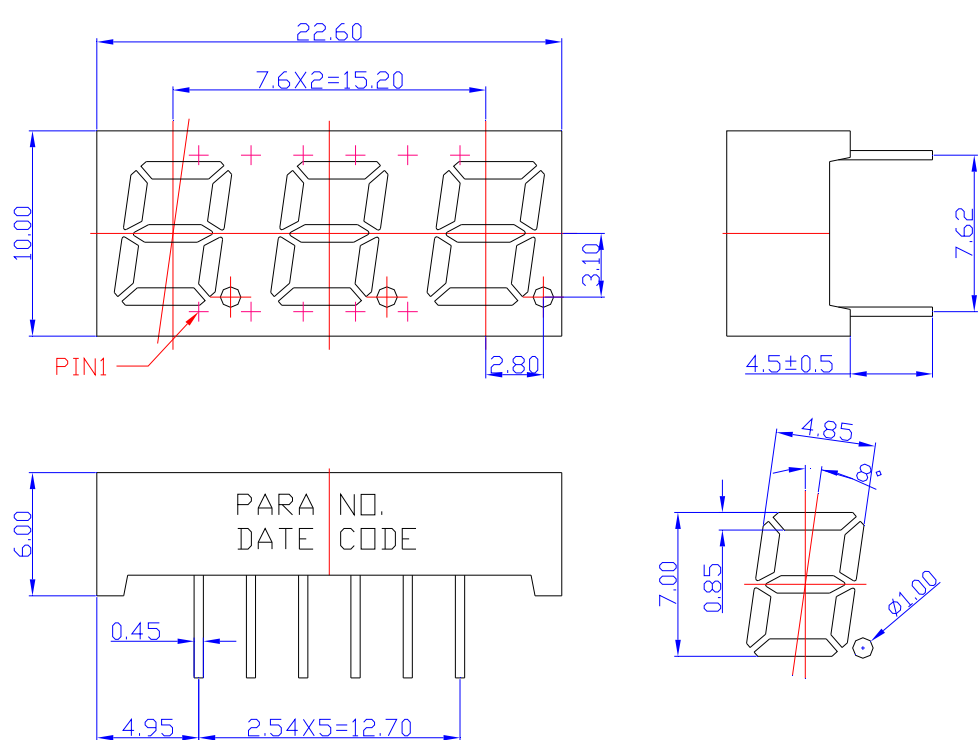


**SPECIFICATIONS** **CDTC28R2WF**

### OUTLINES DIMENSIONS



The technical drawings show the following dimensions:

- Top View:** Total width 22.60mm, height 10.00mm. The LED array is 7.6mm wide and 2 units high (7.6x2=15.20mm). Pin 1 is located 2.80mm from the right edge and 3.10mm from the bottom edge.
- Side View:** Total height 7.62mm, base width 4.5±0.5mm.
- Bottom View:** Total width 4.95mm, height 6.00mm. The LED array is 2.54mm wide and 5 units high (2.54x5=12.70mm). A 0.45mm wide feature is shown on the left.
- Detail View:** Shows a lens diameter of 4.85mm, a height of 7.00mm, a base diameter of 0.85mm, and a 6-degree angle. A hole with a diameter of 1.00mm is also indicated.

**Notes:**

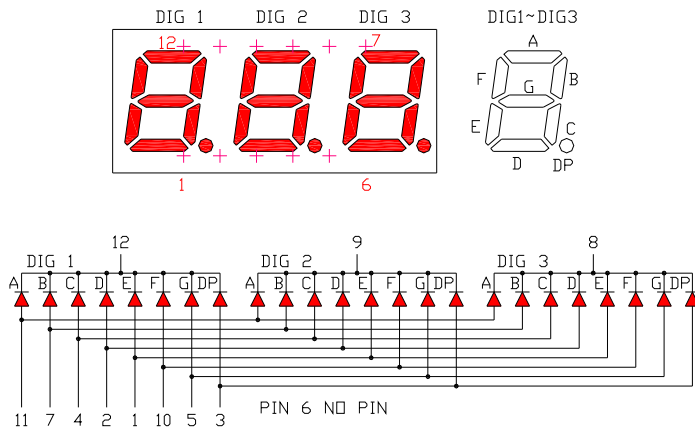
1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Description
CDTC28R2WF	InGaAlP	Red	White Segment	Common Cathode



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## TYPICAL INTERNAL EQUIVALENT CIRCUIT



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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	-	12	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.6	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	μA
Peak Wavelength	λP	IF = 20mA	-	650	-	nm
Dominant Wavelength	λD	IF = 20mA	-	639	-	nm
Spectral Radiation Bandwidth	Δλ	IF = 20mA	-	20	-	nm



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## OPTICAL CHARACTERISTIC CURVES

