

LM-1256 series

16 × 16 dot matrix display, single or dual color, 1.6 mm diameter element

The LM-1256 series are 16 × 16 dot matrix displays. They are available with 1.6 mm diameter elements.

Features

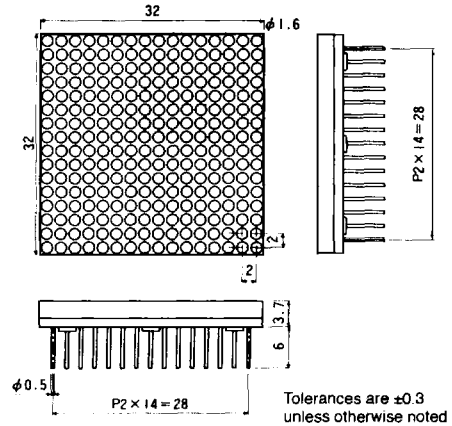
- 16 × 16 dot matrix; with round ($\phi = 1.6$ mm) emitters, external dimensions 32 × 32 × 5.4 mm
- available in bright red and red single color or red and green dual color displays
- package has black-painted surface, segments are tinted
- thin outer casing, multiple units can be coupled together
- clear display
- wide viewing angle

Applications

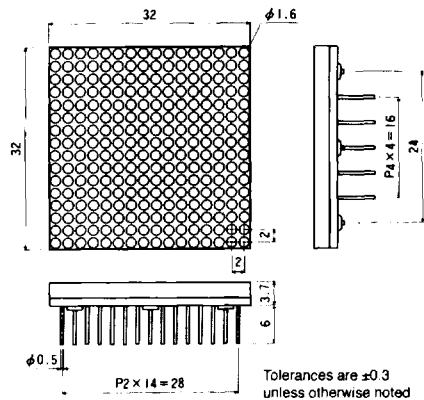
- alpha displays
- numeric displays
- graphic displays

Dimensions (Units : mm)

Single color



Two color



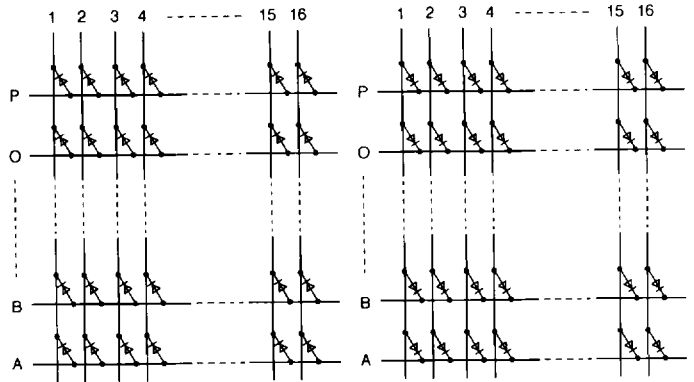
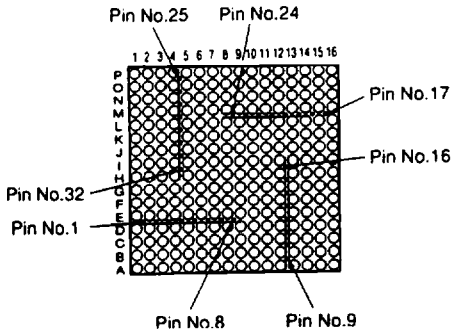
Selection guide

| | | | |
|--------------------|--------------------|---------------|----------------------------|
| Part no. | LM-1256LB | LM-1256VB | |
| Color & wavelength | Bright red, 660 nm | Red, 650 nm | |
| Common pin | Anode | Anode | |
| Availability | semi-standard | semi-standard | |
| Part no. | | | LM-1256MUM |
| Color & wavelength | | | Red, 635 nm, green, 563 nm |
| Common pin | | | Cathode |
| Availability | | | semi-standard |

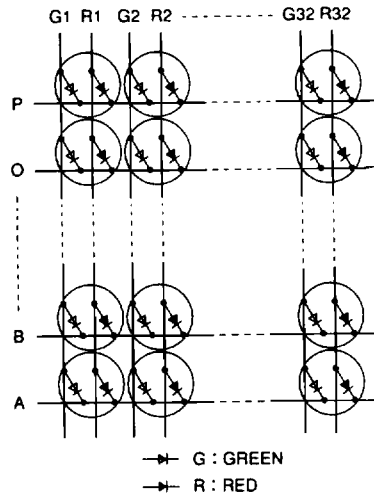
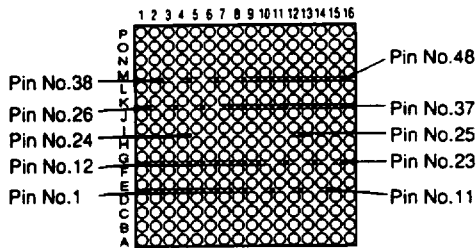
LM-1256 series Dot matrix display

Pin connections

Single color



Two color



Note: For pinout connections, see following tables.

