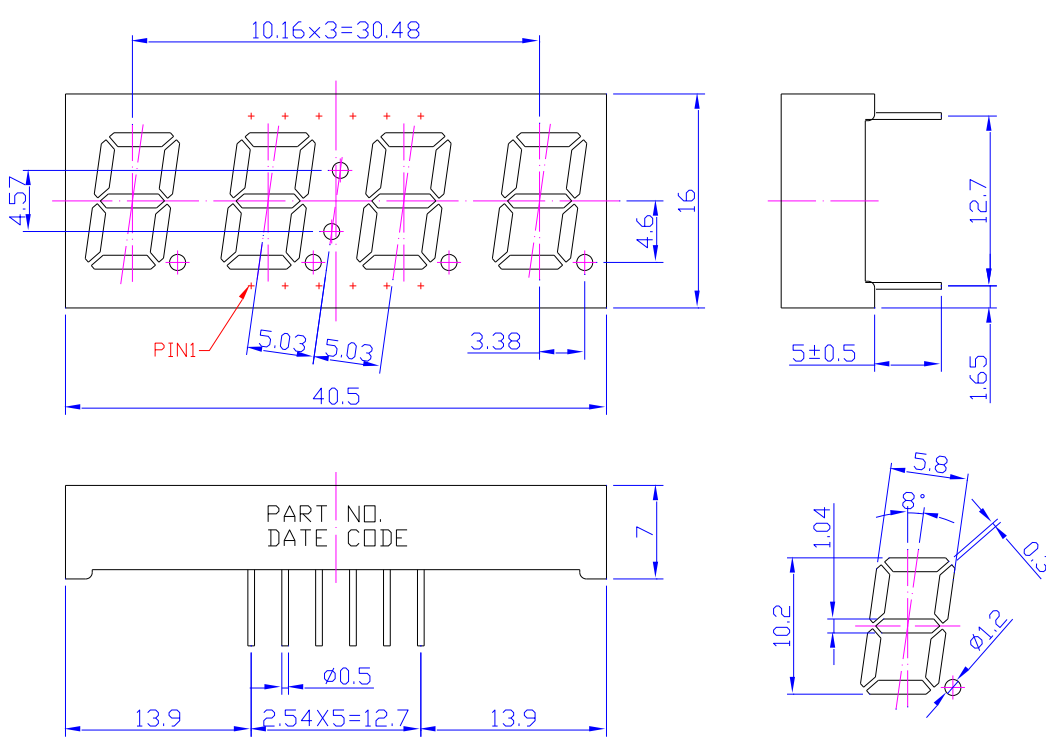


**SPECIFICATIONS** **CDQA40R2WBF**

### OUTLINES DIMENSIONS



The technical drawings show the following dimensions:

- Top View:** Total width 40.5mm, total height 16mm. Four LED segments are arranged horizontally. The distance between the centers of adjacent segments is 10.16mm (3 segments = 30.48mm). The distance from the left edge to the first segment center is 4.57mm. The distance from the last segment center to the right edge is 4.6mm. The distance between the centers of the first and second segments is 5.03mm, and between the second and third is 5.03mm. The distance from the center of the second segment to the right edge is 3.38mm. A PIN1 indicator is shown at the bottom left.
- Side View:** Total height 12.7mm. The base width is 5±0.5mm. The height of the base is 1.65mm.
- Bottom View:** Total width 40.5mm (13.9mm + 12.7mm + 13.9mm). The height of the package is 7mm. The distance between the centers of the two middle segments is 2.54mm x 5 = 12.7mm. The diameter of the mounting holes is 0.5mm.
- Detail View:** Shows a single LED segment with a width of 5.8mm, a height of 10.2mm, and a lens diameter of 1.2mm. The lens has a thickness of 0.3mm and a bevel angle of 8°.

