

7 × 10 matrix displays

LM-0701 Series

The LM-0701 series are 7 × 10 matrix displays which can be used in a wide variety of applications, including alpha-bet, numeric, symbol, and graphic displays. A single-color bright red type and a dual-color red/green type are available.

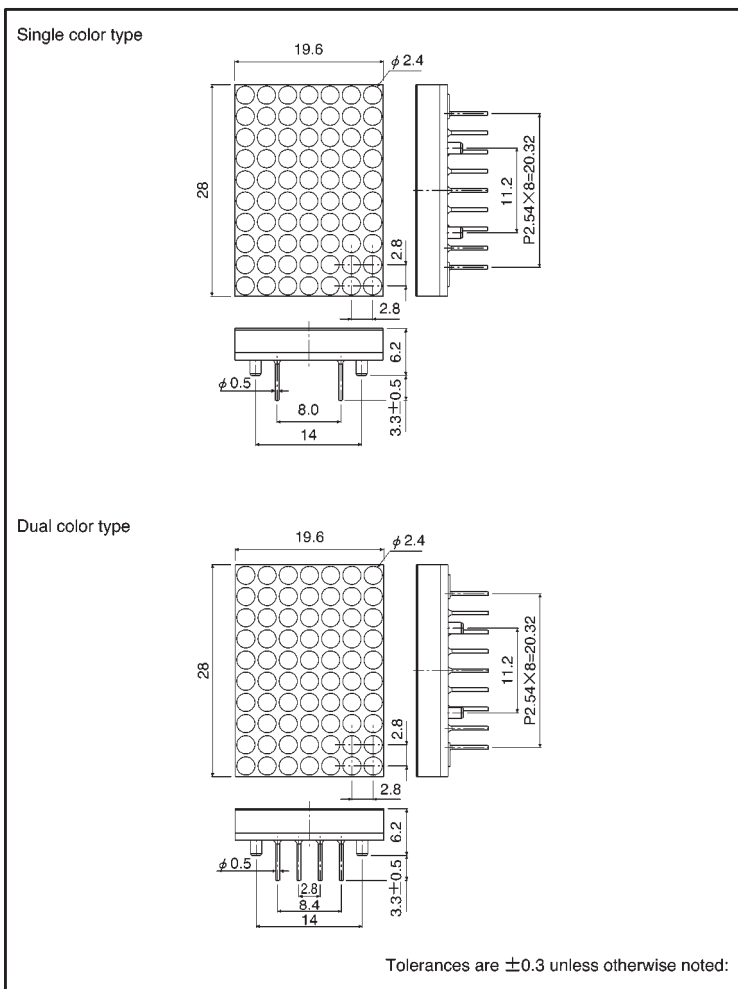
●Applications

Light sources for displays

●Features

- 1) 7 × 10 dot matrix
Circular emitters.
- 2) External dimensions: 28 × 19.6 × 6.2 mm
- 3) Emitter diameter: 2.4 mm.
- 4) Black package.

●External dimensions (Units: mm)

