

The LA-101AK series are LED numerical displays designed to allow use even in bright locations.

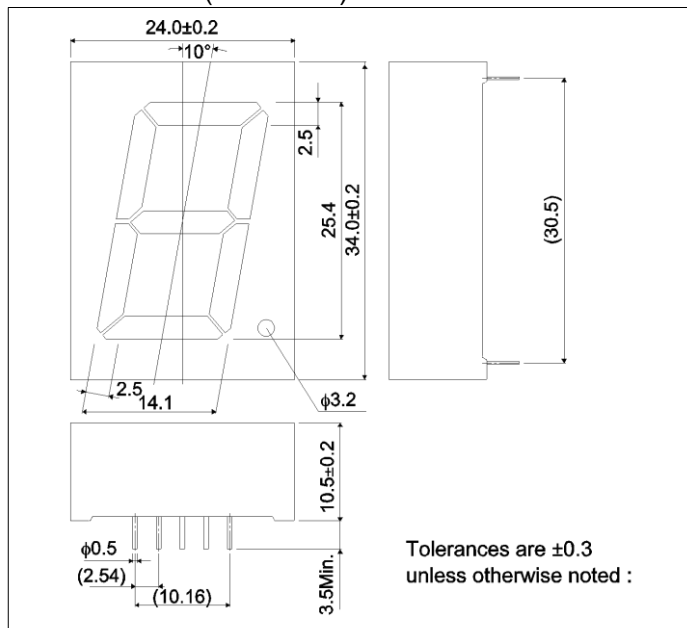
The height of the character is 25.4 mm, and two colors are available: red and green.

These displays are designed for use in large numerical displays.

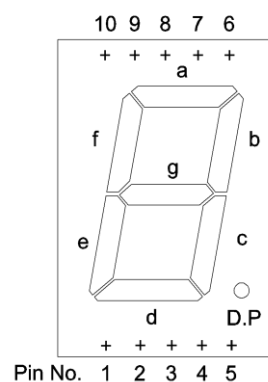
●Features

- 1) Height of character: 25.4 mm
- 2) Dimensions: 24 x 34 x 10.5 mm
- 3) A common anode configuration and a common cathode configuration are available for each color.
- 4) The package surface is painted black and the segments are colored the display color.
- 5) High luminance, clear display.

●Dimensions (Unit : mm)

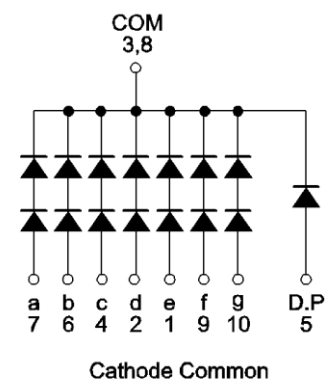
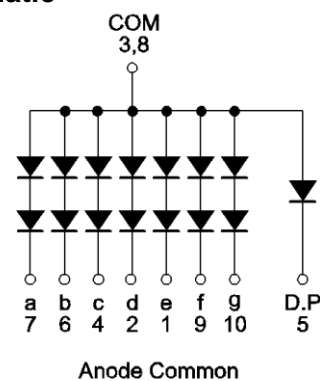


●Pin assignments



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

●Internal circuit schematic



●Selection guide

| Emitting color | Red | Green |
|----------------|----------|----------|
| Common | | |
| Anode | LA-101VA | LA-101MA |
| Cathode | LA-101VK | LA-101MK |

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

| Parameter | Symbol | Red | Green | Unit |
|-----------------------|--------------------|---------------|---------------|------------------|
| | | LA-101VA / VK | LA-101MA / MK | |
| Power dissipation | P_D | 640 | 640 | mW |
| Power dissipation | P_D / seg | 85 (45) | 85 (45) | mW |
| Forward current | I_F | 15 | 20 | mA |
| Peak forward current | I_{FP} | 60 * | 60 * | mA |
| Reverse voltage | V_R | 5 | 5 | V |
| Operating temperature | T_{opr} | -25 to +75 | | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -30 to +85 | | $^\circ\text{C}$ |

* Pulse width 1ms, duty 1 / 5

() is D.P value

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

| Parameter | Symbol | Conditions | Elements | Red | | | Green | | | Unit |
|-------------------------|-----------------|-------------------|----------|------|------|------|-------|------|------|---------------|
| | | | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Forward voltage | V_F | $I_F=10\text{mA}$ | 2 | - | 4.0 | 5.6 | - | 4.2 | 5.6 | V |
| | | | 1 | - | 2.0 | 2.8 | - | 2.1 | 2.8 | |
| Reverse current | I_R | $V_R=3\text{V}$ | - | - | - | 100 | - | - | 100 | μA |
| Peak wavelength | λ_p | $I_F=10\text{mA}$ | - | - | 650 | - | - | 563 | - | nm |
| Spectral line halfwidth | $\Delta\lambda$ | $I_F=10\text{mA}$ | - | - | 40 | - | - | 40 | - | nm |

◎ Not designed for radiation resistance.

