

## DESCRIPTION:

The KWL-1001Ux series is 10.10mm x 25.40mm ten-element bar graph display.

The device has separate anode and cathode for each light segment and is available in 6 different colors.

## ABSOLUTE MAXIMUM RATINGS: (Ta=25°C)

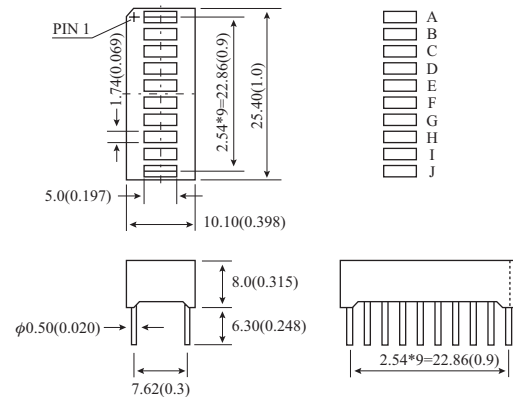
| Parameter                                                        | Max            |
|------------------------------------------------------------------|----------------|
| Reverse Voltage per segment                                      | 5 V            |
| Reverse Current per segment (Vr = 5V)                            | 100μA          |
| Derating Linear from 25°C per segment                            | 0.4mA/°C       |
| Operating Temperature Range                                      | -40°C To 85°C  |
| Storage Temperature Range                                        | -40°C To 100°C |
| Soldering Temperature 1.6mm(1/16") from body for 5 sec. at 260°C |                |

NOTES : 1. All dimensions are in millimeters (inches).  
 2. Tolerance is ±0.25mm(0.010) unless otherwise specified.  
 3. Specifications are subject to change without notice.  
 4. NP: No Pin.  
 5. NC: No Connect.

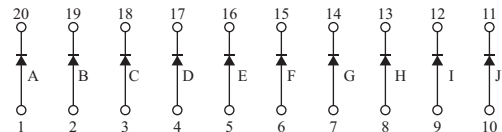
## TESTING CONDITION FOR EACH PARAMETER :

| Parameter                  | Symbol | Unit | Test Condition |
|----------------------------|--------|------|----------------|
| Forward Voltage            | Vf     | V    | If=20mA        |
| Peak Emission Wave Length  | λp     | nm   | If=20mA        |
| Spectral Line Half-Width   | Δλ     | nm   | If=20mA        |
| Reverse Current            | Ir     | μA   | Vr=5V          |
| Average Luminous Intensity | Iv     | μ cd | If=10mA        |

## PACKAGE DIMENSIONS



## INTERNAL CIRCUIT DIAGRAM



## PART NO. SELECTION AND APPLICATION INFORMATION (RATINGS AT 25°C AMBIENT)

| Part No.   | Chip            |                  | C.C<br>or<br>C.A      | Wave<br>Length<br>λρ (nm) | Absolute Maximum Ratings |            |            |                      | Electro-optical Characteristic |      |      |                   |                      |      |
|------------|-----------------|------------------|-----------------------|---------------------------|--------------------------|------------|------------|----------------------|--------------------------------|------|------|-------------------|----------------------|------|
|            | Raw<br>Material | Emitted<br>Color |                       |                           | Δλ<br>(nm)               | Pd<br>(mW) | If<br>(mA) | If<br>(Peak)<br>(mA) | Vf (V)<br>Per Chip             |      |      | If<br>(Rec)<br>mA | Iv (μcd)<br>Per Chip |      |
|            |                 |                  |                       |                           |                          |            |            |                      | Min.                           | Typ. | Max. |                   | Min.                 | Typ. |
| KWL-1001U5 | GaP             | Bright Red       | No<br>Common<br>Polar | 700                       | 90                       | 100        | 50         | 100                  | 1.7                            | 2.4  | 2.8  | 10-20             | 300                  | 550  |
| KWL-1001U3 | GaAsP/GaP       | Hi-Eff. Red      |                       | 635                       | 45                       | 100        | 50         | 100                  | 1.7                            | 1.9  | 2.6  | 10-20             | 700                  | 1800 |
| KWL-1001US | GaAlAs          | Super Red        |                       | 660                       | 20                       | 100        | 50         | 100                  | 1.5                            | 1.9  | 2.6  | 10-20             | 1500                 | 5000 |
| KWL-1001U2 | GaP             | Green            |                       | 565                       | 30                       | 100        | 50         | 100                  | 1.7                            | 2.2  | 2.6  | 10-20             | 700                  | 1600 |
| KWL-1001UG | GaP             | Super Green      |                       | 570                       | 30                       | 100        | 50         | 100                  | 1.7                            | 2.2  | 2.6  | 10-20             | 850                  | 1900 |
| KWL-1001U6 | GaAsP/GaP       | Yellow           |                       | 585                       | 30                       | 100        | 50         | 100                  | 1.7                            | 1.9  | 2.6  | 10-20             | 600                  | 1500 |

REMARKS : 1. The average luminous intensity is obtained by summing the luminous intensity of each segment and dividing by the total number of segments.  
 2. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (International Commission on Illumination) eye-response curve.  
 3. Clean only by pure water, isopropanol, ethanol, Freon TF (or equivalent).