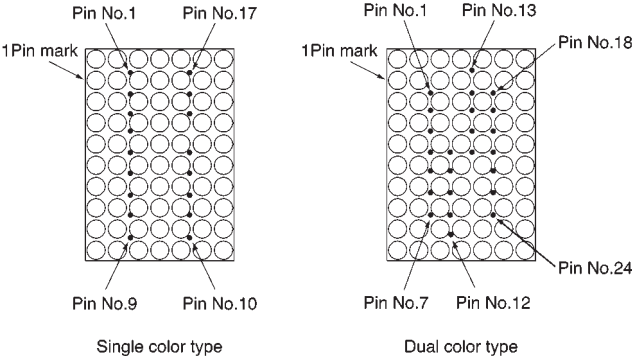


●Selection guide

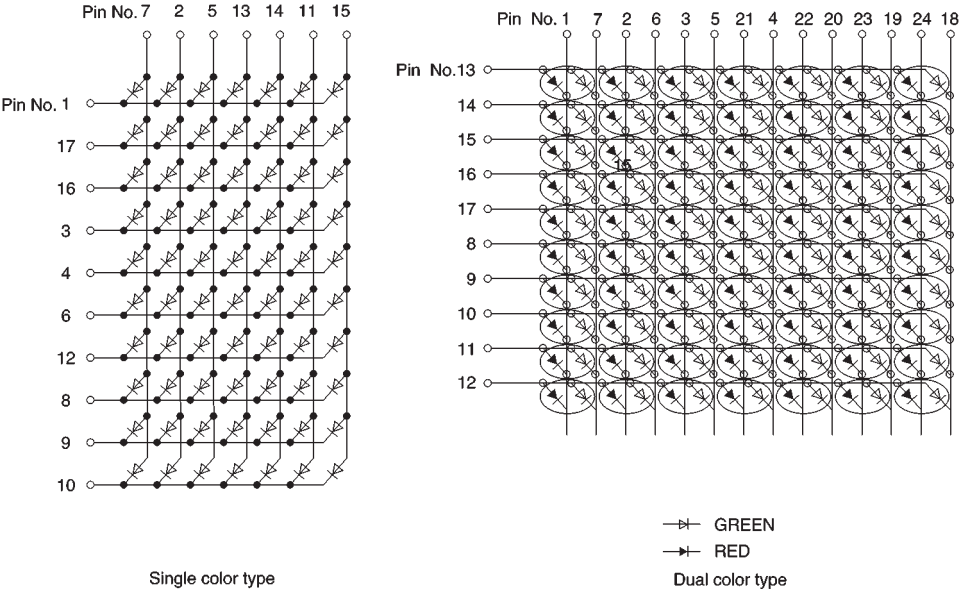
Emitting color	Common	
	Red*	Red / Green
Anode	LM-0701LB	—
Cathode	—	LM-0701MUM

* Bright red

● Pin assignments



● Internal circuit schematic



● Absolute maximum ratings (Ta = 25°C)

Single-color type

Parameter	Symbol	LB	Unit
		Red*2	
Power dissipation	P _D	2.0	W
Forward current	I _F	30	mA
Peak forward current	I _{FP}	80*1	mA
Reverse voltage	V _R	3	V
Operating temperature	T _{opr}	−25~+60	°C
Storage temperature	T _{stg}	−30~+85	°C

*1 Pulse width 1msec duty 1 / 10
*2 Bright red

Dual-color type

Parameter	Symbol	MUM		Unit
		Red	Green	
Power dissipation	P_D	35	35	mW / dot
Forward current	I_F	15	15	mA
Peak forward current	I_{FP}	60*	60*	mA
Reverse voltage	V_R	3	3	V
Operating temperature	T_{opr}	$-20 \sim +50$		$^{\circ}\text{C}$
Storage temperature	T_{stg}	$-25 \sim +75$		$^{\circ}\text{C}$

* Pulse width 1msec duty 1 / 10

●Electrical and optical characteristics ($T_a = 25^{\circ}\text{C}$)

Single-color type

Parameter	Symbol	Conditions	LB			Unit
			Red			
			Min.	Typ.	Max.	
Forward voltage	V_F	$I_F=10\text{mA}$	—	1.75	2.5	V
Reverse current	I_R	$V_R=3\text{V}$	—	—	10	μA
Peak wavelength	λ_P	$I_F=10\text{mA}$	—	660	—	nm
Spectral line half width	$\Delta\lambda$	$I_F=20\text{mA}$	—	25	—	nm

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Dual-color type

Parameter	Symbol	Conditions	MUM						Unit
			Red			Green			
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V _F	I _F =10mA	—	2.0	2.8	—	2.1	2.8	V
Reverse current	I _R	V _R =3V	—	—	100	—	—	100	μ A
Peak wavelength	λ _P	I _F =10mA	—	635	—	—	563	—	nm
Spectral line half width	Δ λ	I _F =10mA	—	40	—	—	40	—	nm

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●Luminous intensity

Color	Type	Min.	Typ.	Max.	Unit
Red*1	LB	1.4	5.0	—	mcd
Red	MUM	0.56	1.6	—	mcd
Green		0.9	2.5	—	mcd

Note: Measured at $I_F = 10\text{mA}$ *1 $I_F = 20\text{mA}$