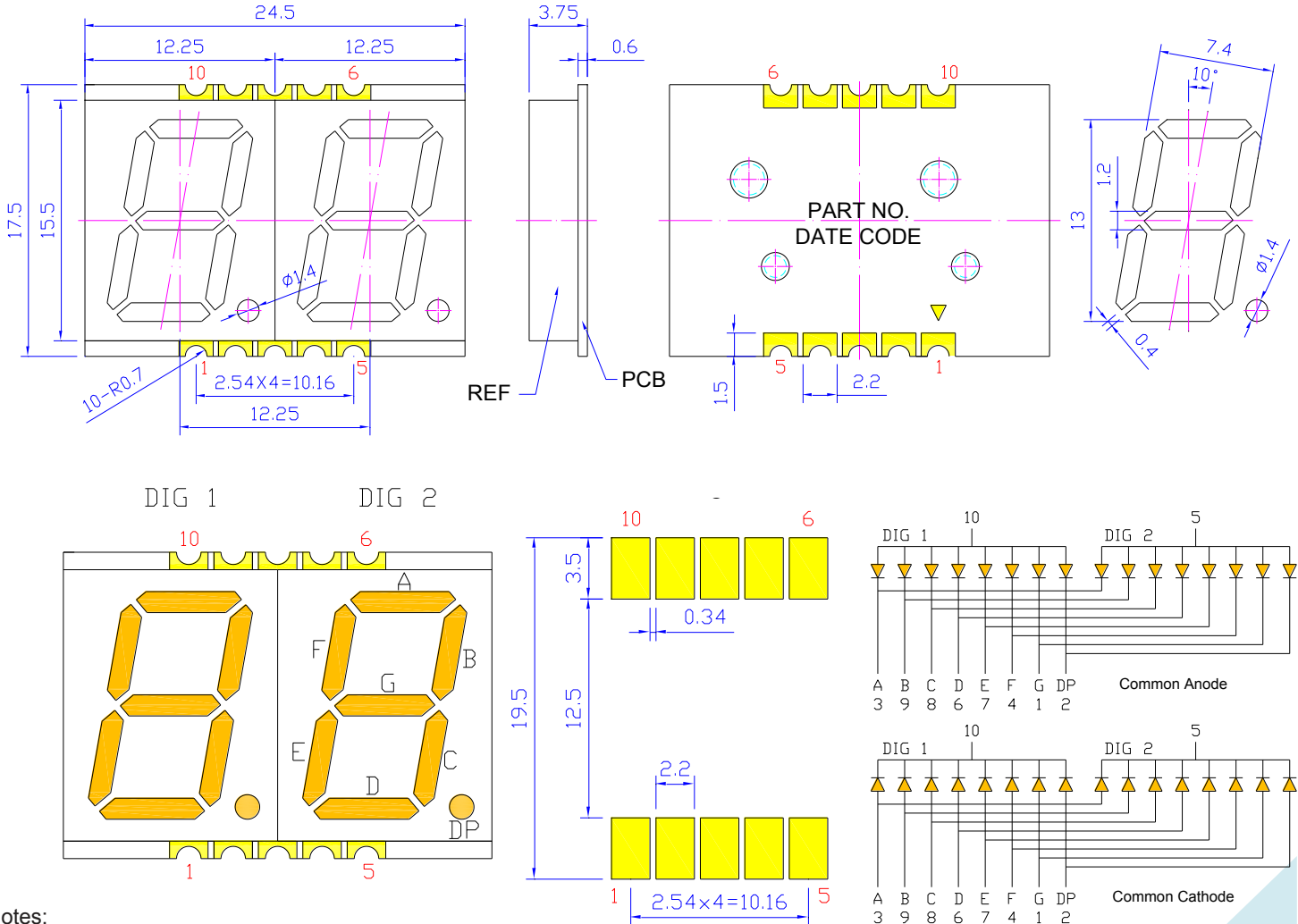


**SPECIFICATIONS** **SDDC51B2W**

**MECHANICAL 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
SDDC51B2W	InGaN	Blue	White Segment	Common Cathode



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

Parameter	Symbol	Value	Unit
Power Dissipation per Dice	P <sub>AD</sub>	120	mW
Derating Liner from 25°C per Dice	-	0.3	mA / °C
Continuous Forward Current per Dice	I <sub>AF</sub>	30	mA
Peak Current per Dice (duty cycle 1/10, 1kHz)	I <sub>PF</sub>	100	mA
Reverse Voltage per Dice	V <sub>R</sub>	5	V
Operating Temperature	T <sub>OPR</sub>	-40~+105	°C
Storage Temperature	T <sub>STG</sub>	-40~+105	°C

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

Characteristic	Symbol	Condition	Value			Unit
			Min.	Type.	Max.	
Forward Voltage per Dice	V <sub>F</sub>	I <sub>F</sub> = 5mA	-	2.85	3.0	V
