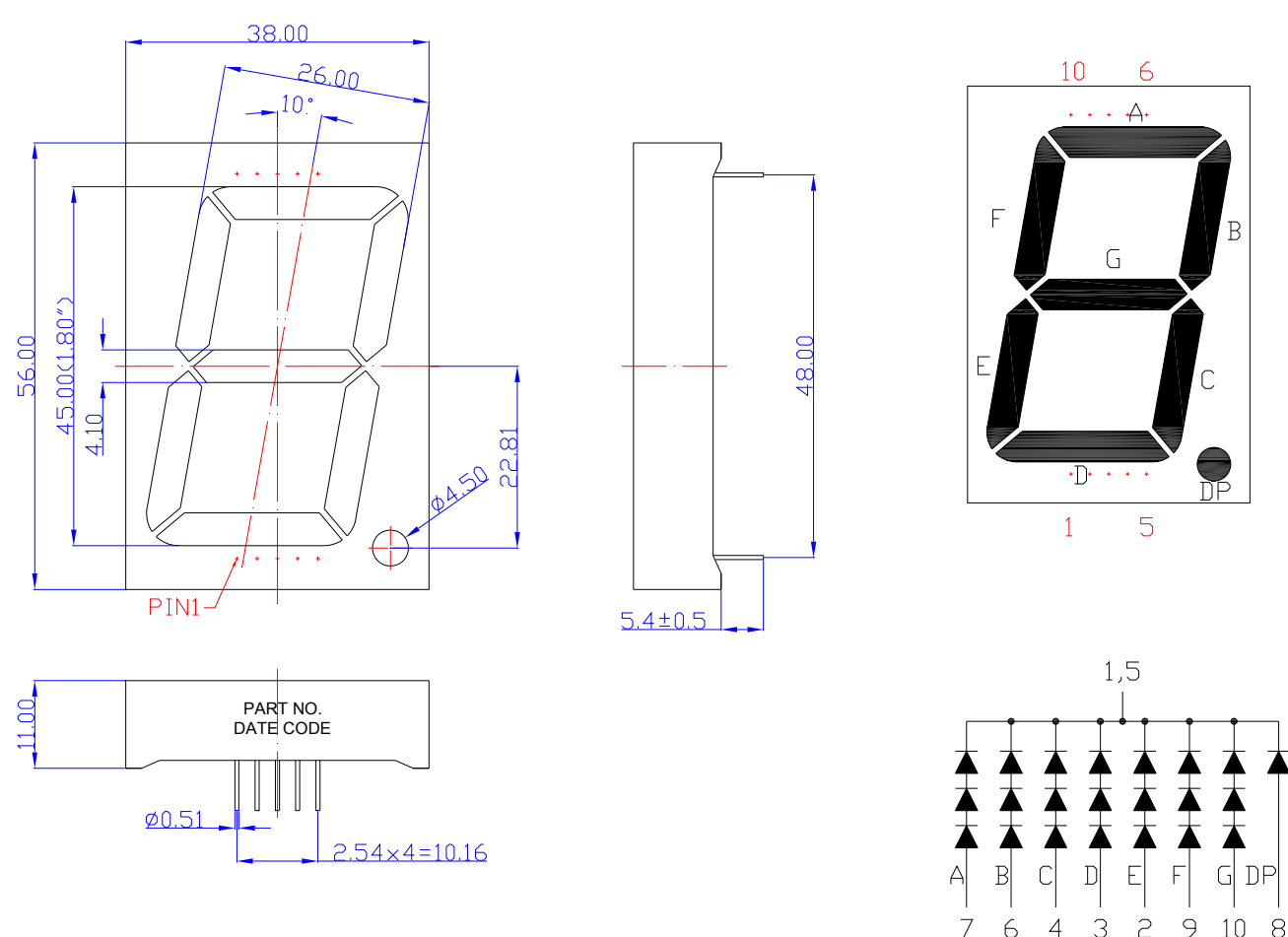


**SPECIFICATIONS** **CDSC18W2W**

### OUTLINES DIMENSIONS



**Notes:**

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

Part Number	Chip Material	Color of Emission	Lens Type	Description
CDSC18W2W	InGaN	White	White Segment	Common Cathode



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

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	78	mW
Pulse Forward Current	IFP	60	mA
Continuous Forward Current	IF	20	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 per segment	Iv	IF = 5mA	-	180	-	mcd
Forward Voltage per segment	VF	IF = 5mA	-	8.7	-	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Chromaticity Coordinates	X	IF = 5mA	-	0.285	-	-
Chromaticity Coordinates	λD	IF = 5mA	-	0.275	-	-
Spectral Radiation Bandwidth	Δλ	IF = 5mA	-	30	-	nm



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## OPTICAL CHARACTERISTIC CURVES

(25 °C Free Air Temperature Unless Otherwise Specified)

