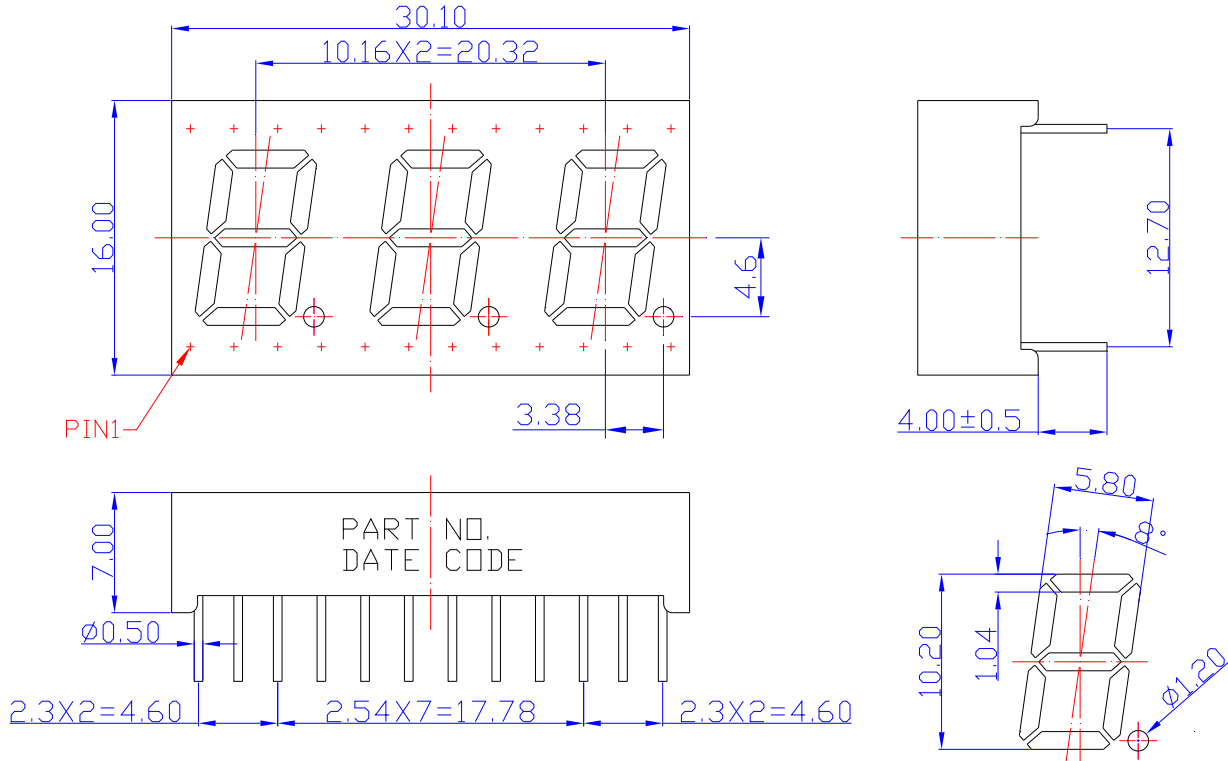


**SPECIFICATIONS** **CDTC40B2WF**

### OUTLINES DIMENSIONS



The technical drawing illustrates the dimensions of the CDTC40B2WF LED package. The top view shows a rectangular package with a total width of 30.10 mm and a height of 16.00 mm. The three LED chips are spaced 10.16 mm apart, with a total chip width of 20.32 mm. The distance from the center of the chips to the right edge is 4.16 mm, and the distance from the center to the bottom edge is 3.38 mm. A PIN1 is indicated on the left side. The side view shows a total height of 12.70 mm and a base width of 4.00 ± 0.5 mm. The bottom view shows a package height of 7.00 mm and a base diameter of 0.50 mm. The bottom surface features a central area for marking (PART NO., DATE, CODE) and seven leads with a width of 2.54 mm each, totaling 17.78 mm. The leads are spaced 2.3 mm apart, with 4.60 mm from the center to the left and right edges. A detail view of the LED chip shows a width of 5.80 mm, a height of 1.04 mm, and a diameter of 1.20 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
CDTC40B2WF	InGaN	Blue	White Segment	Common Cathode