Reverse Current per Dice	I <sub>R</sub>	V <sub>R</sub> = 8V	-	-	10	μA
Peak Wavelength per Dice	λ <sub>P</sub>	I <sub>F</sub> = 5mA	-	472	-	nm
Dominant Wavelength per Dice	λ <sub>D</sub>	I <sub>F</sub> = 5mA	450	470	480	nm
Luminous Intensity per Dice	I <sub>V</sub>	I <sub>F</sub> = 5mA	10	30	-	mcd
Spectral Radiation Bandwidth per Dice	Δλ	I <sub>F</sub> = 5mA	-	30	-	nm

\*Tolerance of viewing angle: -10 / +5 deg.



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## OPTICAL CHARACTERISTIC CURVES

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

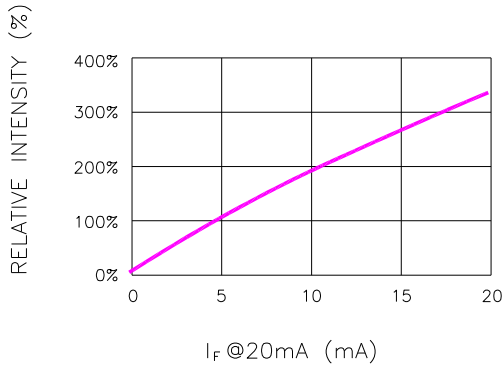


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

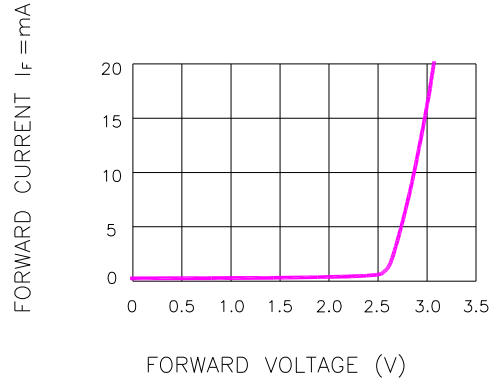


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

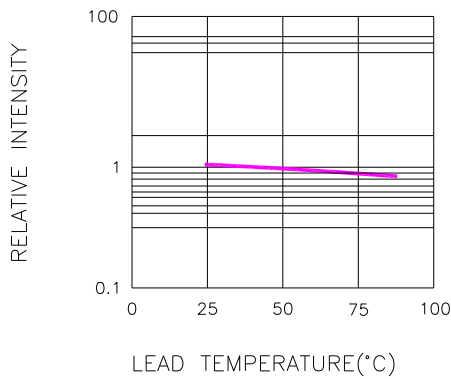


Fig.3 RELATIVE INTENSITY VS. LEAD TEMPERATURE  
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)

