

### DESCRIPTION:

The KW4-402 series is 0.40 inch (10.16mm) height four digit display. All devices are available as either common anode or common cathode.

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

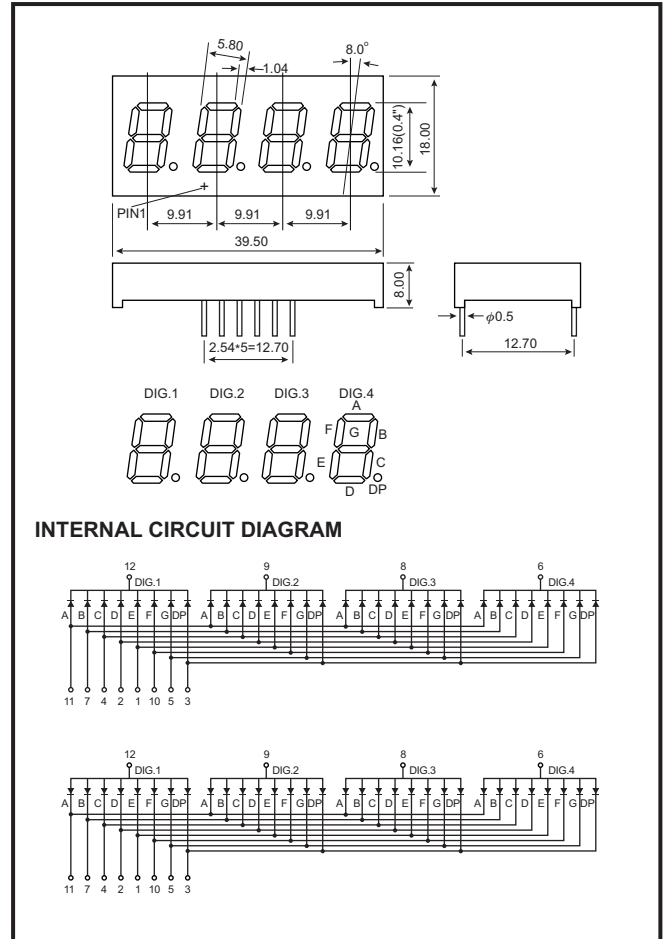
| Parameter  | Max            |
|--|----------------|
| Reverse Voltage per segment                                      | 5 V            |
| Reverse Current per segment (Vr = 5V)                            | 100μA          |
| Derating Linear from 25°C per segment                            | 0.4mA/°C       |
| 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.

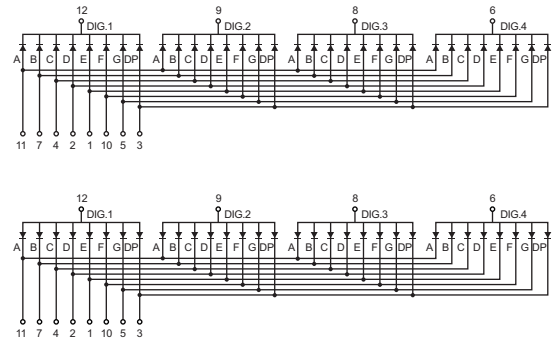
### TESTING CONDITION FOR EACH PARAMETER :

| 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 or C.A     | Wave Length λp (nm) | Absolute Maximum Ratings |         |         |                | Electro-optical Data(at 10mA) |      |      |               |                      |      |
|-----------|--------------|---------------|----------------|---------------------|--------------------------|---------|---------|----------------|-------------------------------|------|------|---------------|----------------------|------|
|           | Raw Material | Emitted Color |                |                     | Δλ (nm)                  | Pd (mW) | If (mA) | If (Peak) (mA) | Vf (V) Per Segment            |      |      | If (Rec) (mA) | Iv (μcd) Per Segment |      |
|           |              |               |                |                     |                          |         |         |                | Min.                          | Typ. | Max. |               | Min.                 | Typ. |
| KW4-402A3 | GaAsP/GaP    | Hi-Eff. Red   | Common Anode   | 635                 | 45                       | 100     | 50      | 100            | 1.7                           | 1.9  | 2.6  | 10-20         | 700                  | 1800 |
| KW4-402AS | GaAlAs       | Super Red     |                | 660                 | 20                       | 100     | 50      | 100            | 1.5                           | 1.9  | 2.6  | 10-20         | 1500                 | 5000 |
| KW4-402A2 | GaP          | Green         |                | 565                 | 30                       | 100     | 50      | 100            | 1.7                           | 2.2  | 2.6  | 10-20         | 700                  | 1600 |
| KW4-402AG | GaP          | Super Green   |                | 570                 | 30                       | 100     | 50      | 100            | 1.7                           | 2.2  | 2.6  | 10-20         | 850                  | 1900 |
| KW4-402A6 | GaAsP/GaP    | Yellow        |                | 585                 | 30                       | 100     | 50      | 100            | 1.7                           | 1.9  | 2.6  | 10-20         | 600                  | 1500 |
| KW4-402C3 | GaAsP/GaP    | Hi-Eff Red    | Common Cathode | 635                 | 45                       | 100     | 50      | 100            | 1.7                           | 1.9  | 2.6  | 10-20         | 700                  | 1800 |
| KW4-402CS | GaAlAs       | Super Red     |                | 660                 | 20                       | 100     | 50      | 100            | 1.5                           | 1.9  | 2.6  | 10-20         | 1500                 | 5000 |
| KW4-402C2 | GaP          | Green         |                | 565                 | 30                       | 100     | 50      | 100            | 1.7                           | 2.2  | 2.6  | 10-20         | 700                  | 1600 |
| KW4-402CG | GaP          | Super Green   |                | 570                 | 30                       | 100     | 50      | 100            | 1.7                           | 2.2  | 2.6  | 10-20         | 850                  | 1900 |
| KW4-402C6 | 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).