**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
CDQA40R2WBF	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			

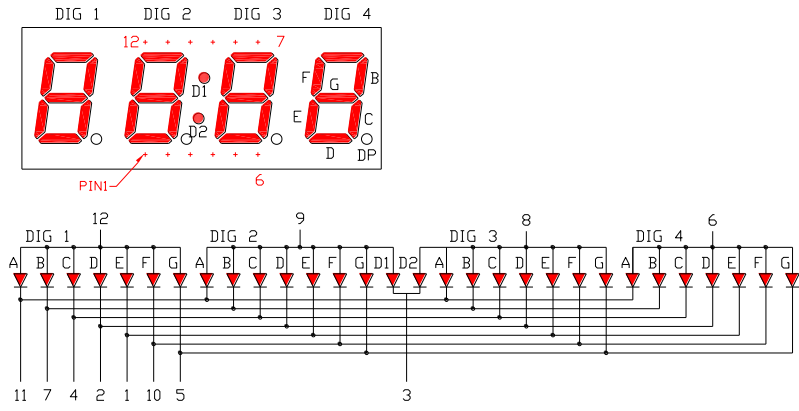
**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 20mA	-	60	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.4	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)

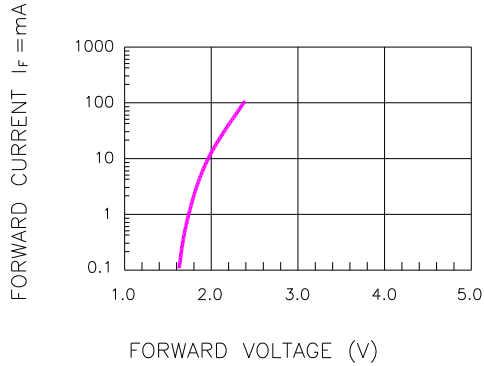


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

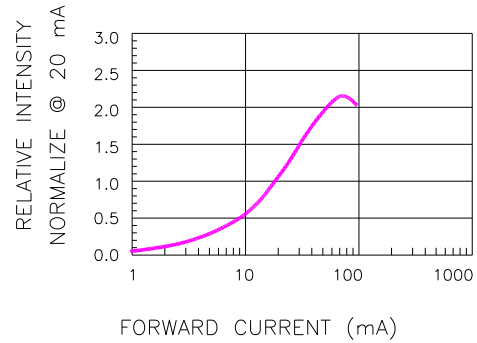


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

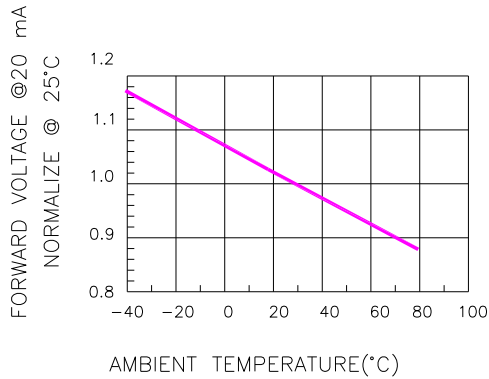


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

