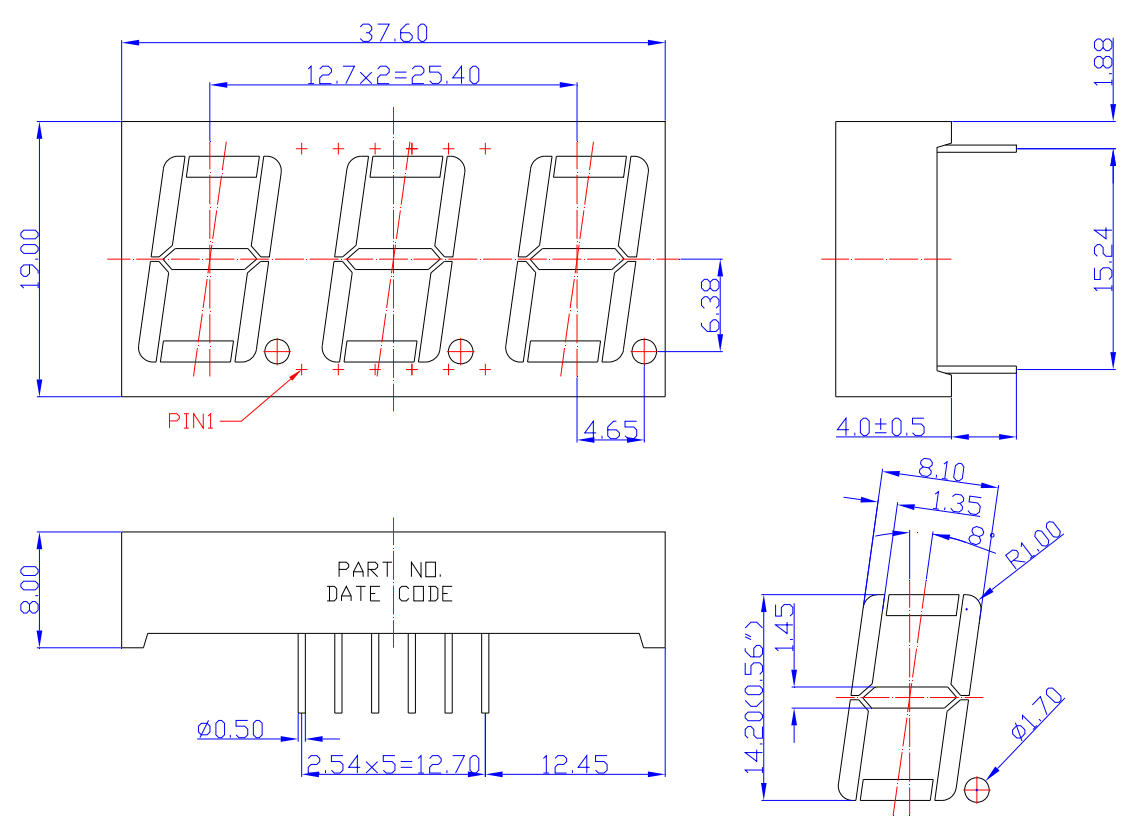


**SPECIFICATIONS** **CDTC56R2W**

### OUTLINES DIMENSIONS



The technical drawings show the following dimensions:

- Top View:** Overall width 37.60 mm, height 19.00 mm. Three LED segments are spaced 12.7 mm apart (total 25.40 mm). Segment width is 6.38 mm. Pin 1 is located 4.65 mm from the right edge.
- Side View:** Total height 15.24 mm, with a top section of 1.88 mm. The base width is 4.0 ± 0.5 mm.
- Bottom View:** Shows a leaded package with a height of 8.00 mm. The lead pitch is 2.54 mm (5 leads = 12.70 mm). The distance from the lead edge to the center of the package is 12.45 mm. A diameter of 0.50 mm is indicated for the lead.
- Isometric View:** Shows a lens diameter of 1.70 mm, a lens height of 1.45 mm, and a lens radius of R1.00 mm. The distance from the lens center to the package center is 8.10 mm, and the distance from the lens center to the lead edge is 1.35 mm.