The forward voltage and reverse current values are the guaranteed values per element.

●Luminous intensity

| Parameter | λ_p | Type | Min. | Typ. | Max. | Unit |
|-----------|-------------|----------|------|------|------|------|
| Red | 650 | LA-101VA | 3.6 | 10 | - | mcd |
| | | LA-101VK | | | | |
| Green | 563 | LA-101MA | 5.6 | 16 | - | mcd |
| | | LA-101MK | | | | |

◎ Condition $I_F=10\text{mA}$

●Electrical and optical characteristics curves

Fig.1 Forward Current vs. Forward Voltage

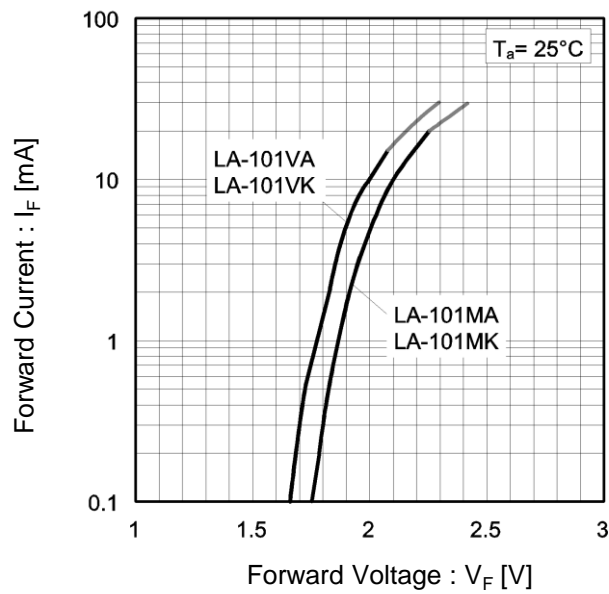


