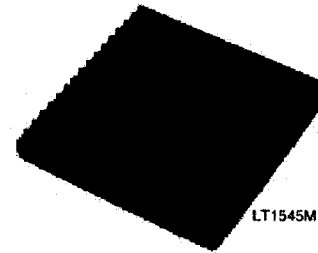


Dot Matrix LED Unit for Outdoor Use LT1545M(Lamp Type,Water-proof Type)

■ Features

- No. of dots : 16×16dots
- Outline dimensions : 240×240mm
- Dot size : 13.0×13.0mm
- Dot pitch : 14.9mm
- Radiation color : Yellow-green+Red(High-luminosity)dichromatic type
- Driving method : 1/8 duty dynamic drive



■ Absolute Maximum Ratings

(Ta=25°C)

Supply voltage for IC	VCC	-0.3 to +6.0	V
Supply voltage for LED	VLED	-0.3 to +8.0	V
Input voltage*1	VI	-0.3 to VCC+0.3	V
Turn-on time	ton	1	ms
Operating temperature	Topr	-20 to +75	°C
Storage temperature	Tstg	-25 to +100	°C
Power dissipation	P	59	W

*1 VI<Vcc at Vcc≤5

■ Optical Characteristics

(VCC=5V, VLED=7.5V, Ta=25°C)

Viewing angle	2θ1/2	30	°
Peak emission wavelength	Red	660	nm
	Yellow-green	565	nm

■ Luminance

Luminance is classified into 2 ranks shown below. It is adjustable by variable registers.

(VCC=5V, VLED=7.5V, Ta=25°C)

Red	1 500	1 800	cd/m ²
Yellow-green	1 500	1 800	

■ Terminal Functions

Power supply (CN1)	VLED	Supply voltage for LED(+7.5V)
	VCC	Supply voltage for IC(+5V)
	GND1	Ground for IC
	GND2	Ground for LED
Input signal (CN2)	A0 to A2	Address specification signal for column driver
	RDATA	Serial data input for red(H=ON, L=OFF)
	GDATA	Serial data input for yellow-green(H=ON, L=OFF)
	LATCH	Latch signal of display data H: Serial data is converted to parallel data. L: Contents are latched. LATCH signal is set up after switching address(A0 to A2)
	RENEWABLE	Controls ON/OFF of LED (H: LED OFF)
	CLOCK	Clock signal for data transmission in the shift-register.(L→H: serial data is shifted.)
	GND1	Ground for signal
Output signal (CN3)	A0 to A2	Buffered input signal
	RDATA	Input signal generated through 32-bit shift register or buffer
	GDATA	Input signal generated through 32-bit shift register or buffer
	LATCH	Buffered input signal
	RENEWABLE	Buffered input signal
	CLOCK	Buffered input signal
	GND1	Ground for signal

Each signal is used as input signal for next unit.

*As for the terminal number, refer to the outline dimensions.

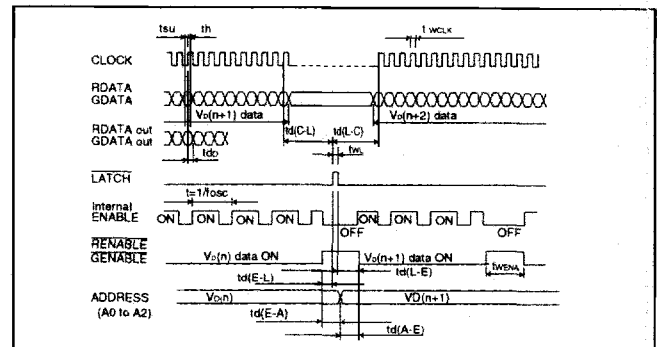
■ Electrical Characteristics

(VCC=5V, VLED=7.5V, Ta=25°C)

Supply voltage for IC	VCC	4.75	5.0	5.25	V
Supply voltage for LED	VLED	7.0	7.5	7.75	V
IC current dissipation*1	ICC	—	200	500	mA
LED current dissipation*1	ILED	—	5.5	7.0	A
Input voltage	VIH	3.5	—	—	V
	VIL	—	—	1.5	V
Input current	IIH	—	—	0.1	μA
	IIL	—	—	0.12	mA
Clock frequency	fCLK	—	—	10	MHz
Frame frequency	fFR	250	400	3 000	Hz

*1 Under the condition that dichromatic all dots are lit.

■ Timing Chart



■ Block Diagram

