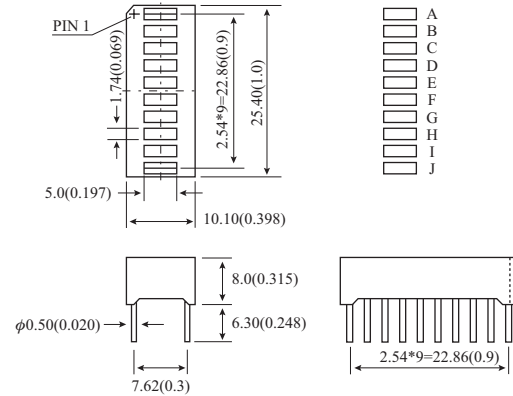


**DESCRIPTION:**

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.

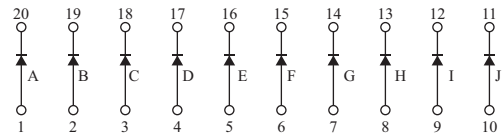
**PACKAGE DIMENSIONS**

**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        |

**INTERNAL CIRCUIT DIAGRAM**

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

| Part No.   | Chip         |               | C.C or C.A            | Wave Length λp (nm) | Absolute Maximum Ratings |         |         |                | Electro-optical Characteristic |      |      |               |                   |      |
|------------|--------------|---------------|-----------------------|---------------------|--------------------------|---------|---------|----------------|--------------------------------|------|------|---------------|-------------------|------|
|            | Raw Material | Emitted Color |                       |                     | Δλ (nm)                  | Pd (mW) | If (mA) | If (Peak) (mA) | Vf (V) Per Chip                |      |      | If (Rec) (mA) | Iv (μcd) 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).