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

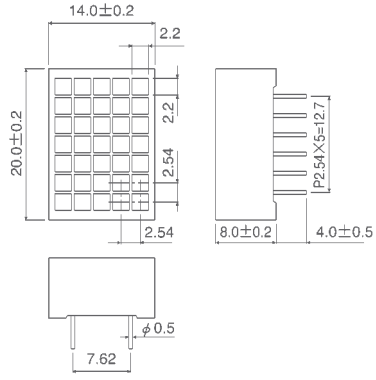
Light sources for displays

●Features

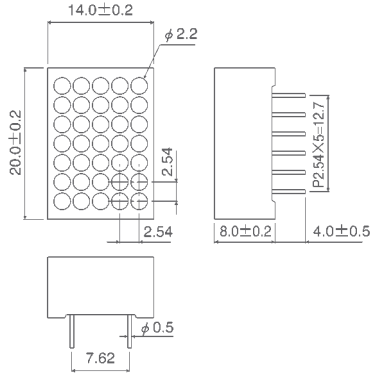
1) 5 × 7 dot matrix
   Square and circular emitters.
2) External dimensions: 20 × 14 × 8 mm.
3) Dimensions of square emitters: 2.2 × 2.2 mm
   Diameter of circular emitters: 2.2 mm.
4) Black package, colored emitters.
5) Wide viewing angle.
6) Clear display.

●External dimensions (Units: mm)

A type



B type



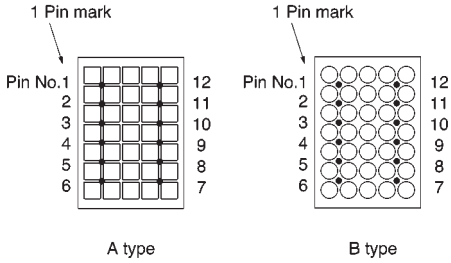
Tolerances are ±0.15 unless otherwise noted:

●Selection guide

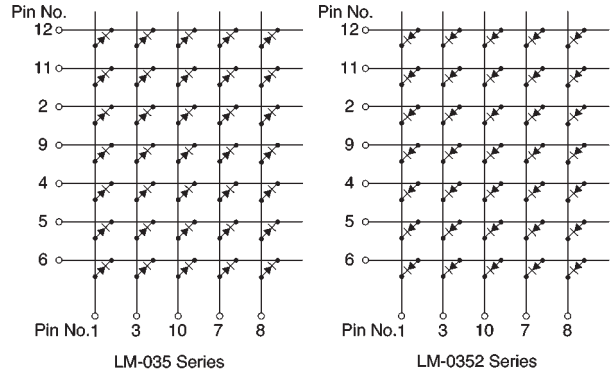
Common \ Emitting color	Red*	Red	Orange	Green
Anode	LM-035LR A	LM-035VR A	LM-035DU A	LM-035MG A
	LM-035LR B	LM-035VR B	LM-035DU B	LM-035MG B
Cathode	—	LM-0352VR A	—	—
	—	LM-0352VR B	—	LM-0352MG B

* Bright red

●Pin assignments



●Internal circuit schematic



●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	LR*2	VR	DU	MG	Unit
Power dissipation	P_D	2.8	1.23	1.23	1.23	W
Forward current	I_F	30	15	15	15	mA
Peak forward current	I_{FP}	60*1	60*1	60*1	60*1	mA
Reverse voltage	V_R	4	3	3	3	V
Operating temperature	Topr	−25～+60	−25～+75			℃
Storage temperature	Tstg	−30～+85	−30～+85			℃

*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_F	I_F=10mA	—	1.75	2.5	—	2.0	2.8	—	2.0	2.8	—	2.1	2.8	V
Reverse current	I_R	V_R=3V	—	—	100	—	—	100	—	—	100	—	—	100	μA
Peak wavelength	λ_P	I_F=10mA	—	660	—	—	650	—	—	610	—	—	563	—	nm
Spectral line half width	$\Delta\lambda$	I_F=10mA	—	25	—	—	40	—	—	40	—	—	40	—	nm

◎Not designed for radiation resistace.
*1 I_F = 20mA, V_R = 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_F = 10mA
*1 I_F = 20mA