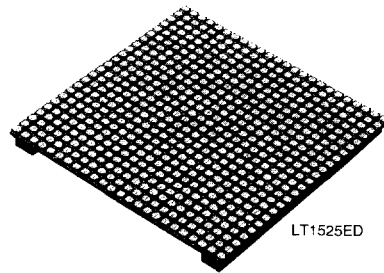


Dot Matrix LED Unit for Indoor Use LT1525ED(Chip Type)

■ Features

- No. of dots : 24X24dots
- Outline dimensions : 96X96mm
- Dot size : 3.0X3.0mm
- Dot pitch : 4.0mm
- Radiation color : Yellow-green+Red(dichromatic type)
- Driving method : 1/24 duty dynamic drive

Outline dimensions are shown on the page 203, Fig.9.



■ Absolute Maximum Ratings

(Ta=25°C)

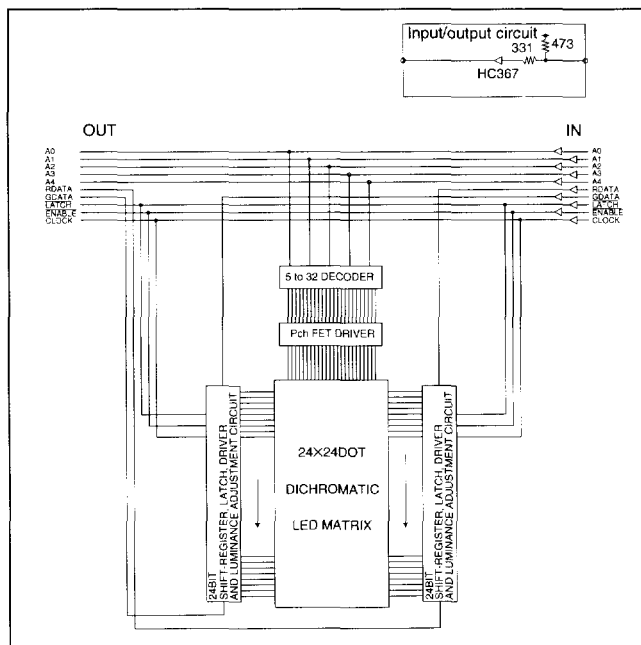
Parameter	Symbol	Rating	Unit
Supply voltage for IC	V _{CC}	-0.3 to +5.5	V
Supply voltage for LED	V _{LED}	-0.3 to +4.5	V
Input voltage	V _I	-0.3 to V _{CC} +0.3	V
Turn-on time	t _{ON}	1	ms
Operating temperature	T _{opr}	-10 to +60	°C
Storage temperature	T _{stg}	-20 to +70	°C
Power dissipation	P	18	W

■ Optical Characteristics

(V_{CC}=5V, V_{LED}=4V, Ta=25°C)

Parameter	Symbol	TYP.	Unit
Luminance	Red	110	cd/m ²
	Yellow-green	140	
Viewing angle	2θ ^{1/2}	120	°
Peak emission wavelength	Red	635	nm
	Yellow-green	565	

■ Block Diagram



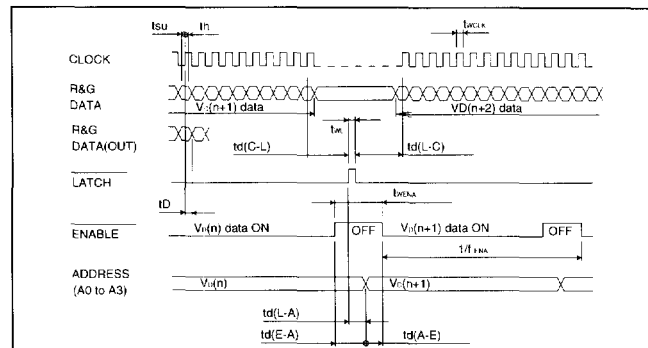
■ Electrical Characteristics

(V_{CC}=5V, V_{LED}=4V, Ta=25°C)

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
Supply voltage for IC	V _{CC}	4.75	5.0	5.25	V
Supply voltage for LED	V _{LED}	3.75	4.0	4.25	V
IC current dissipation ^{*1}	I _{CC}	—	120	160	mA
LED current dissipation ^{*1}	I _{LED}	—	3.4	3.8	A
Input voltage	V _{IH}	3.5	—	—	V
	V _{IL}	—	—	1.5	V
Input current	I _{IH}	—	—	0.1	μA
	I _{IL}	—	—	0.12	mA
Clock frequency	f _{CLK}	—	—	10	MHz
Frame frequency	f _{FR}	70	250	1000	Hz

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

■ Timing Chart



■ Recommended Timing Conditions

(V_{CC}=5.0V, Ta=25°C)

Parameter	Symbol	Rating			Unit	Remarks
		MIN.	TYP.	MAX.		
Clock pulse width	t _{WCLK}	50	—	—	ns	
Latch pulse width	t _{WL}	100	—	—	ns	
Enable pulse width	t _{WENA}	4	—	—	μs	
Data setup time	t _{SU}	60	—	—	ns	
Data hold time	t _H	20	—	—	ns	
Clock-latch time	t _{d(C-L)}	100	—	—	ns	
Latch-clock time	t _{d(L-C)}	100	—	—	ns	
Enable-address time	t _{d(E-A)}	2	—	—	μs	
Address-enable time	t _{d(A-E)}	2	—	—	μs	
Latch-address time	t _{d(L-A)}	0	—	—	μs	
Propagation delay time	t _{pLH, tpHL}	—	24	—	ns	Except data terminal
Data output delay time	t _{dD}	—	104	—	ns	
Frame frequency	f _{FR}	70	250	1 000	Hz	
Enable frequency	f _{ENA}	—	—	24	kHz	