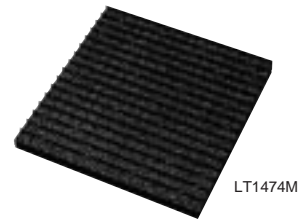


Dot Matrix LED Unit for Outdoor Use LT1474M(Lamp Type,Water-proof Type)

Features

- No. of dots : 16X16dots
- Outline dimensions : 320X320mm
- Dot size : 18X18mm(Using oval lamp)
- Dot pitch : 20.0mm
- Radiation color : Yellow-green+Red(High-luminosity)dichromatic type
- Driving method : 1/16 duty dynamic drive



Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage for IC	VCC	-0.3 to +6.0	V
Supply voltage for LED	VLED	-0.3 to +9.5	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	176	W

\*1 VI<Vcc at Vcc≤5

Optical Characteristics

(VCC=5V,VLED=9V,Ta=25°C)

Parameter	Symbol	TYP.	Unit
Luminance	Red	1 900	cd/m²
	Yellow-green	1 500	
Viewing angle[Horizontal(Red/Yellow-green)]	2θ1/2	60/70	°
Peak emission wavelength	Red	660	nm
	Yellow-green	565	

Terminal Functions

Connector	Symbol	Function
Power supply (CN1)	VLED	Supply voltage for LED(+9V)
	VCC	Supply voltage for IC(+5V)
	GND1	Ground for IC
	GND2	Ground for LED
Input signal (CN2)	A0 to A3	Address specification signal for row 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
	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 A3	Buffered input signal
	RDATA	Input signal generated through 16-bit shift register or buffer
	GDATA	Input signal generated through 16-bit shift register or buffer
	LATCH	Buffered input signal
	RENEWABLE	Buffered input signal
	CLOCK	Buffered input signal
	GND1	Ground for signal(Connected to ground for IC)

Each signal is used as input signal for next unit.

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

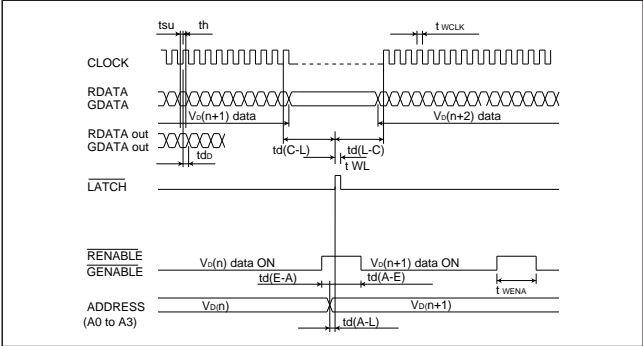
Electrical Characteristics

(VCC=5V,VLED=9V,Ta=25°C)

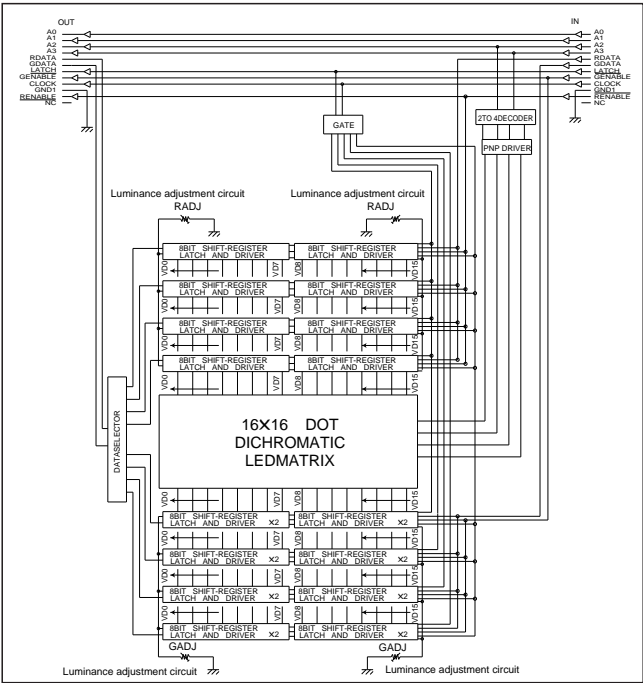
Parameter	Symbol	MIN.	TYP.	MAX.	Unit
Supply voltage for IC	LCC	4.75	5.0	5.25	V
Supply voltage for LED	VLED	8.75	9.0	9.25	V
IC current dissipation*1	ICC	—	500	750	mA
LED current dissipation*1	ILED	—	12	18	A
Input voltage	VIH	3.5	—	—	V
	VIL	—	—	1.5	V
Input current	IIH	—	—	0.1	μA
	IIL	—	—	0.12	mA
Clock frequency	fCLK	—	—	10	MHz

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

Timing Chart

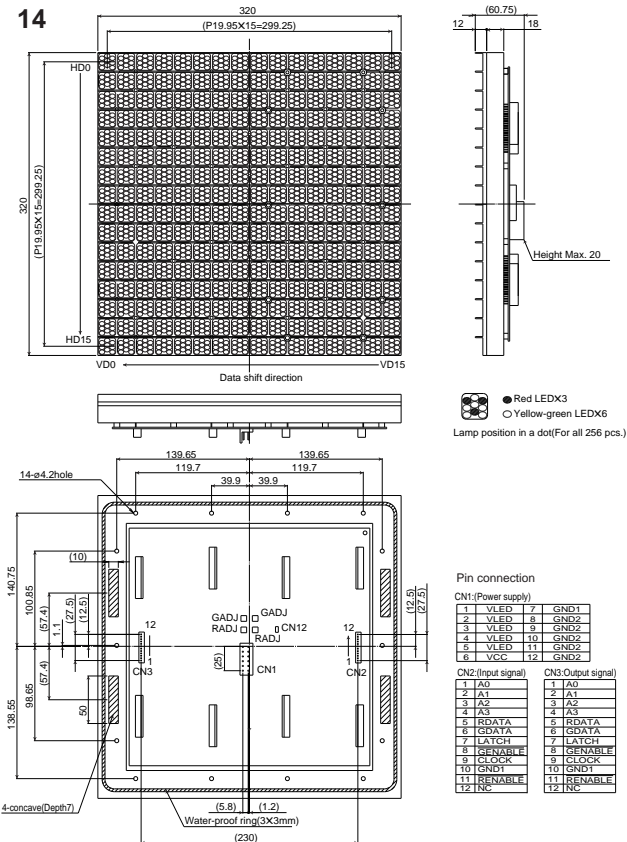


Block Diagram



(Notice) • In the absence of confirmation by device specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP devices shown in catalogs, data books, etc. Contact SHARP in order to obtain the latest device specification sheets before using any SHARP device.  
(Internet) • Data for sharp's optoelectronic/power device is provided for internet.(Address <http://www.sharp.co.jp/ecg/>)

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LT1474M