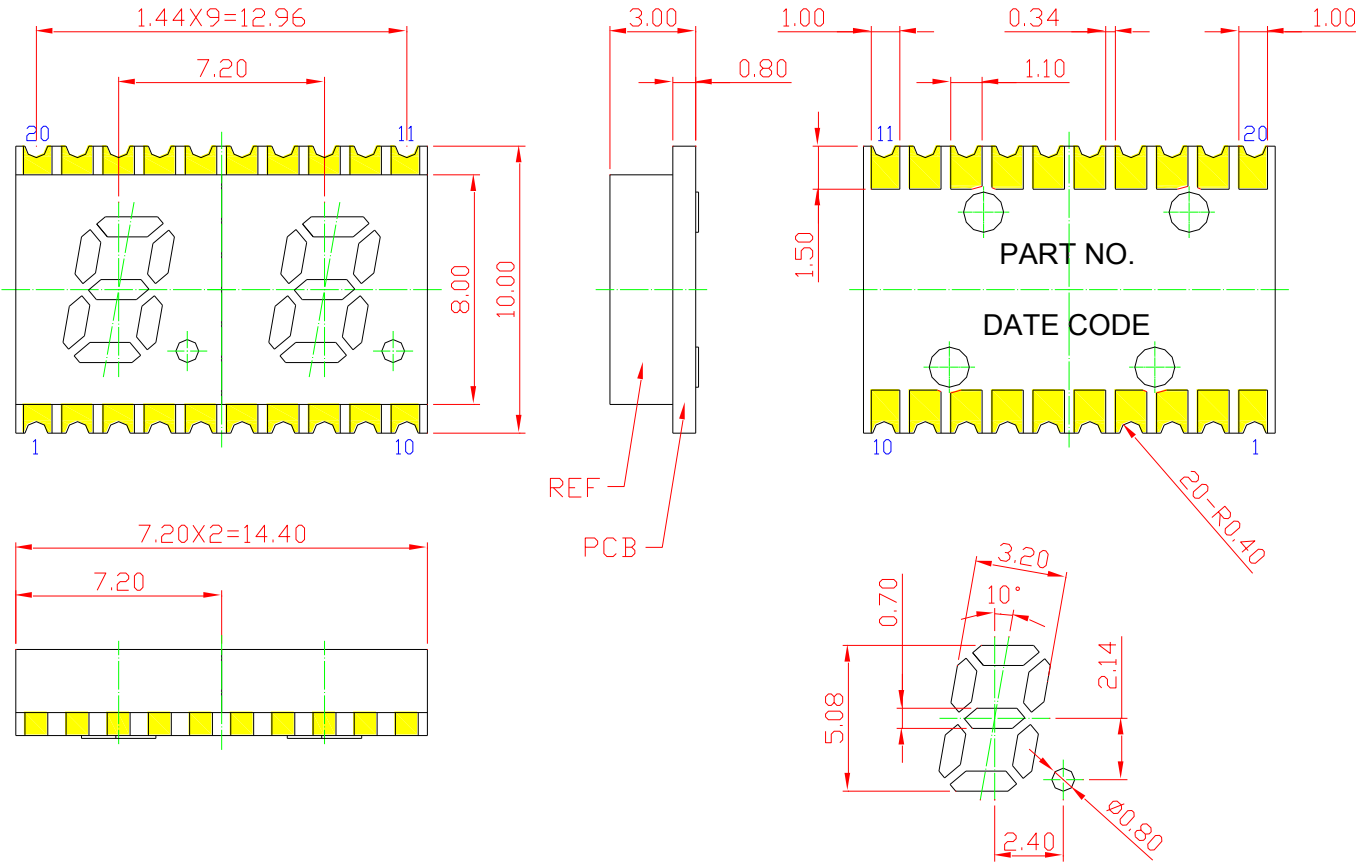


## SPECIFICATIONS SDDA20R2W

### OUTLINES DIMENSIONS



The technical drawings illustrate the dimensions of the SDDA20R2W LED package. The top view shows a rectangular package with a total width of 12.96 mm (1.44 mm x 9) and a height of 10.00 mm. The distance between the centers of the two LED chips is 7.20 mm. The side view shows a package height of 3.00 mm, with a 0.80 mm offset from the top edge. The lens view shows a lens diameter of 3.20 mm with a 10-degree angle, a lens height of 2.14 mm, and a base diameter of 2.40 mm. The package includes a reference (REF) and a PCB mounting area. The top surface is marked with 'PART NO.' and 'DATE CODE'.

