

Two-color, high luminance numeric displays

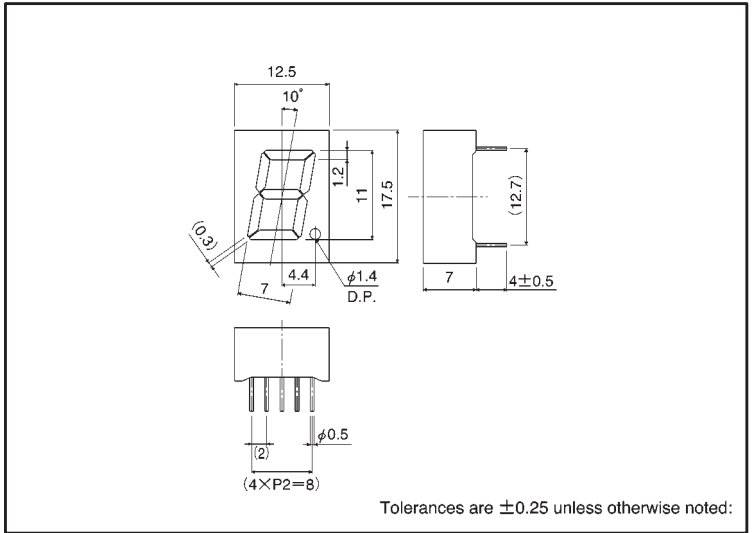
LA-421 AK Series

The LA-421 AK series are two-color, high luminance numeric displays designed to be used in bright locations. Red, green and orange displays are possible.

●Features

- 1) Height of display : 11 mm.
- 2) Dimensions : 12.5 × 17.5 × 7 mm.
- 3) Common anode and common cathode configurations are available.
- 4) The package surface is painted black and the segments are milky white.
- 5) High luminance, clear display.
- 6) Red, green and orange displays are possible.

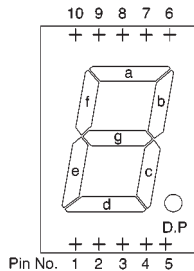
●External dimensions (Units: mm)



●Selection guide

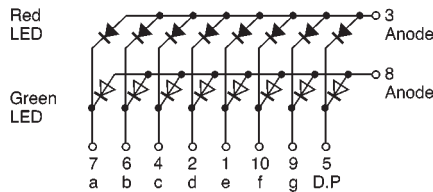
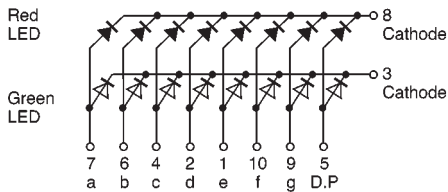
| | |
|----------------|-------------|
| Emitting color | Red / Green |
| Common | LA-421MLA |
| Anode | LA-421MLK |
| Cathode | LA-421MLK |

●Pin assignments



| Pin No. | Function |
|---------|---------------|
| 1 | Segment "e" |
| 2 | Segment "d" |
| 3 | Red Common |
| 4 | Segment "c" |
| 5 | Segment "D,P" |
| 6 | Segment "b" |
| 7 | Segment "a" |
| 8 | Green Common |
| 9 | Segment "g" |
| 10 | Segment "f" |

● Internal circuit schematic (example of common cathode) (example of common anode)



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

| Parameter | Symbol | Red | Green | Unit |
|-----------------------|--------------------|-----------------|-----------------|------------------|
| | | LA-421MLA / MLK | LA-421MLA / MLK | |
| Power dissipation | P_D | 640 | 480 | mW |
| Power dissipation | P_D / seg | 80 | 60 | mW |
| Forward current | I_F | 30 | 20 | mA |
| Peak forward current | I_{FP} | 60* | 60* | mA |
| Reverse voltage | V_R | 3 | 3 | V |
| Operating temperature | T_{opr} | -25~+75 | | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -30~+85 | | $^\circ\text{C}$ |

* Pulse width 1ms duty 1 / 5

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

| Parameter | Symbol | Conditions | Red | | | Green | | | Unit |
|--------------------------|-----------------|-------------------|------|------|------|-------|------|------|---------------|
| | | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Forward voltage | V_F | $I_F=20\text{mA}$ | — | 1.75 | 2.5 | — | 2.1 | 2.8 | V |
| Reverse current | I_R | $V_R=3\text{V}$ | — | — | 100 | — | — | 100 | μA |
| Peak wavelength | λ_P | $I_F=20\text{mA}$ | — | 660 | — | — | 563 | — | nm |
| Spectral line half width | $\Delta\lambda$ | $I_F=20\text{mA}$ | — | 25 | — | — | 40 | — | nm |

Ⓞ Not designed for radiation resistance.

● Luminous intensity

| Color | λ_P | Type | Min. | Typ. | Max. | Unit |
|-------|-------------|-----------|------|------|------|------|
| Red | 660 | LA-421MLA | 14 | 50 | — | mcd |
| | | LA-421MLK | | | | |
| Green | 563 | LA-421MLA | 9.0 | 25 | — | mcd |
| | | LA-421MLK | | | | |

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