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

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	120	mW
Pulse Forward Current	IFP	100	mA
Continuous Forward Current	IF	30	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			

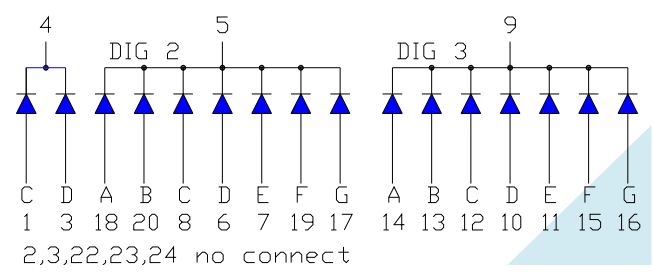
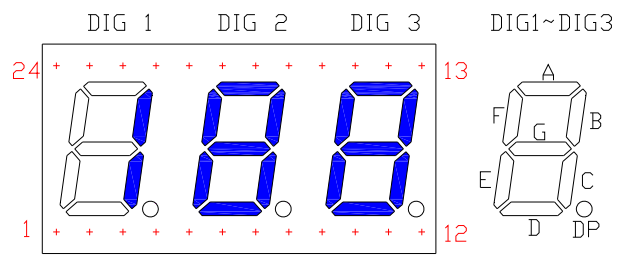
**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 20mA	-	40	-	mcd
Forward Voltage	VF	IF = 20mA	-	3.0	4.0	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Dominant Wavelength	λD	IF = 20mA	460	465	475	nm
Spectral Radiation Bandwidth	Δλ	IF = 20mA	-	40	-	nm



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## TYPICAL INTERNAL EQUIVALENT CIRCUIT



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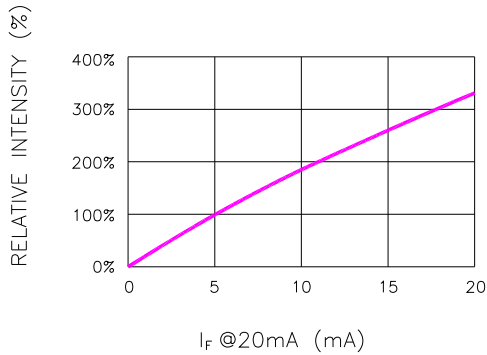
**OPTICAL CHARACTERISTIC CURVES**
**Typical Electro-optical Characteristic Curves  
(25 °C Free Air Temperature Unless Otherwise Specified)**


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

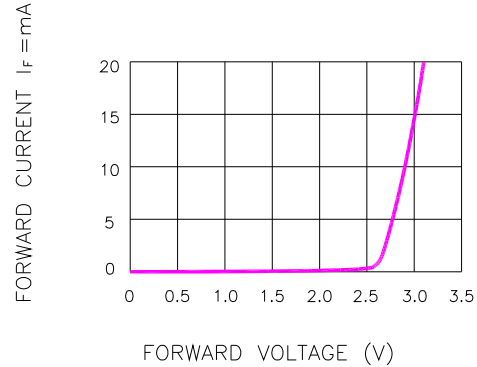


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

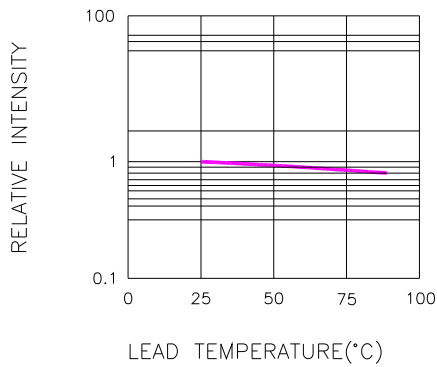
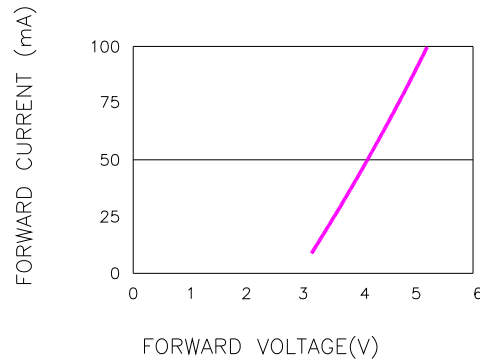