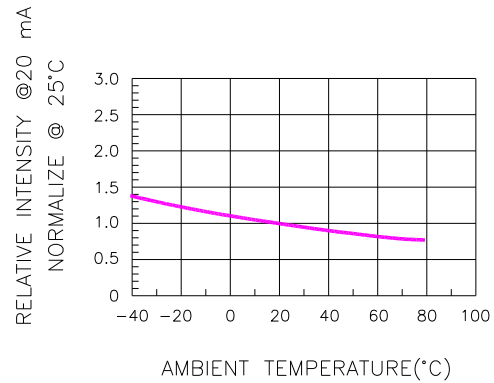


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

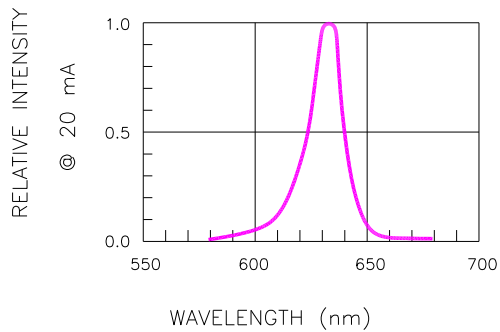


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

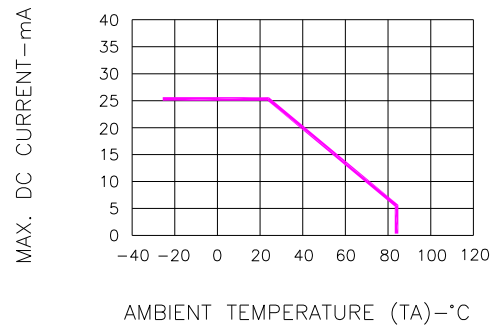


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

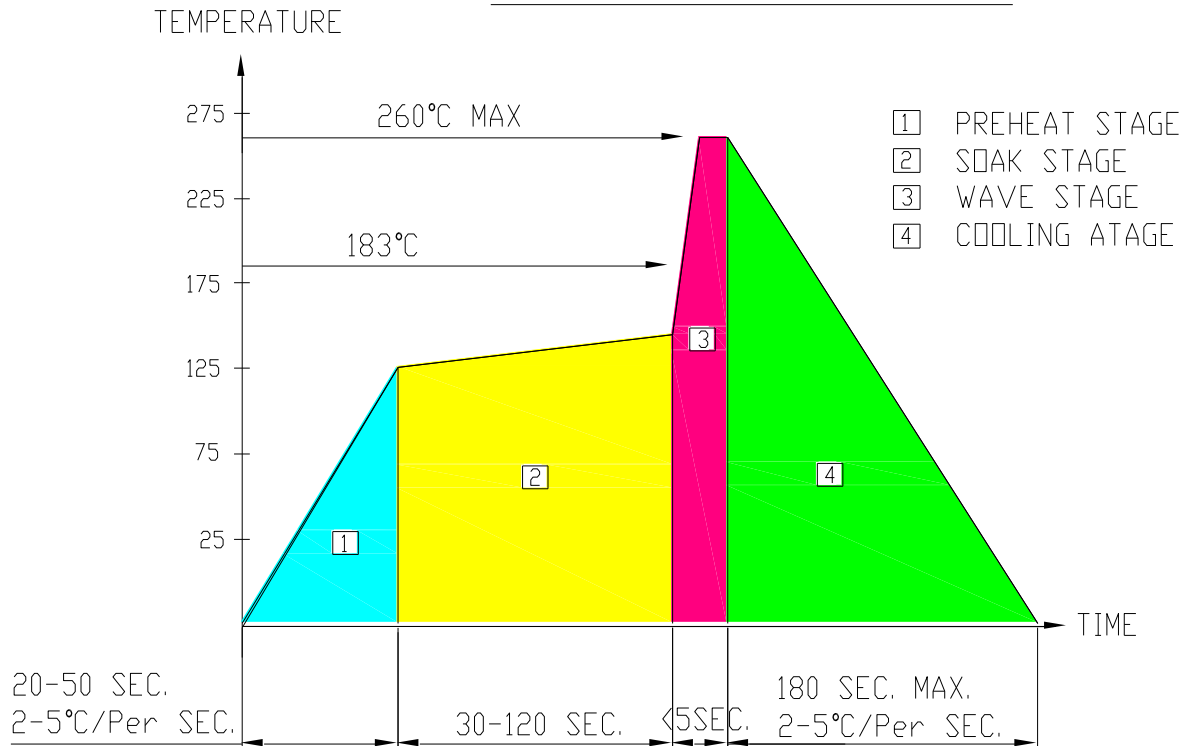


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## SOLDERING CONDITIONS – DISPLAY TYPE LED

### ● RECOMMEND SOLDERING PROFILE

#### WAVE SOLDER 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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