**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.

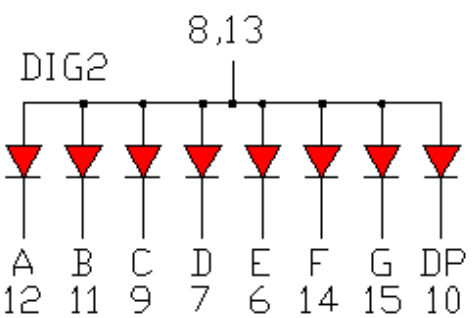
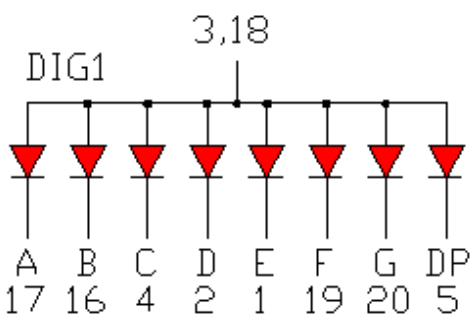
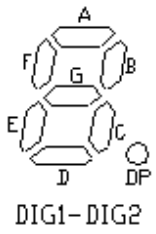
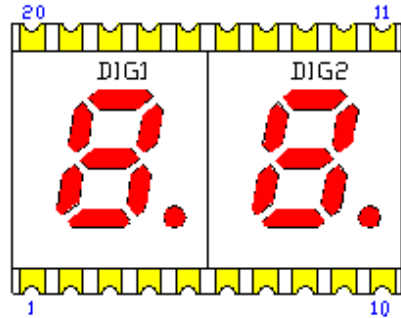
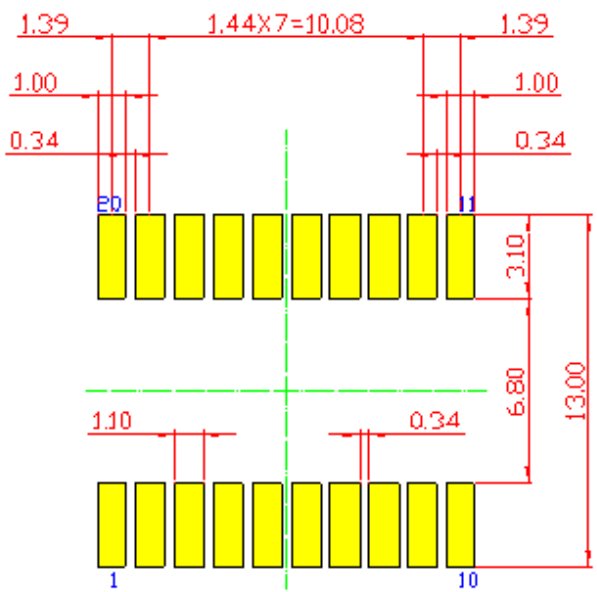
Part Number	Chip Material	Color of Emission	Lens Type	Description
SDDA20R2W	InGaAlP	Red	White Segment	Common Anode



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## TYPICAL INTERNAL EQUIVALENT CIRCUIT

Recommended Soldering Pattern



(Common Anode)



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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	-40~+105	°C
Storage Temperature Range	TSTG	-40~+105	°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	-	22	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.0	2.6	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Dominant Wavelength	λd	IF = 20mA	-	625	-	nm
Peak Wavelength	Δp	IF = 20mA	-	632	-	nm



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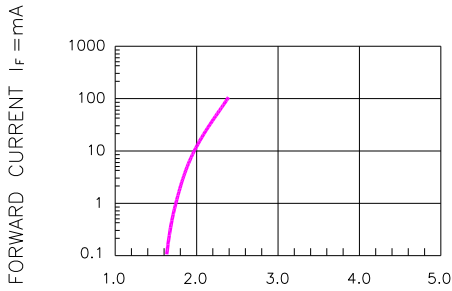
**OPTICAL CHARACTERISTIC CURVES**
**Typical Electro-optical Characteristic Curves  
(25 °C Free Air Temperature Unless Otherwise Specified)**