**Notes:**

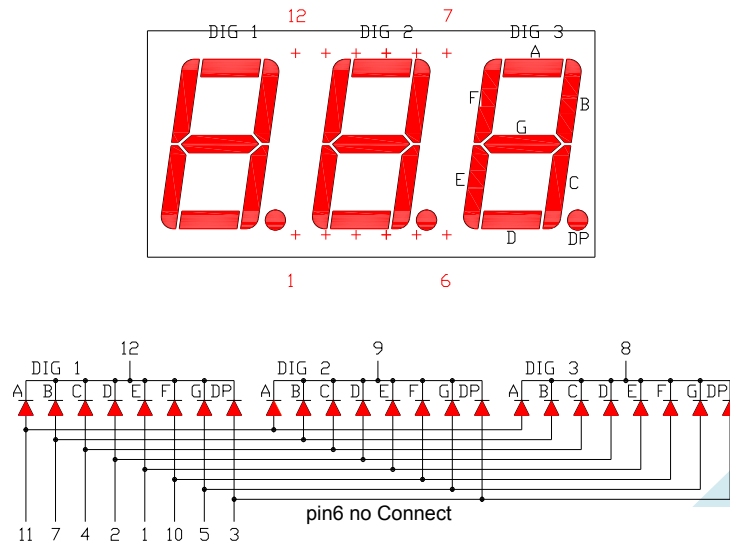
1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Description
CDTC56R2W	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	-	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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## OPTICAL CHARACTERISTIC CURVES

(25 °C Free Air Temperature Unless Otherwise Specified)