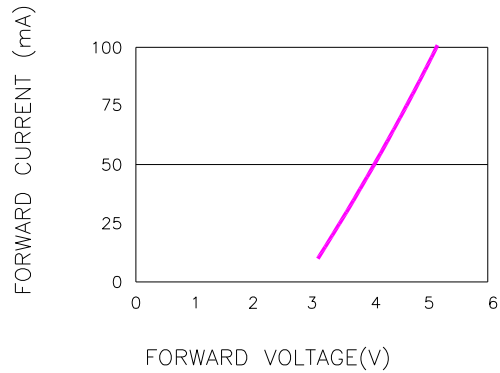


Fig.4 PEAK FORWARD VOLTAGE VS. FORWARD CURRENT  
(100us TEST PULSE, 1% DUTY CYCLE)

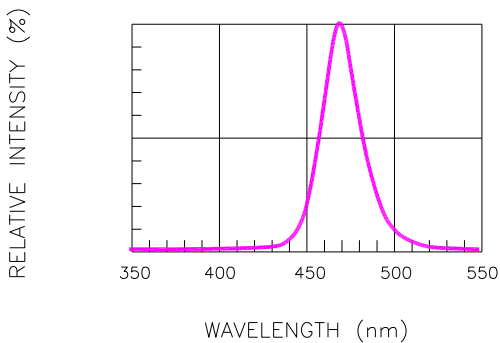


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

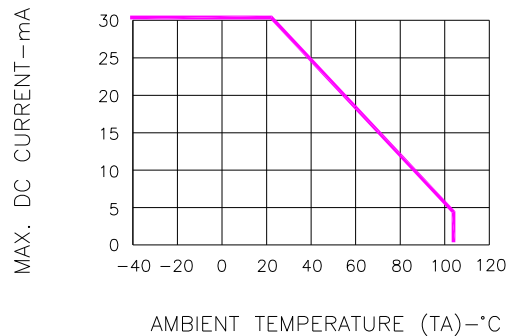


Fig.6 MAX. ALLOWABLE DC CURRENT



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**SOLDERING CONDITIONS – LAMP TYPE LED**

● **SMT REFLOW SOLDERING INSTRUCTIONS**

SMT Soldering Profile  
 Pb free reflow 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.

