# $5 \times 7$ matrix displays

## LM-035 / LM-0352 Series

The LM-035 and LM-0352 series are 5  $\times$  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

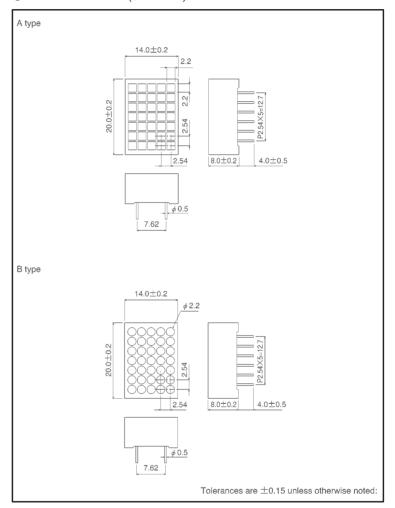
#### Features

- 5 × 7 dot matrix
   Square and circular emitters.
- 2) External dimensions:  $20 \times 14 \times 8$
- 3) Dimensions of square emitters: 2.2  $\times$  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 Common	Red*	Red	Orange	Green	
Anode	LM-035LR A	LM-035VR A	LM-035DU A	LM-035MG A	
Ariode	LM-035LR B	LM-035VR B	LM-035DU B	LM-035MG B	
Cathode	_	LM-0352VR A	_	_	
	_	LM-0352VR B	ı	LM-0352MG B	

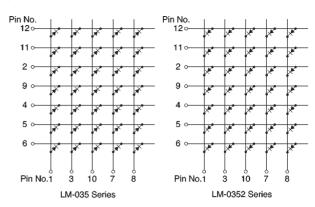
\* Bright red



#### Pin assignments

#### 1 Pin mark 1 Pin mark Pin No.1 12 12 2 2 11 11 3 3 10 10 4 5 4 9 9 5 8 8 6 A type B type

#### ●Internal circuit schematic



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

Parameter	Symbol	LR*2	VR	DU	MG	Unit	
Power dissipation	P□	2.8	1.23 1.23		1.23	W	
Forward current	le	30	15 15		15	mA	
Peak forward current	IFP	60*1	60*1	60*1	60*1	mA	
Reverse voltage	VR	4	3	3	3	٧	
Operating temperature	Topr	<b>−25~</b> +60	<b>−25~+75</b>				
Storage temperature	Tstg	<del>-30</del> ∼+85	<del>-30</del> ∼+85				

<sup>\*1</sup> Pulse width 1ms duty 1 / 5

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

Parameter Symbol	Cumbal	I Canditiana	LR*1		VR		DU		MG		I Imia				
	Conditions	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Unit	
Forward voltage	VF	I=10mA	_	1.75	2.5	_	2.0	2.8	_	2.0	2.8	_	2.1	2.8	V
Reverse current	lR	V <sub>R</sub> =3V	_	_	100	_	_	100	_	_	100	_	_	100	μΑ
Peak wavelength	λР	I=10mA	_	660	_	_	650	_	_	610	_	_	563	_	nm
Spectral line half width	Δλ	I=10mA	_	25	_	_	40	_	_	40	_	_	40	_	nm

ONot designed for radiation resistace.

#### Luminous intensity

Color	Туре	Min.	Тур.	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 IF = 10mA

\*1 IF = 20mA

<sup>\*2</sup> Bright red

<sup>\*1</sup> IF = 20mA, VR = 4V