Fig.2 Relative Luminous Intensity vs. Forward Current

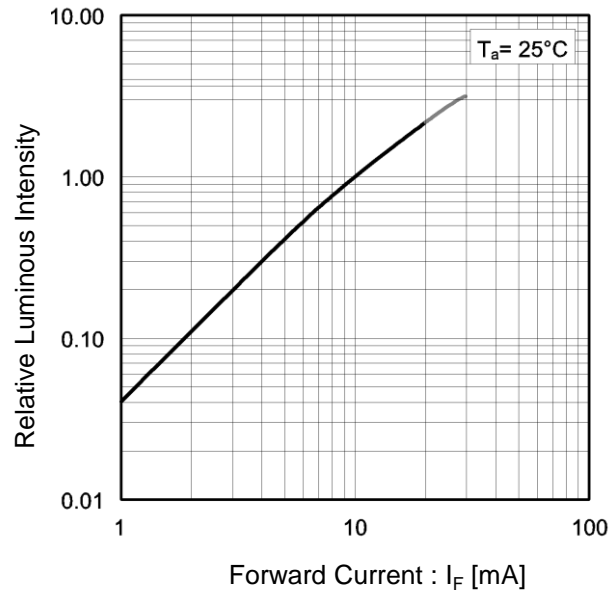


Fig.3 Relative Luminous Intensity vs. Case Temperature

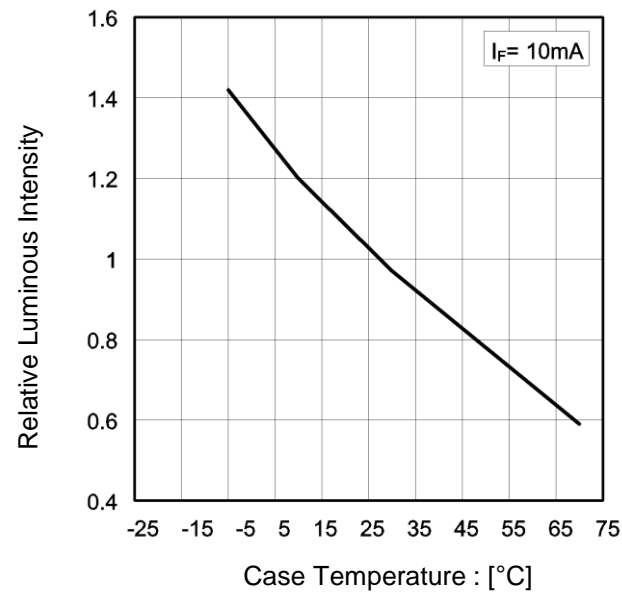
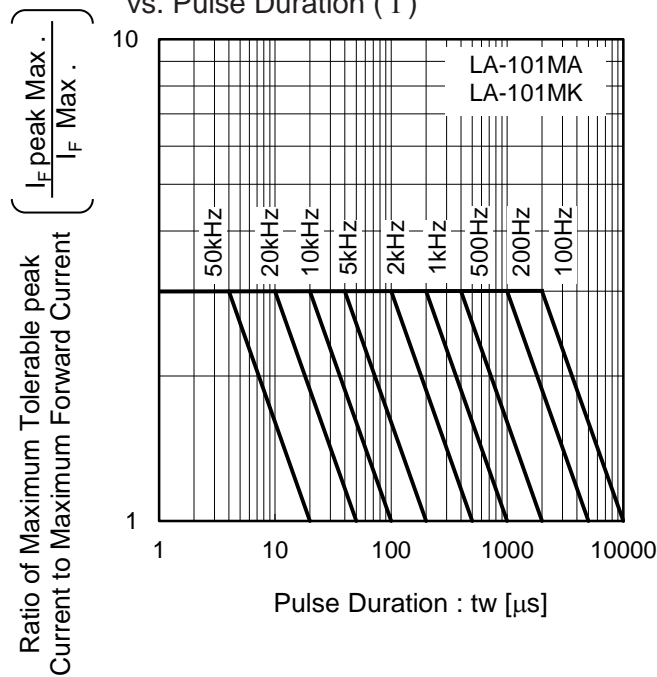


Fig.4 Ratio of Maximum Tolerable Peak Current vs. Pulse Duration (I)



●Electrical and optical characteristics curves

Fig.5 Ratio of Maximum Tolerable Peak Current vs. Pulse Duration (II)

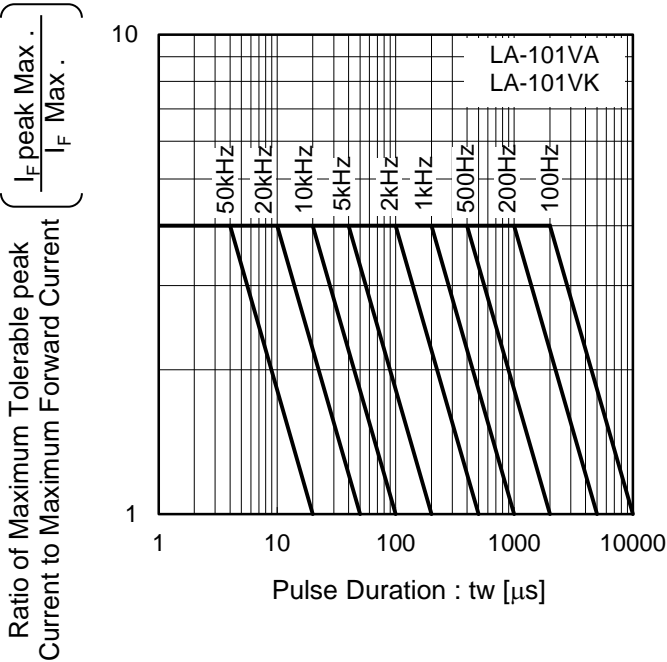
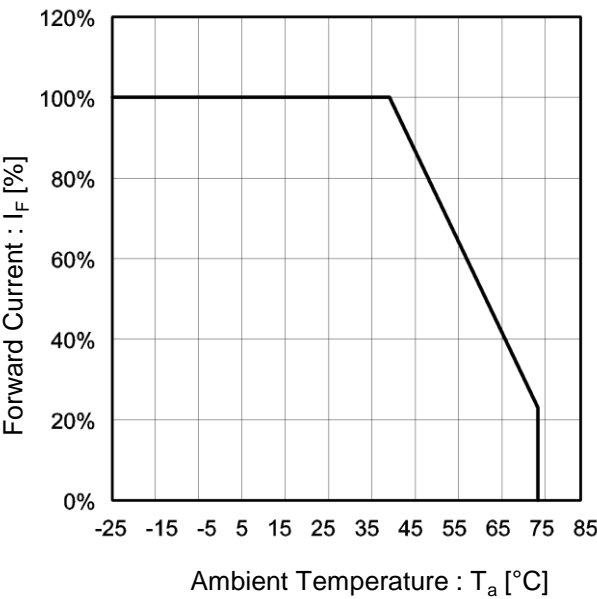


Fig.6 Derating



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