

Single Digit Surface Mount LED Numeric Display

LF-301 A / K Series

LF-301 A / K series of Single Digit Surface Mount LED Numeric Display which the height of a letter 8mm have ROHM original structure that realizes re-flow soldering.

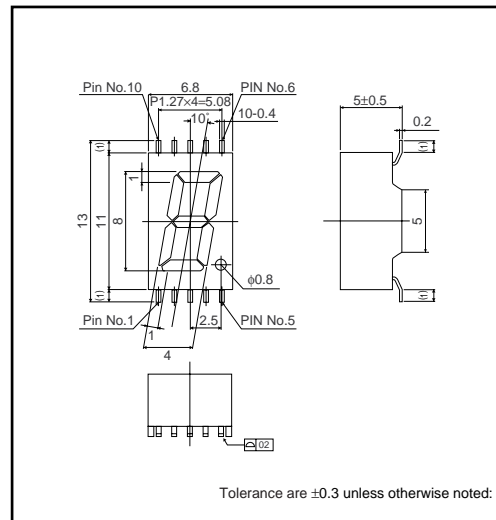
●Features

- 1) Re-flow soldering *
 - 2) Pb-free available
 - 3) Automatic mounting with taping pack
- *Number of re-flow process shall be recommend 1 time by our re-flow condition.

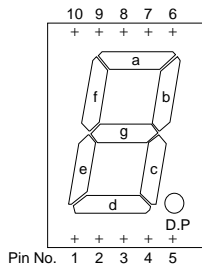
●Selection guide

| Emitting color | Red | Green |
|----------------|----------|----------|
| | Common | |
| Anode | LF-301VA | LF-301MA |
| Cathode | LF-301VK | LF-301MK |

●Dimensions (Unit : mm)

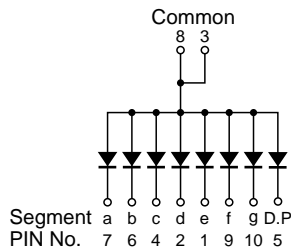


●Pin assignments

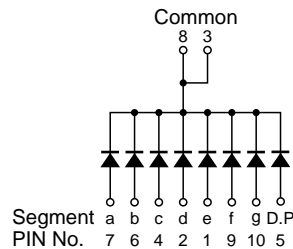


| Pin No. | Function |
|---------|-------------|
| 1 | Segment "e" |
| 2 | Segment "d" |
| 3 | Common |
| 4 | Segment "c" |
| 5 | D.P |
| 6 | Segment "b" |
| 7 | Segment "a" |
| 8 | Common |
| 9 | Segment "f" |
| 10 | Segment "g" |

●Equivalent circuit (anode common)



(cathode common)



LED displays

●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Red | Green | Unit |
|-----------------------|----------------------|---------------|---------------|------|
| | | LF-301VA / VK | LF-301MA / MK | |
| Power dissipation | P _D | 320 | 480 | mW |
| Power dissipation | P _D / seg | 40 | 60 | 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 | | °C |
| Storage temperature | T _{stg} | -30 to +85 | | °C |

*Pulse width 1ms Duty 1 / 5

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Conditions | Red | | Green | | Unit |
|--------------------------|----------------|----------------------|------|------|-------|------|------|
| | | | Typ. | Max. | Typ. | Max. | |
| Forward voltage | V _F | I _F =10mA | 2.0 | 2.8 | 2.1 | 2.8 | V |
| Reverse current | I _R | V _R =3V | – | 100 | – | 100 | μA |
| Peak wavelength | λ _P | I _F =10mA | 650 | – | 563 | – | nm |
| Spectral line half width | Δλ | I _F =10mA | 40 | – | 40 | – | nm |

© The products are not radiations resistant.