 Fig.3 RELATIVE INTENSITY VS. LEAD TEMPERATURE  
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)


Fig.4 PEAK FORWARD VOLTAGE VS. FORWARD (100us TEST PULSE, 1% DUTY CYCLE)

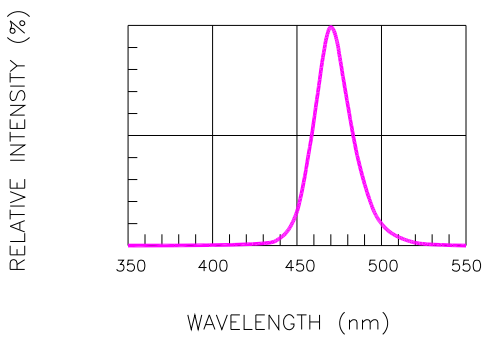


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

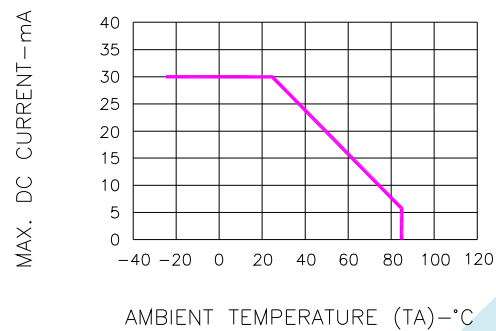


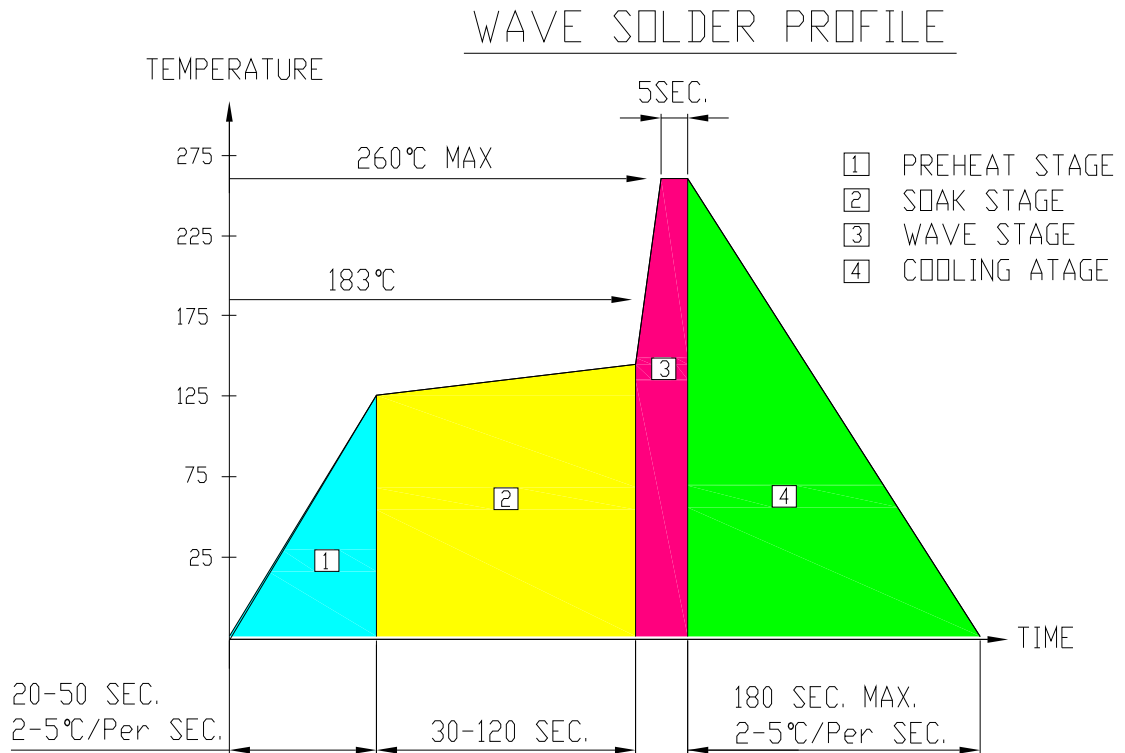
Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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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