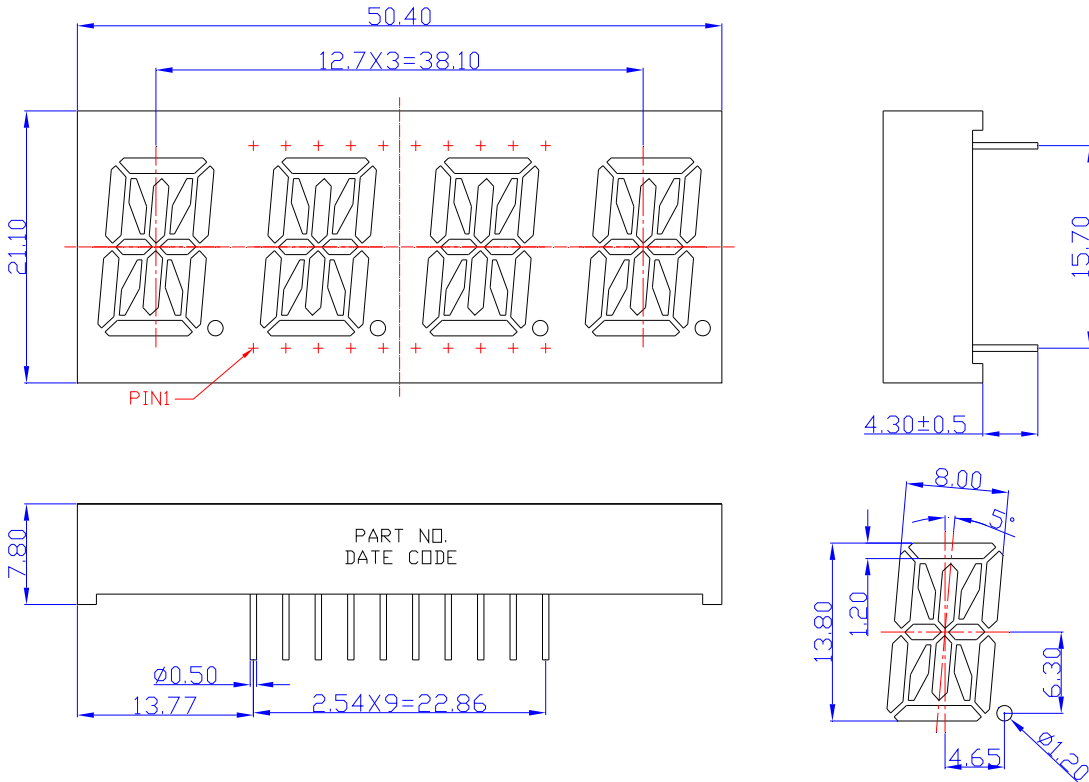


**SPECIFICATIONS** **CDQAN54R2RR**

### OUTLINES DIMENSIONS



The technical drawings show the following dimensions:

- Top View:** Overall width is 50.40 mm. The LED array is 38.10 mm wide, calculated as  $12.7 \times 3 = 38.10$ . The height of the package is 21.10 mm. A PIN1 indicator is shown at the bottom left.
- Side View:** The total height of the package is 15.70 mm. The mounting tab width is  $4.30 \pm 0.5$  mm.
- Bottom View:** The package height is 7.80 mm. The mounting tab width is 13.77 mm. The LED array is 22.86 mm wide, calculated as  $2.54 \times 9 = 22.86$ . The mounting tab has a diameter of  $\phi 0.50$ .
- Detail View:** Shows a single LED die with a width of 8.00 mm and a 5° angle. The die height is 1.20 mm. The mounting pad diameter is  $\phi 1.20$  mm. The distance from the die center to the mounting pad center is 4.65 mm. The mounting pad width is 6.30 mm.

Additional markings on the bottom view include "PART NO." and "DATE CODE".