●Luminous intensity

| Color | λ _P (nm) | Type | Min. | Typ. | Unit |
|-------|---------------------|----------|------|------|------|
| Red | 650 | LF-301VA | 3.6 | 10 | mcd |
| | | LF-301VK | | | |
| Green | 563 | LF-301MA | 3.6 | 10 | mcd |
| | | LF-301MK | | | |

LED displays

●Electrical and optical characteristic curves

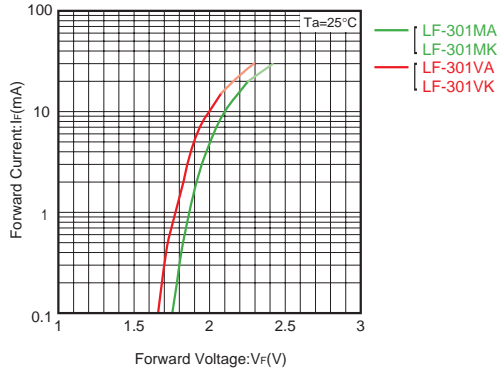


Fig.1 Forward Current - Forward Voltage

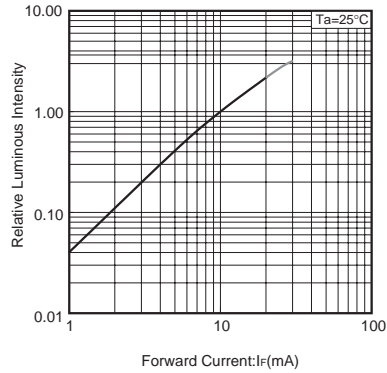


Fig.2 Relative Luminous Intensity - Forward Current

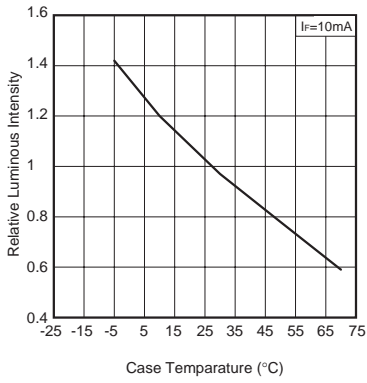


Fig.3 Relative Luminous Intensity - Case Temperature

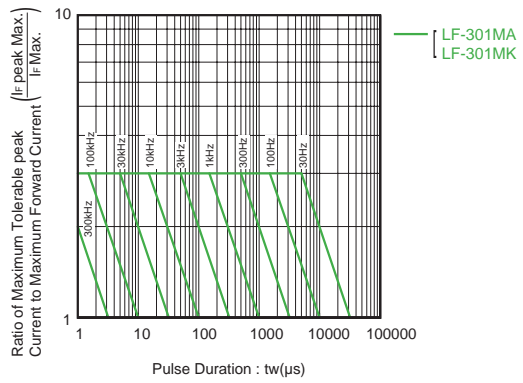


Fig.4 Ratio of Maximum Tolerable Peak Current - Pulse Duration (I)

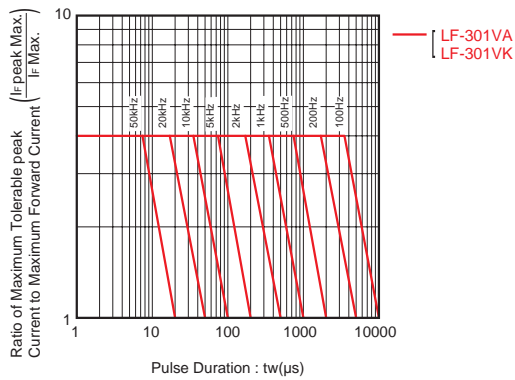


Fig.5 Ratio of Maximum Tolerable Peak Current - Pulse Duration (II)

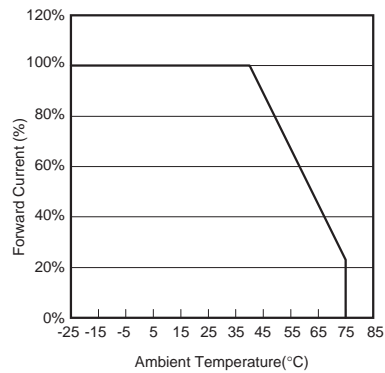


Fig.6 Derating

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