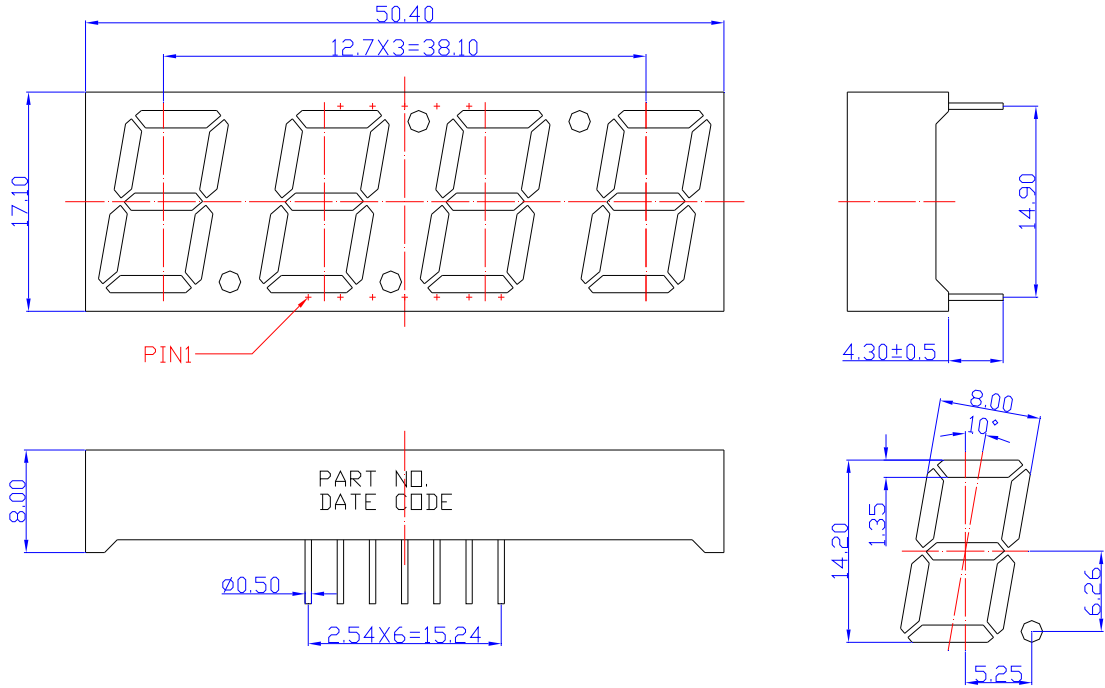


**SPECIFICATIONS** **CDQA56R2WF-1A**

### OUTLINES DIMENSIONS



The technical drawings show the following dimensions:

- Top View:** Total width is 50.40 mm. The distance between the centers of the four LED segments is 12.7 mm, resulting in a total segment width of 38.10 mm. The height of the package is 17.10 mm. A label 'PIN1' points to the first pin on the left.
- Side View:** The total height of the package is 14.90 mm. The distance from the top surface to the base of the LED segments is 4.30 ± 0.5 mm.
- Bottom View:** The package has a height of 8.00 mm. The pins are spaced at 2.54 mm (6 pins total, 15.24 mm). The pin diameter is 0.50 mm. The surface is marked with 'PART NO.' and 'DATE CODE'.
- Detail View:** Shows a single LED segment with a width of 8.00 mm, a height of 14.20 mm, and a viewing angle of 10°. The distance from the center of the segment to the bottom edge is 6.26 mm. The distance from the center to the side edge is 5.25 mm. The distance from the top edge to the center is 1.35 mm.

**Notes:**

1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

| Part Number   | Chip Material | Color of Emission | Lens Type     | Description  |
|---------------|---------------|-------------------|---------------|--------------|
| CDQA56R2WF-1A | InGaAlP       | Red               | White Segment | Common Anode |



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**ABSOLUTE MAXIMUM RATINGS**
**(TA=25°C)**

| Parameter  | Symbol | Max Rating | Unit |
|--|--------|------------|------|
| Power Dissipation  | PD     | 70         | mW   |
| Pulse Forward Current  | IFP    | 90         | mA   |
| Continuous Forward Current   | IF     | 25         | mA   |
| Reverse Voltage Segment  | VR     | 5          | V    |
| Operating Temperature Range  | TOPR   | -25~+85    | °C   |
| Storage Temperature Range  | TSTG   | -25~+85    | °C   |
| IFP = Pulse Width ≤ 10 ms, Duty Ratio ≤1/10. Soldering Condition: 260 °C/ 5sec |        |            |      |