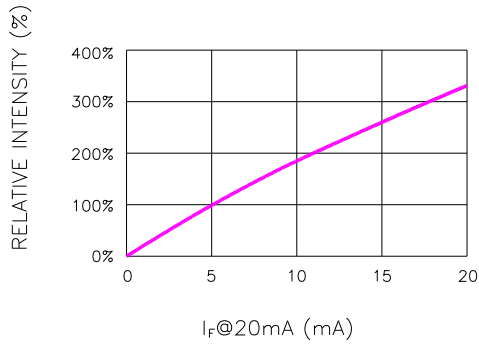


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

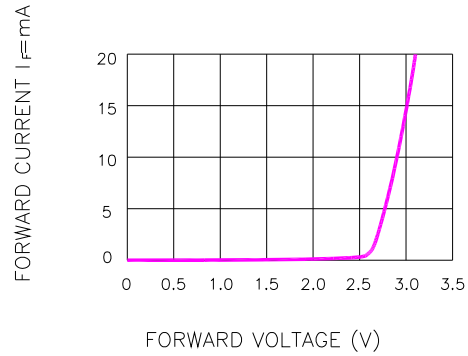


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

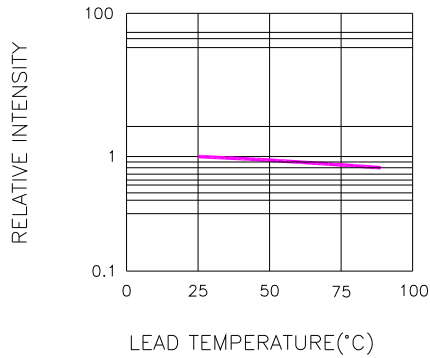


Fig.3 RELATIVE INTENSITY VS. LEAD TEMPERATURE  
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)

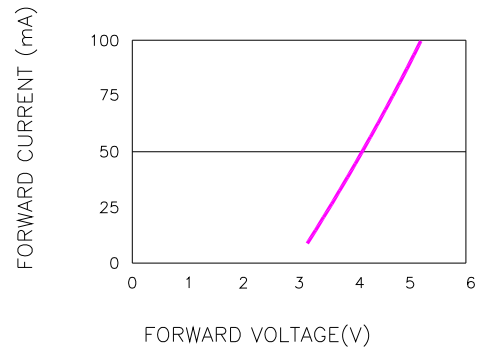


Fig.4 PEAK FORWARD VOLTAGE VS. FORWARD(100us TEST PULSE, 1% DUTY CYCLE)

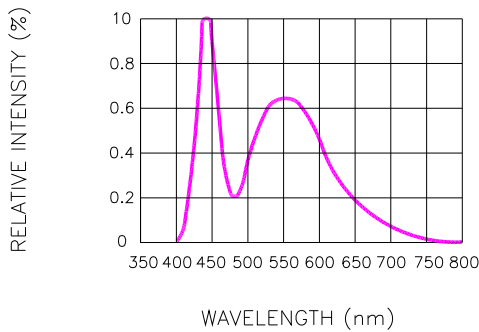


Fig.4 RELATIVE INTENSITY VS. WAVELENGTH

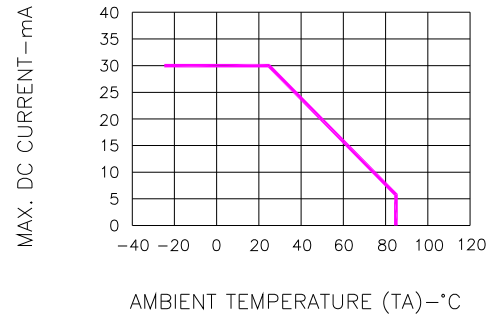
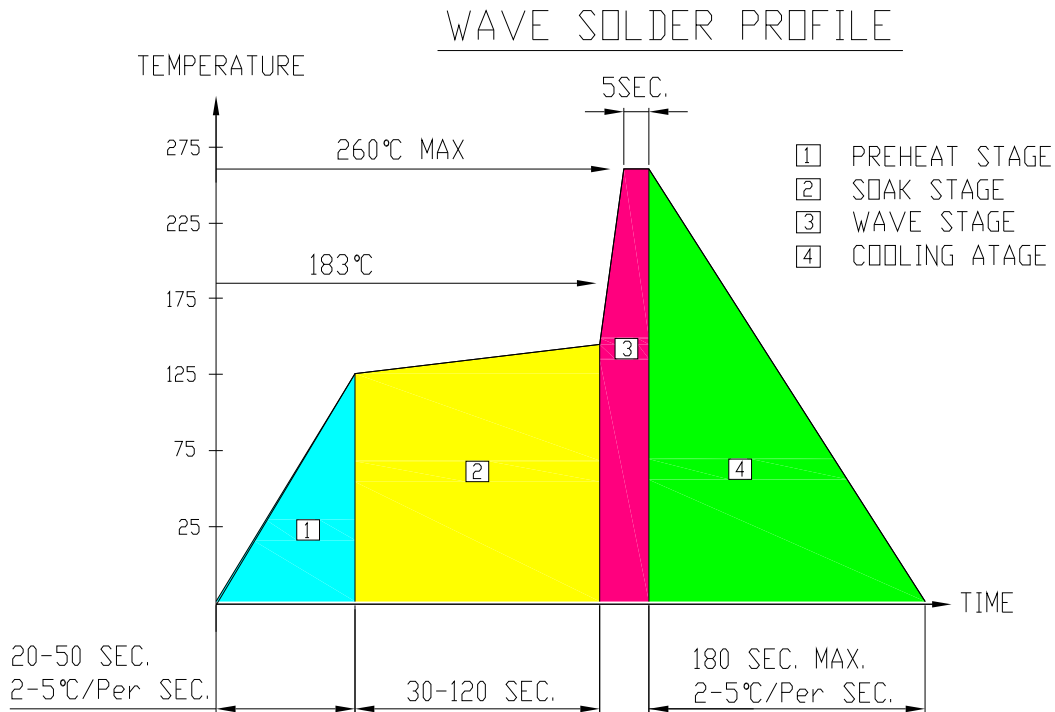


Fig.7 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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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