**Notes:**

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

Part Number	Chip Material	Color of Emission	Segment/Face	Description
CDQAN54R2RR	InGaAlP	Red	Red/Red	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			

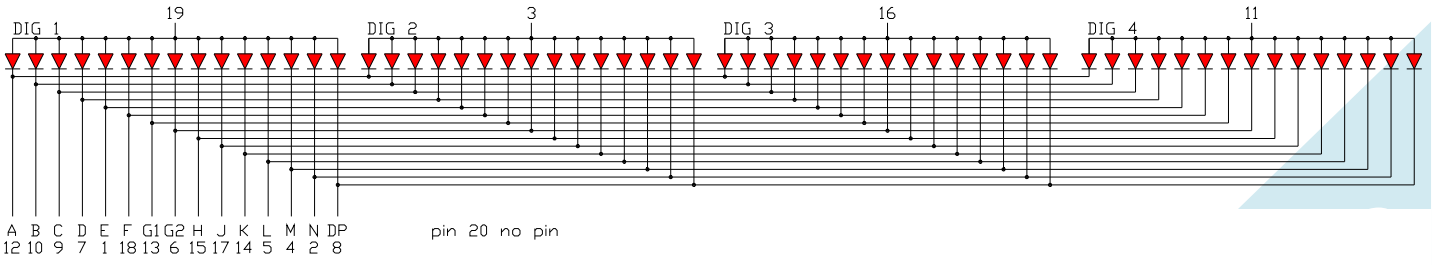
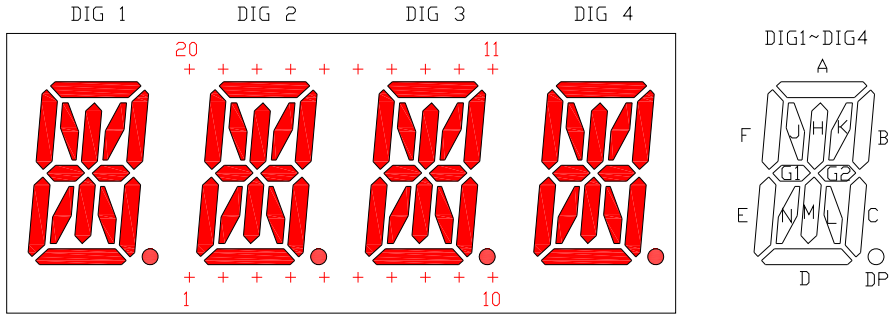
**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