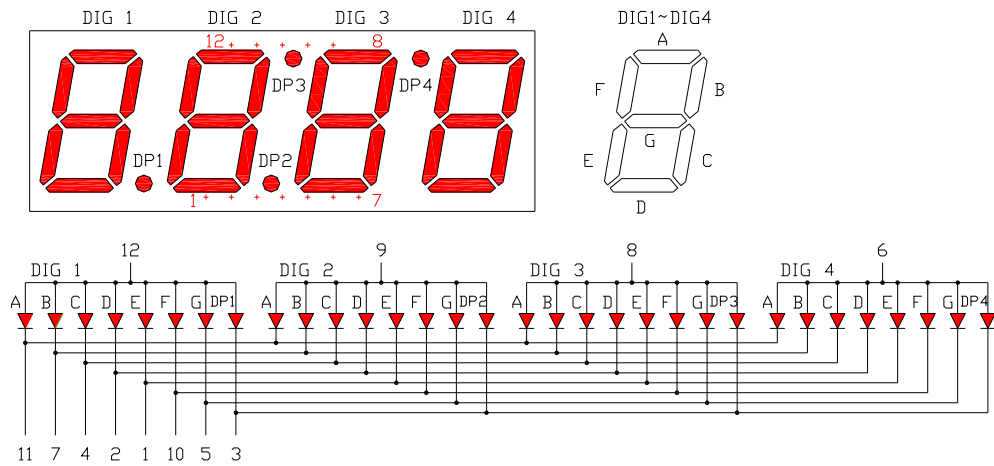
**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

| Parameter                    | Symbol | Test Condition | Value |     |     | Unit |
|------------------------------|--------|----------------|-------|-----|-----|------|
|                              |        |                | Min   | Typ | Max |      |
| Luminous Intensity           | IV     | IF = 10mA      | -     | 30  | -   | mcd  |
| Forward Voltage              | VF     | IF = 20mA      | -     | 2.0 | 2.6 | V    |
| Reverse Leakage Current      | IR     | VR = 5V        | -     | -   | 10  | µA   |
| Peak Wavelength              | λP     | IF = 20mA      | -     | 632 | -   | nm   |
| Dominant Wavelength          | λD     | IF = 20mA      | 619   | 624 | 629 | nm   |
| Spectral Radiation Bandwidth | Δλ     | IF = 20mA      | -     | 20  | -   | nm   |



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TYPICAL INTERNAL EQUIVALENT CIRCUIT



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## OPTICAL CHARACTERISTIC CURVES

(25 °C Free Air Temperature Unless Otherwise Specified)