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

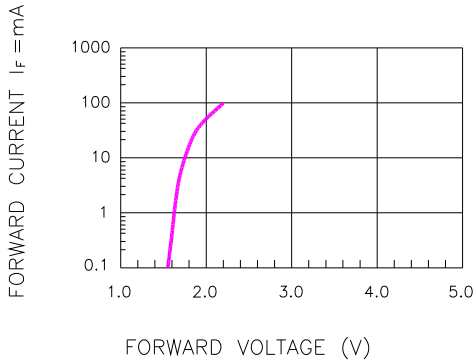


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

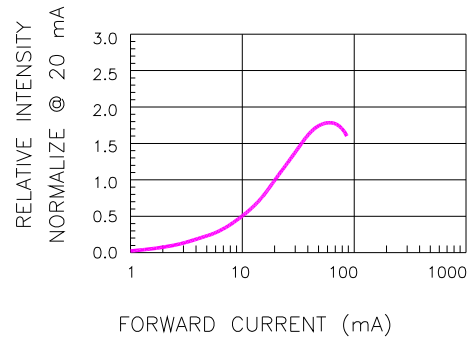


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

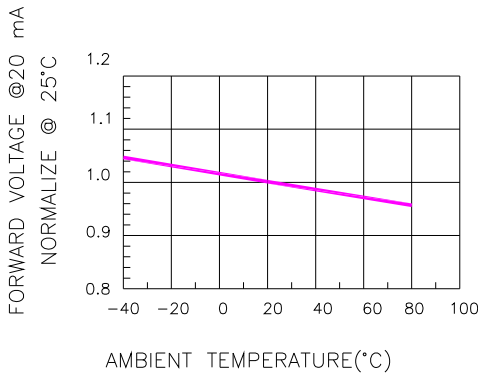


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

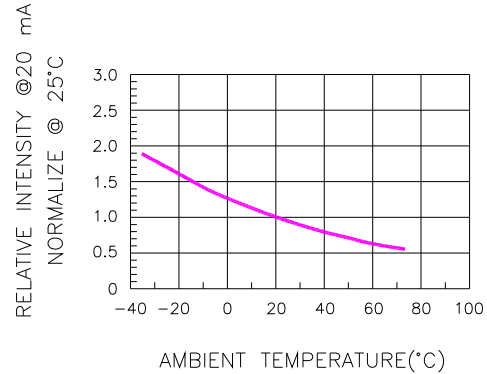


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

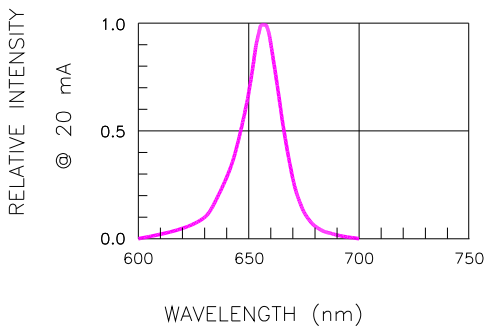


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

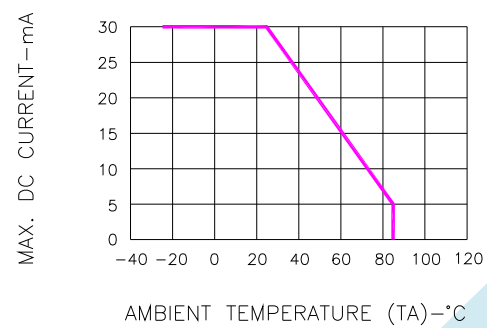


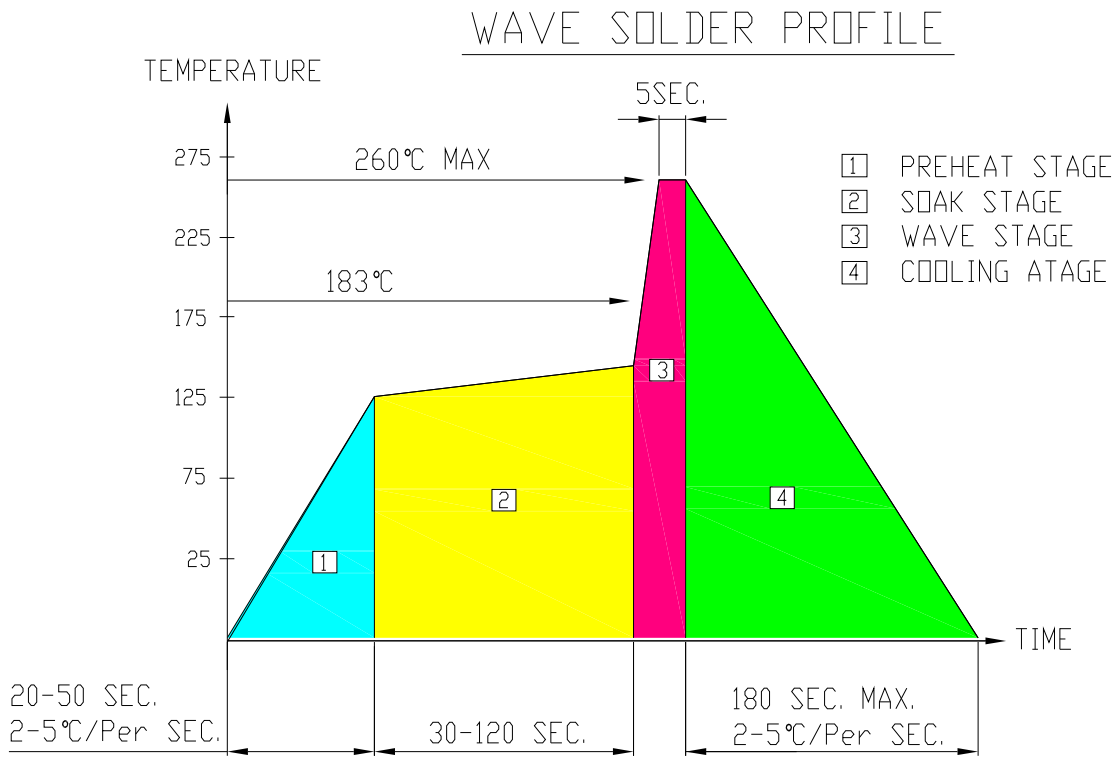
Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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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