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

### Typical Electro-optical Characteristic Curves (25 °C Free Air Temperature Unless Otherwise Specified)

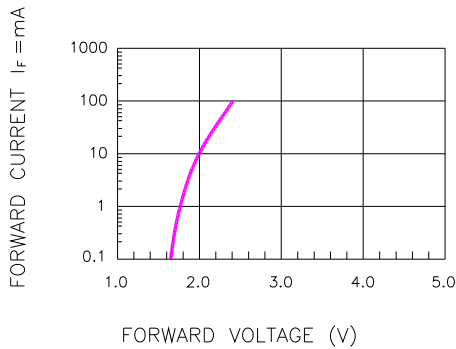


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

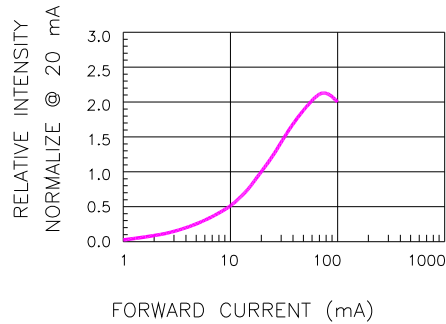


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

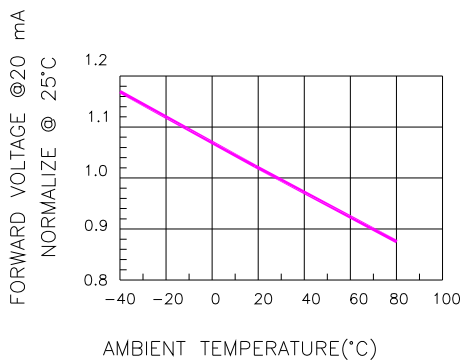


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

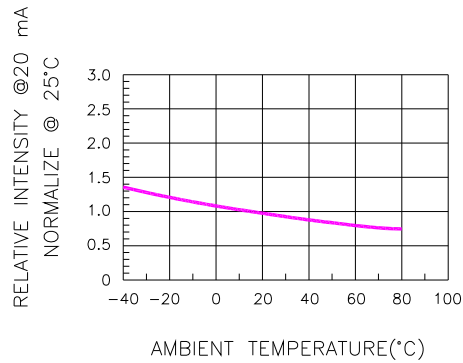


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

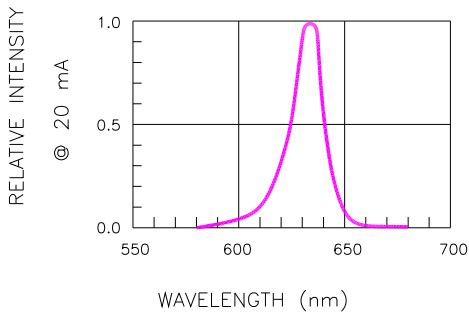


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

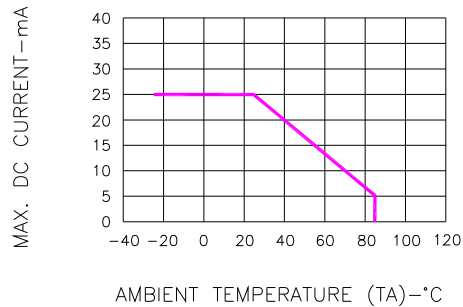


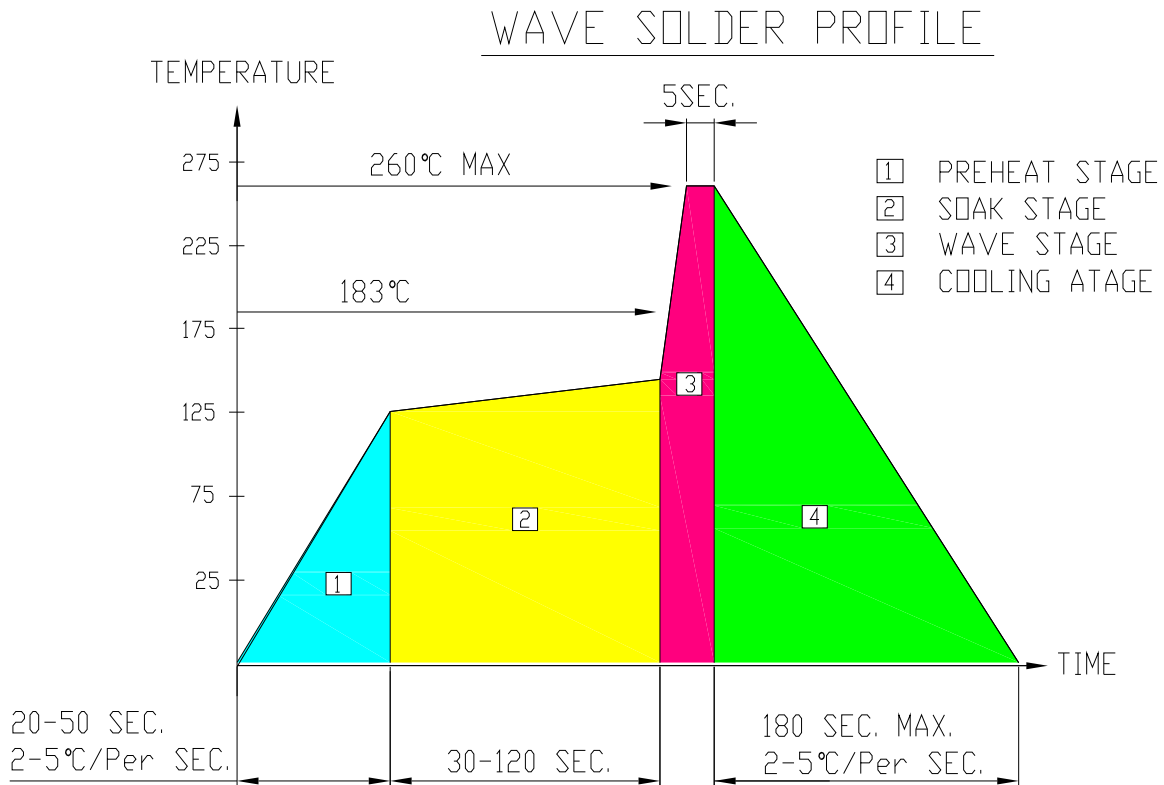
Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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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