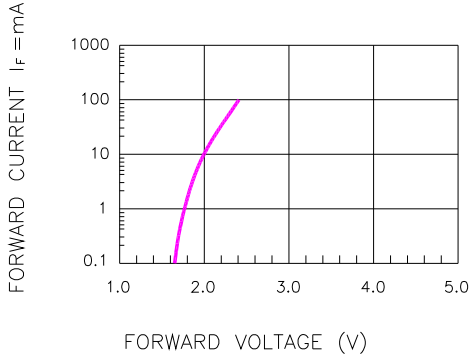


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

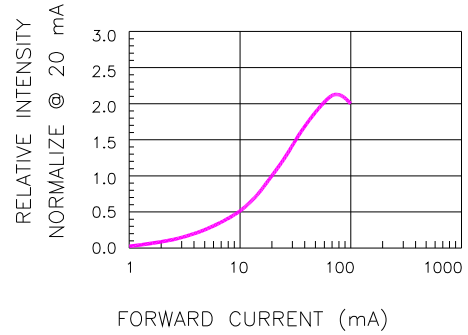


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

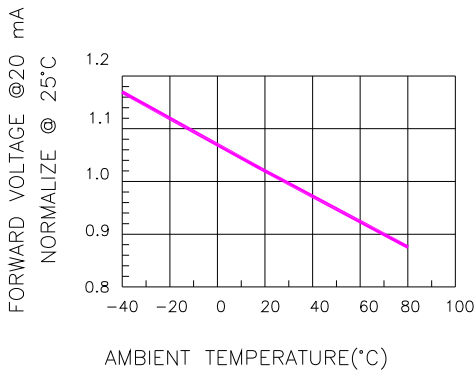


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

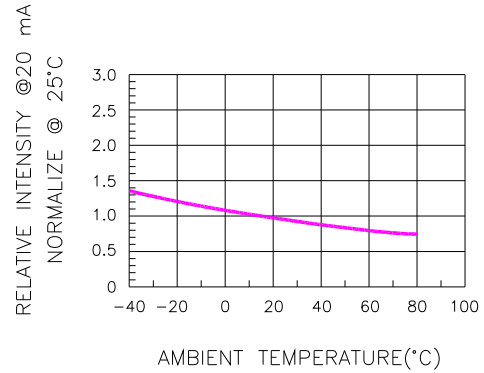


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

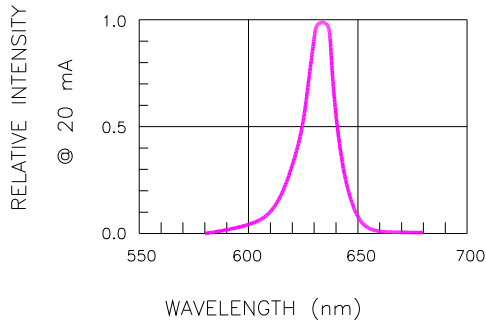


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

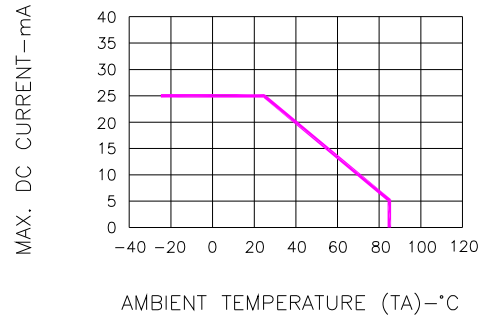
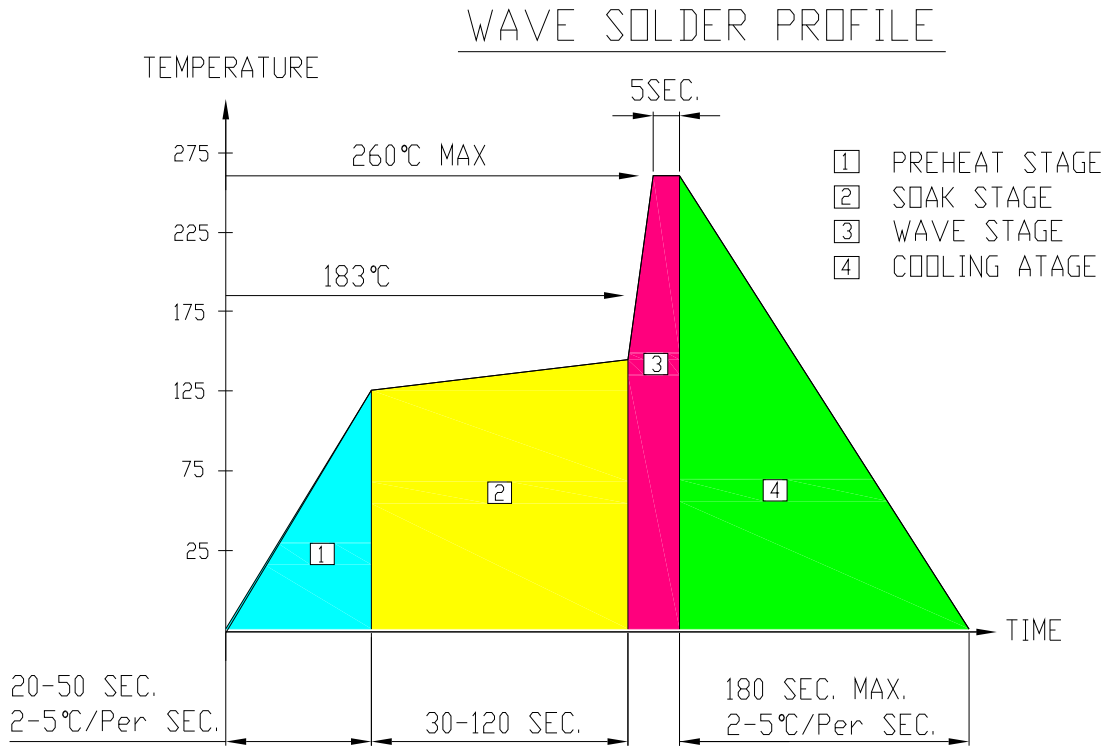


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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**SOLDERING CONDITIONS – DISPLAY TYPE LED**
**● RECOMMEND SOLDERING PROFILE**

**● SOLDERING IRON**

Basic spec is  $\leq 4$  sec when 260°C. If temperature is higher, time should be shorter (+10°C→1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C.

**● REWORK**

Customer must finish rework within  $\leq 4$  sec under 245°C.



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