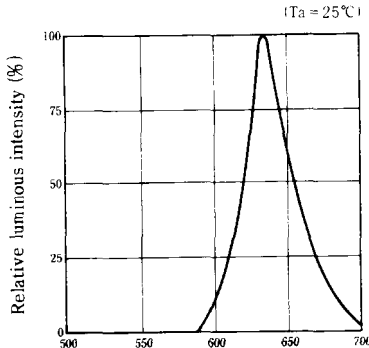Forward current IF (mA)

Forward Current Derating Curve
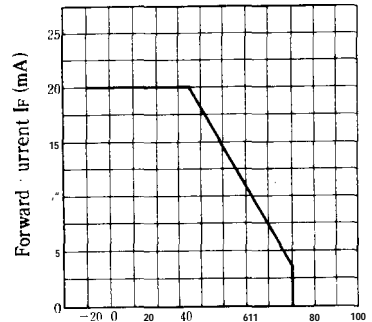
Ambient temperature Ta ("C)

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

Ambient temperature Ta (℃)

Spectrum Distribution　(Ta＝25℃)

Wavelength λ(nm)

6

LT5106S(Sunset orange)

■ Electro-optical Characteristics ※4

(Ta = 25℃)

Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT5106S	$I_F = 10mA$		1.9	2.5	V
※5 Luminous intensity	I_V	LT5106S	$I_F = 10mA$	0.65	2.0	−	mcd
Peak emission wavelength	λ_p	LT5106S	$I_F = 10mA$	−	610	−	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT5106S	$I_F = 10mA$		35	−	nm
Reverse current	I_R	LT5106S	$V_R = 4V$		−	10	μA
Response frequency	f_c	LT5106S	−		−	4	−	MHz

※4 **Per dot**
※5 Tolerance: ±30%

■ Characteristics Diagrams

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

Forward current I_F (mA) vs Forward voltage V_F (V)

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

Luminous intensity I_V (mcd) vs Forward current I_F(mA)

Forward Current Derating Curve

Forward current I_F (mA) vs Ambient temperature Ta(℃)

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

Relative (%) vs Ambient temperature Ta(℃)

Spectrum Distribution
(Ta = 25℃)

Relative luminous intensity (%) vs Wavelength λ (rim)

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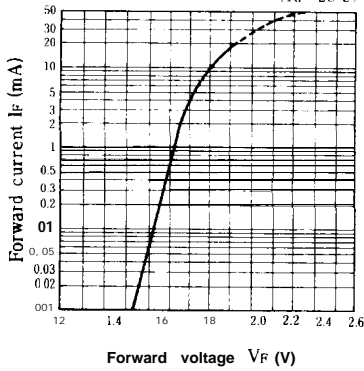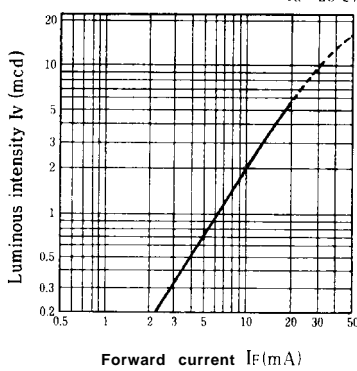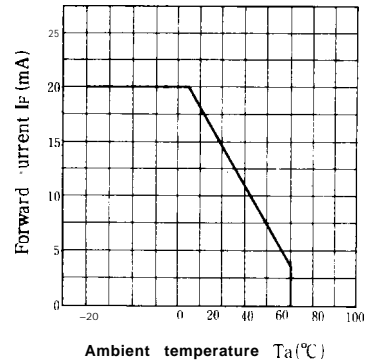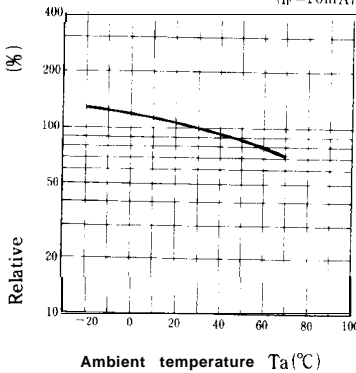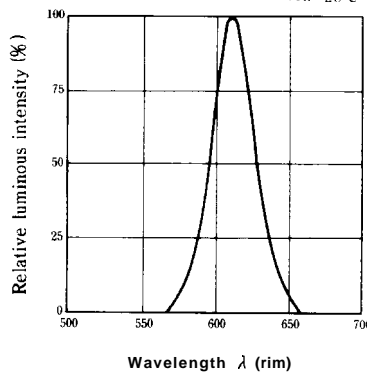
LT5105E/LT51 06 E(Yellow-green)

■ Electro-optical Characteristics ※4 (Ta = 25℃)

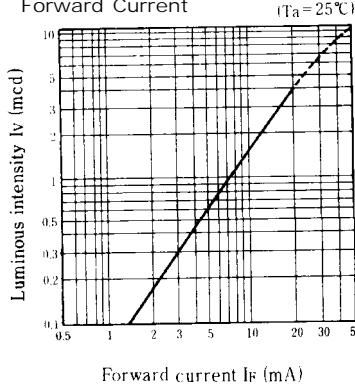| Parameter	Symbol	Model No.	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	V_F	LT5105E/LT5106E	$I_F = 10mA$	·	2.0	2.5	V
※5 Luminous intensity	I_V	LT5105E/LT5106E	$I_F = 10mA$	1.0	1.7	–	mcd
Peak emission wavelength	λ_p	LT5105E/LT5106E	$I_F = 10mA$	–	565	–	nm
Spectrum radiation bandwidth	$\Delta\lambda$	LT5105E/LT5106E	$I_F = 10mA$	–	30	–	nm
Reverse current	I_R	LT5105E/LT5106E	$V_R = 4V$	–		10	μA
Response frequency	f_c	LT5105E/LT5106E	–	–	4	–	MHz

※4 Per dot
※5 Tolerance: ±30%

■ Characteristics Diagrams
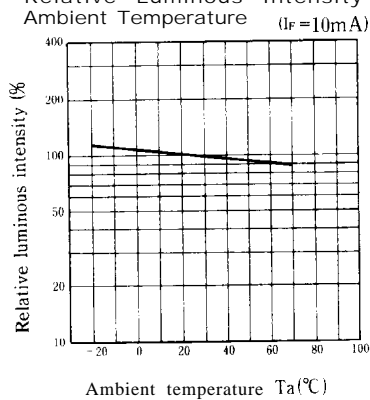
Forward Current vs. Forward Voltage (Ta = 25℃)

Forward voltage V_F (V)

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

Forward current I_F (mA)

Forward Current Derating Curve

Ambient temperature T_a (℃)

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

Ambient temperature T_a(℃)

Spectrum Distribution (Ta = 25℃)

Wavelength λ (rim)

SHARP