

# 5 × 7 matrix displays

## LM-035 / LM-0352 Series

The LM-035 and LM-0352 series are 5 × 7 matrix displays which can be used in a wide variety of applications, including alphabet, numeric, symbol, and graphic displays. Bright red, red, orange and green are available in square and circular shapes to allow easy incorporation into the apparatus design.

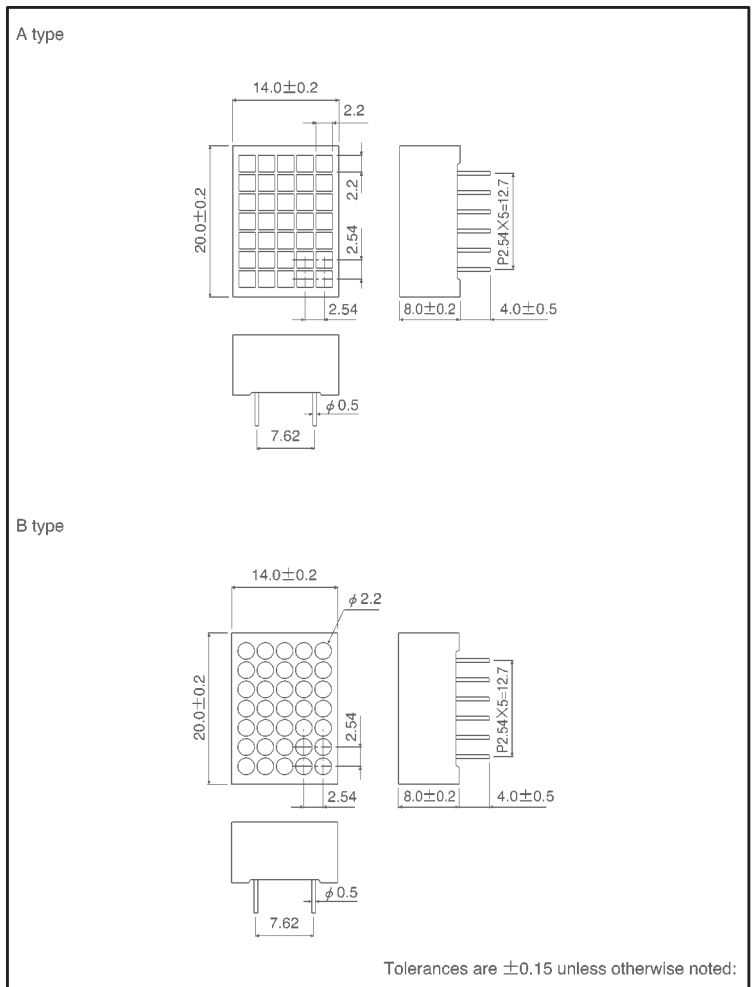
### ●Applications

Light sources for displays

### ●Features

- 1) 5 × 7 dot matrix  
Square and circular emitters.
- 2) External dimensions: 20 × 14 × 8 mm.
- 3) Dimensions of square emitters: 2.2 × 2.2 mm  
Diameter of circular emitters: 2.2 mm.
- 4) Black package, colored emitters.
- 5) Wide viewing angle.
- 6) Clear display.

### ●External dimensions (Units: mm)

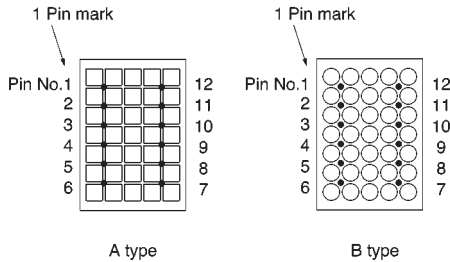


### ●Selection guide

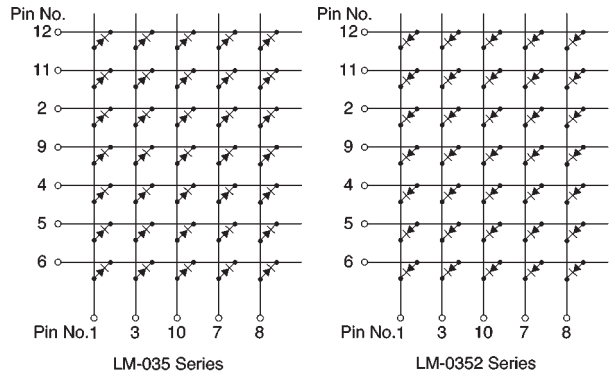
Emitting color	Red*	Red	Orange	Green
	Common			
Anode	LM-035LR A	LM-035VR A	LM-035DU A	LM-035MG A
	LM-035LR B	LM-035VR B	LM-035DU B	LM-035MG B
Cathode	—	LM-0352VR A	—	—
	—	LM-0352VR B	—	LM-0352MG B

\* Bright red

## ● Pin assignments



## ● Internal circuit schematic



## ● Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	LR*2	VR	DU	MG	Unit
Power dissipation	P <sub>D</sub>	2.8	1.23	1.23	1.23	W
Forward current	I <sub>F</sub>	30	15	15	15	mA
Peak forward current	I <sub>FP</sub>	60*1	60*1	60*1	60*1	mA
Reverse voltage	V <sub>R</sub>	4	3	3	3	V
Operating temperature	T <sub>opr</sub>	-25~+60	-25~+75			°C
Storage temperature	T <sub>stg</sub>	-30~+85	-30~+85			°C

\*1 Pulse width 1ms duty 1 / 5

\*2 Bright red

## ● Electrical and optical characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	LR*1			VR			DU			MG			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	—	1.75	2.5	—	2.0	2.8	—	2.0	2.8	—	2.1	2.8	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =3V	—	—	100	—	—	100	—	—	100	—	—	100	μA
Peak wavelength	λ <sub>P</sub>	I <sub>F</sub> =10mA	—	660	—	—	650	—	—	610	—	—	563	—	nm
Spectral line half width	Δλ	I <sub>F</sub> =10mA	—	25	—	—	40	—	—	40	—	—	40	—	nm

©Not designed for radiation resistance.

\*1 I<sub>F</sub> = 20mA, V<sub>R</sub> = 4V

## ● Luminous intensity

Color	Type	Min.	Typ.	Max.	Unit
Red	LR*1	2.2	6.3	—	mcd
Red	VR	0.56	1.6	—	mcd
Orange	DU	0.9	2.5	—	mcd
Green	MG	0.9	2.5	—	mcd

Note: Measured at I<sub>F</sub> = 10mA\*1 I<sub>F</sub> = 20mA