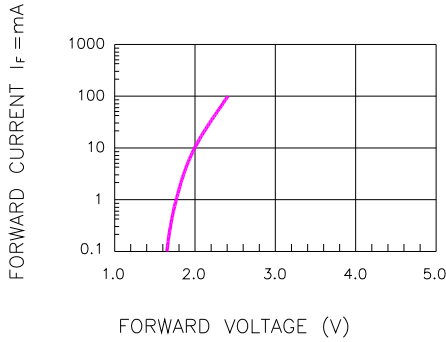


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

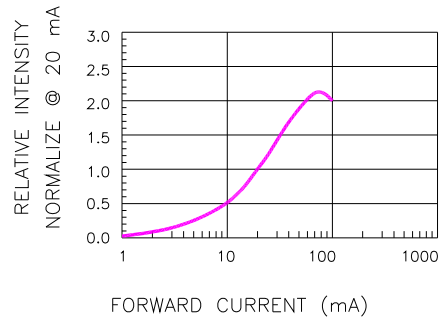


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

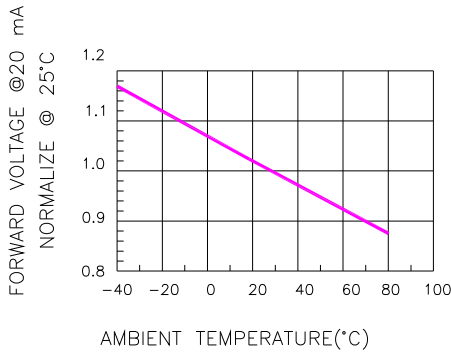


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

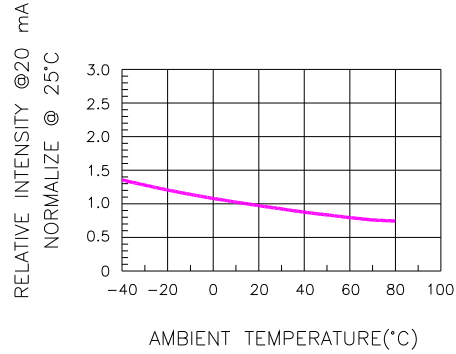


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

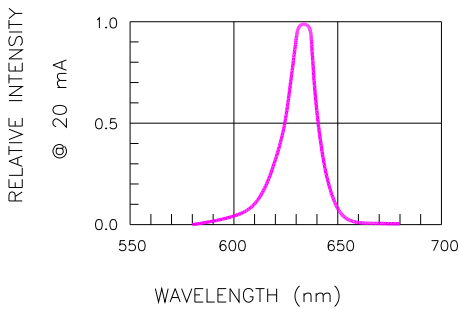


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

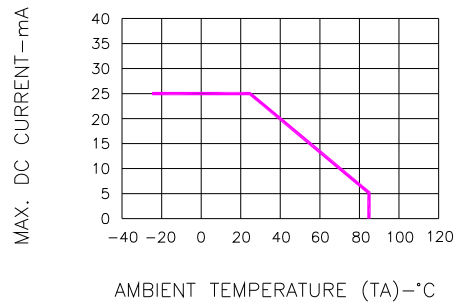


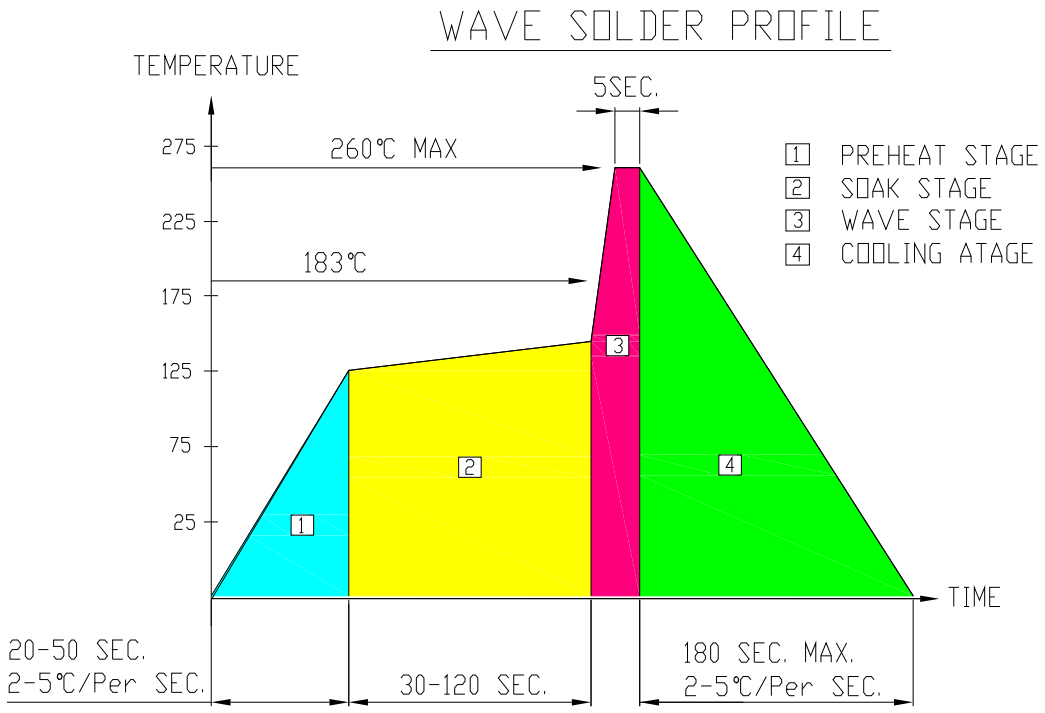
Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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# SOLDERING CONDITIONS – DISPLAY TYPE LED

## ● RECOMMEND SOLDERING PROFILE



### ● Note:

- Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
- Peak wave soldering temperature between 245°C ~ 225°C for 3 sec (5 sec max)
- No more than one wave soldering pass

### ● 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  $\leq 3$  sec under 350°C. The head of soldering iron cannot touch copper foil.



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