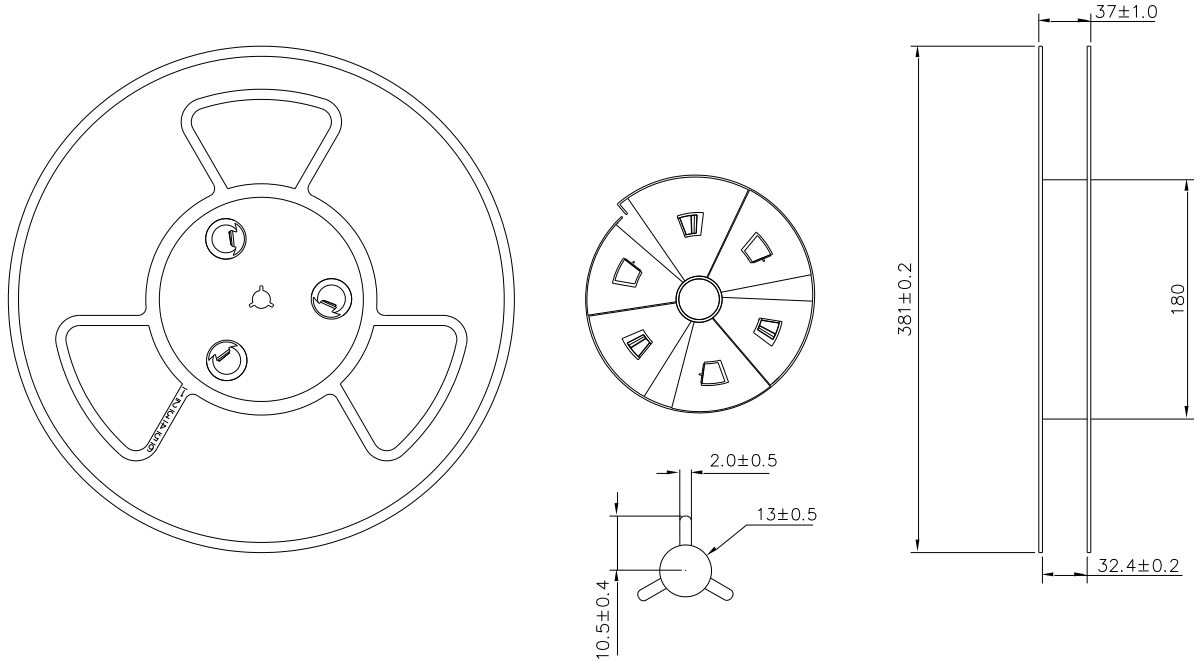
● **REWORK**

- Customer must finish rework within 5 sec. under 260 °C.
- The head of soldering iron cannot touch copper foil.

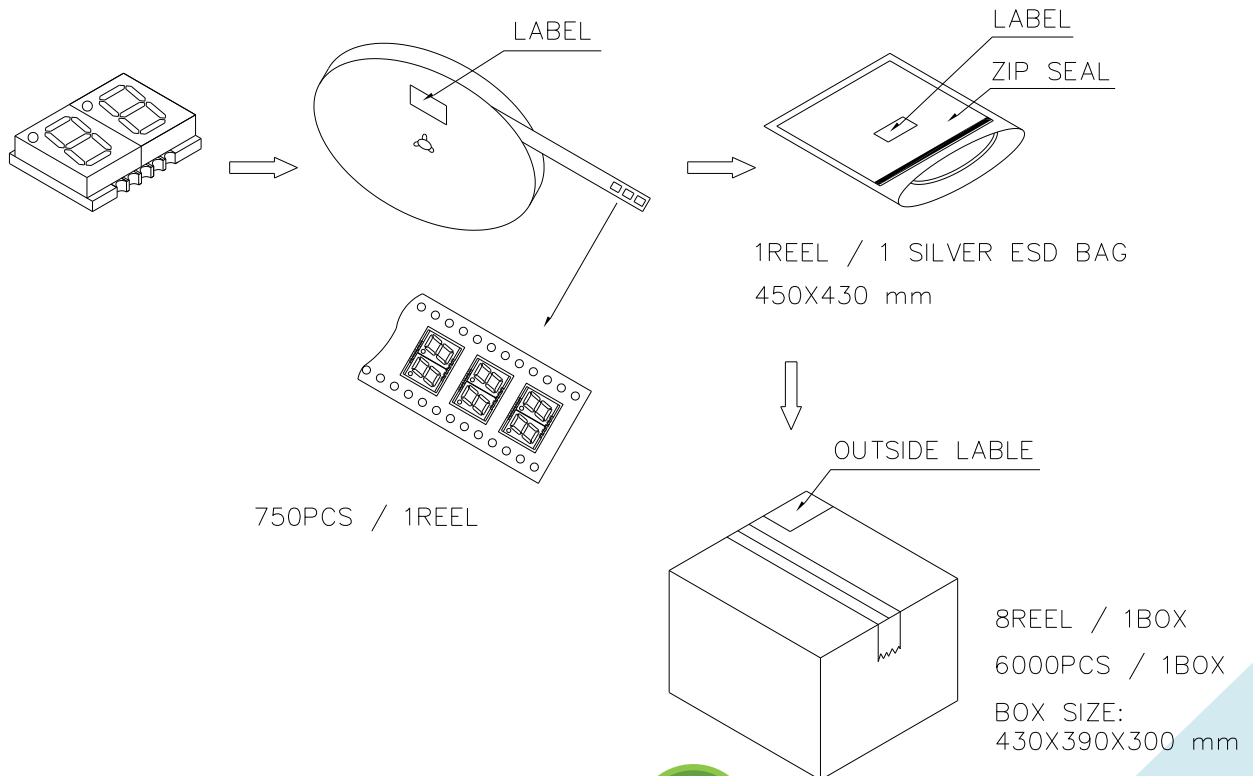


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## DIMENSIONS OF TAPE (Unit: mm)



## PACKAGING SPECIFICATION



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