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

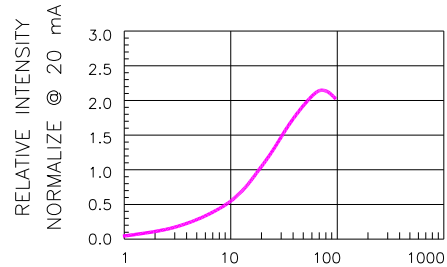


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

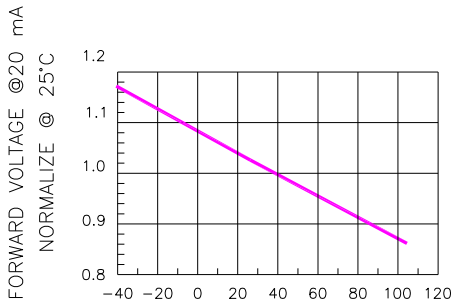


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

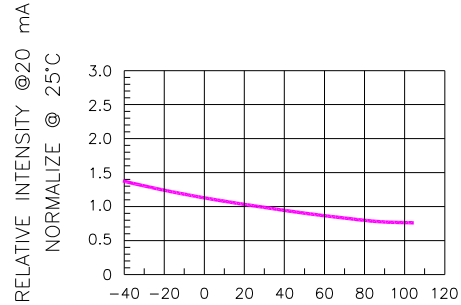


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

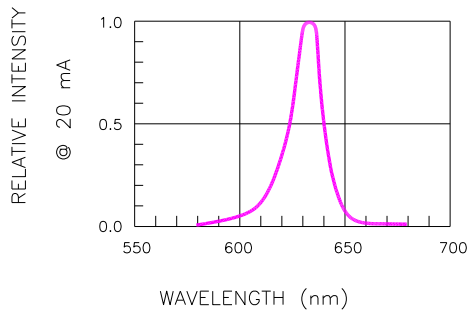


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

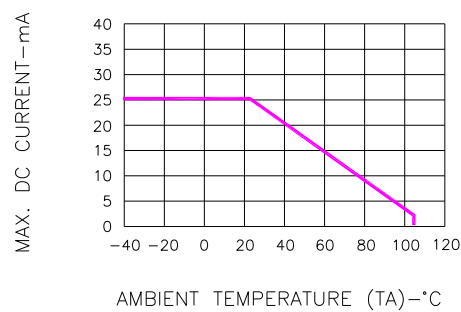


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

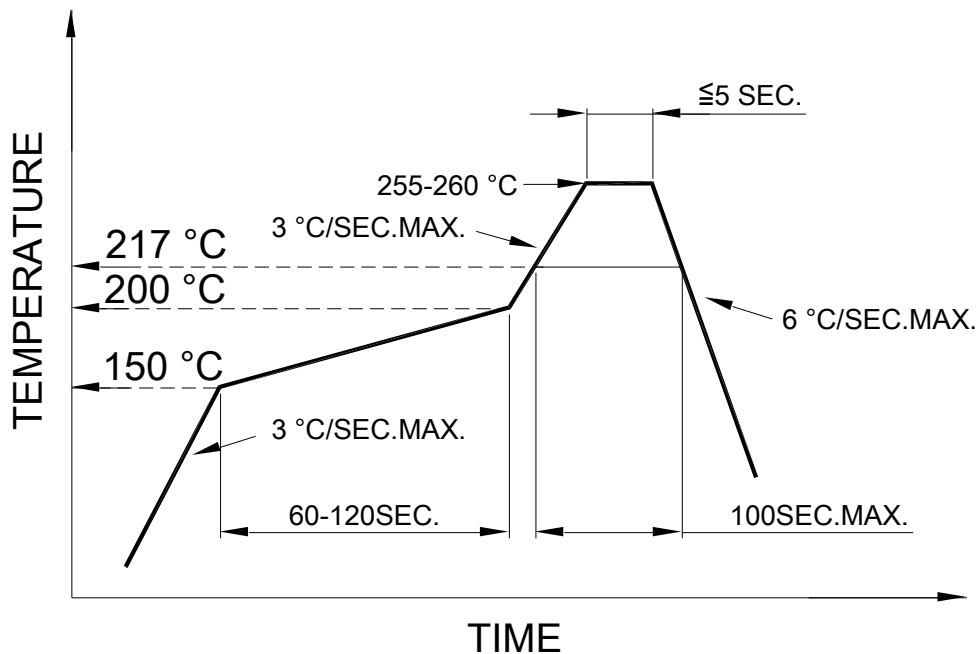


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**SOLDERING CONDITIONS – DISPLAY TYPE LED**
**● RECOMMEND SOLDERING PROFILE**

SMT Soldering Profile

Pb free reflow soldering Profile


**● SOLDERING IRON**

Basic specification :  $\leq 4$  seconds 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.



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