Pin connection, two color

| Pin no. | Connection | Pin no. | Connection |
|---------|------------|---------|------------|
| 1 | R1 cathode | 13 | G2 cathode |
| 2 | R2 cathode | 14 | G3 cathode |
| 3 | R3 cathode | 15 | G4cathode |
| 4 | R4 cathode | 16 | G5 cathode |
| 5 | R5 cathode | 17 | G6 cathode |
| 6 | R6 cathode | 18 | G7 cathode |
| 7 | R7 cathode | 19 | G8 cathode |
| 8 | R8 cathode | 20 | H anode |
| 9 | B anode | 21 | C anode |
| 10 | A anode | 22 | D anode |
| 11 | G anode | 23 | E anode |
| 12 | G1 cathode | 24 | K anode |

| Pin no. | Connection | Pin no. | Connection |
|---------|-------------|---------|-------------|
| 25 | F anode | 37 | R16 cathode |
| 26 | L anode | 38 | J anode |
| 27 | M anode | 39 | P anode |
| 28 | N anode | 40 | O anode |
| 29 | I anode | 41 | G9 cathode |
| 30 | R9 cathode | 42 | G10 cathode |
| 31 | R10 cathode | 43 | G11 cathode |
| 32 | R11 cathode | 44 | G12 cathode |
| 33 | R12 cathode | 45 | G13 cathode |
| 34 | R13 cathode | 46 | G14 cathode |
| 35 | R14 cathode | 47 | G15 cathode |
| 36 | R15 cathode | 48 | G16 cathode |

Pin connection, bright red

| Pin no. | Connection | Pin no. | Connection |
|---------|------------|---------|------------|
| 1 | 1 cathode | 17 | 16 cathode |
| 2 | 2 cathode | 18 | 15 cathode |
| 3 | 3 cathode | 19 | 14 cathode |
| 4 | 4 cathode | 20 | 13 cathode |
| 5 | 5 cathode | 21 | 12 cathode |
| 6 | 6 cathode | 22 | 11 cathode |
| 7 | 7 cathode | 23 | 10 cathode |
| 8 | 8 cathode | 24 | 9 cathode |
| 9 | A anode | 25 | P anode |
| 10 | B anode | 26 | O anode |
| 11 | C anode | 27 | N anode |
| 12 | D anode | 28 | M anode |
| 13 | E anode | 29 | L anode |
| 14 | F anode | 30 | K anode |
| 15 | G anode | 31 | J anode |
| 16 | H anode | 32 | I anode |

Pin connection, red

| Pin no. | Connection | Pin no. | Connection |
|---------|------------|---------|------------|
| 1 | 1 anode | 17 | 16 anode |
| 2 | 2 anode | 18 | 15 anode |
| 3 | 3 anode | 19 | 14 anode |
| 4 | 4 anode | 20 | 13 anode |
| 5 | 5 anode | 21 | 12 anode |
| 6 | 6 anode | 22 | 11 anode |
| 7 | 7 anode | 23 | 10 anode |
| 8 | 8 anode | 24 | 9 anode |
| 9 | A cathode | 25 | P cathode |
| 10 | B cathode | 26 | O cathode |
| 11 | C cathode | 27 | N cathode |
| 12 | D cathode | 28 | M cathode |
| 13 | E cathode | 29 | L cathode |
| 14 | F cathode | 30 | K cathode |
| 15 | G cathode | 31 | J cathode |
| 16 | H cathode | 32 | I cathode |

LM-1256 series Dot matrix display

Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | LM-1256LB | LM-1256VB | LM-1256MUM | | Unit | Conditions |
|-----------------------|-----------|------------|-----------|------------|-------|------------------|------------------------------|
| | | Bright red | Red | Red | Green | | |
| Power dissipation | P_d | 2.4 | 2.7 | 2.7 | | W | |
| Forward current | I_F | 15 | | 15 | | mA | |
| Peak forward current | I_{FP} | 60 | | 60 | | mA | Pulse width 1 ms, duty 6.25% |
| Reverse voltage | V_R | 3 | | 4 | | V | |
| Operating temperature | T_{opr} | -25 ~ +50 | | -20 ~ +50 | | $^\circ\text{C}$ | |
| Storage temperature | T_{stg} | -30 ~ +75 | | -25 ~ +75 | | $^\circ\text{C}$ | |

Electro-optical characteristics ($T_a = 25^\circ\text{C}$)

| Parameter | Sym | LM-1256LB | | LM-1256VB | | LM-1256MUM | | | | Unit | Conditions |
|---------------------|-----------------|------------|-----|-----------|-----|------------|-----|-------|-----|---------------|---|
| | | Bright red | | Red | | Red | | Green | | | |
| | | Typ | Max | Typ | Max | Typ | Max | Typ | Max | | |
| Forward voltage | V_F | 1.75 | 2.5 | 2.0 | 2.8 | 2.0 | 2.8 | 2.1 | 2.8 | V | $I_F = 10\text{ mA}$, 20 mA for LM-1256LB |
| Reverse current | I_R | | 100 | | 100 | | 100 | | 100 | μA | $V_R = 3\text{ V}$, 4 V for LM-1256LB |
| Peak wavelength | λ_p | 660 | | 650 | | 635 | | 563 | | nm | $I_F = 10\text{ mA}$, 20 mA for LM-1256LB |
| Spectral half-width | $\Delta\lambda$ | 25 | | 40 | | 40 | | 40 | | nm | $I_F = 10\text{ mA}$, 20 mA for LM-1256LB |

Luminous intensity

| Part no. | Color | Min | Typical | Max | Unit | Conditions |
|------------|------------|------|---------|-----|------|----------------------|
| LM-1256LB | Bright red | 0.9 | 2.5 | | mcd | $I_F = 20\text{ mA}$ |
| LM-1256VB | Red | 0.22 | 0.63 | | mcd | $I_F = 10\text{ mA}$ |
| LM-1256MUM | Red | 0.22 | 0.63 | | mcd | $I_F = 10\text{ mA}$ |
| | Green | 0.56 | 1.6 | | mcd | $I_F = 10\text{ mA}$ |