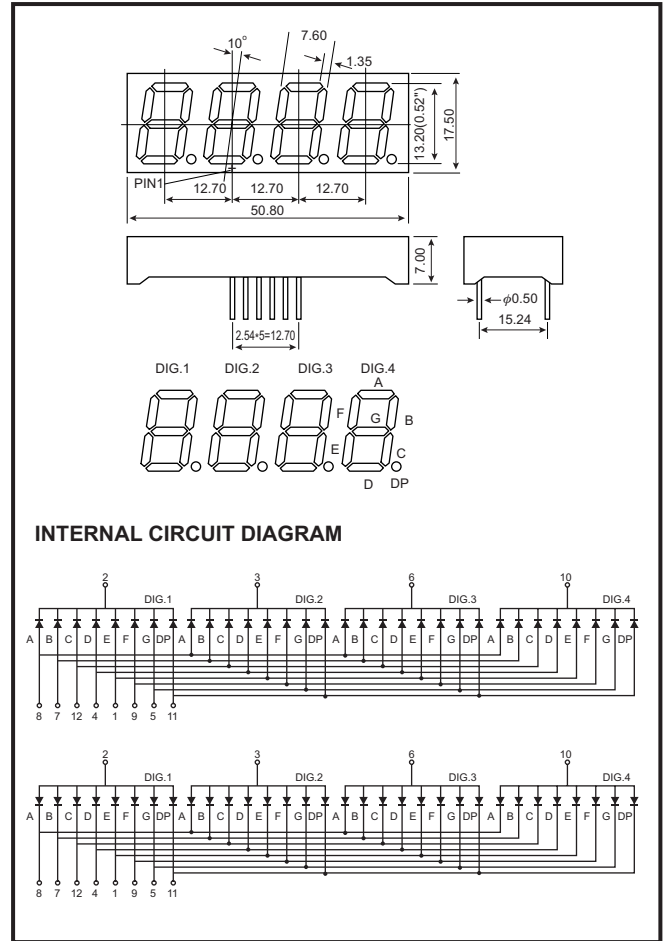


DESCRIPTION:

The KW4-521 series is 0.52 inch (13.20mm) height four digit display. All devices are available as either common anode or common cathode.

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 |

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. |
| KW4-521A3 | GaAsP/GaP | Hi-Eff. Red | Common Anode | 635 | 45 | 100 | 50 | 100 | 1.7 | 1.9 | 2.6 | 10-20 | 750 | 2000 |
| KW4-521AS | GaAlAs | Super Red | | 660 | 20 | 100 | 50 | 100 | 1.5 | 1.9 | 2.6 | 10-20 | 5600 | 21000 |
| KW4-521A2 | GaP | Green | | 565 | 30 | 100 | 50 | 100 | 1.7 | 2.2 | 2.6 | 10-20 | 750 | 2000 |
| KW4-521AG | GaP | Super Green | | 570 | 30 | 100 | 50 | 100 | 1.7 | 2.2 | 2.6 | 10-20 | 850 | 2200 |
| KW4-521A6 | GaAsP/GaP | Yellow | | 585 | 30 | 100 | 50 | 100 | 1.7 | 1.9 | 2.6 | 10-20 | 700 | 1600 |
| KW4-521C3 | GaAsP/GaP | Hi-Eff Red | Common Cathode | 635 | 45 | 100 | 50 | 100 | 1.7 | 1.9 | 2.6 | 10-20 | 750 | 2000 |
| KW4-521CS | GaAlAs | Super Red | | 660 | 20 | 100 | 50 | 100 | 1.5 | 1.9 | 2.6 | 10-20 | 5600 | 21000 |
| KW4-521C2 | GaP | Green | | 565 | 30 | 100 | 50 | 100 | 1.7 | 2.2 | 2.6 | 10-20 | 750 | 2000 |
| KW4-521CG | GaP | Super Green | | 570 | 30 | 100 | 50 | 100 | 1.7 | 2.2 | 2.6 | 10-20 | 850 | 2200 |
| KW4-521C6 | GaAsP/GaP | Yellow | | 585 | 30 | 100 | 50 | 100 | 1.7 | 1.9 | 2.6 | 10-20 | 700 | 1600 |

- 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).