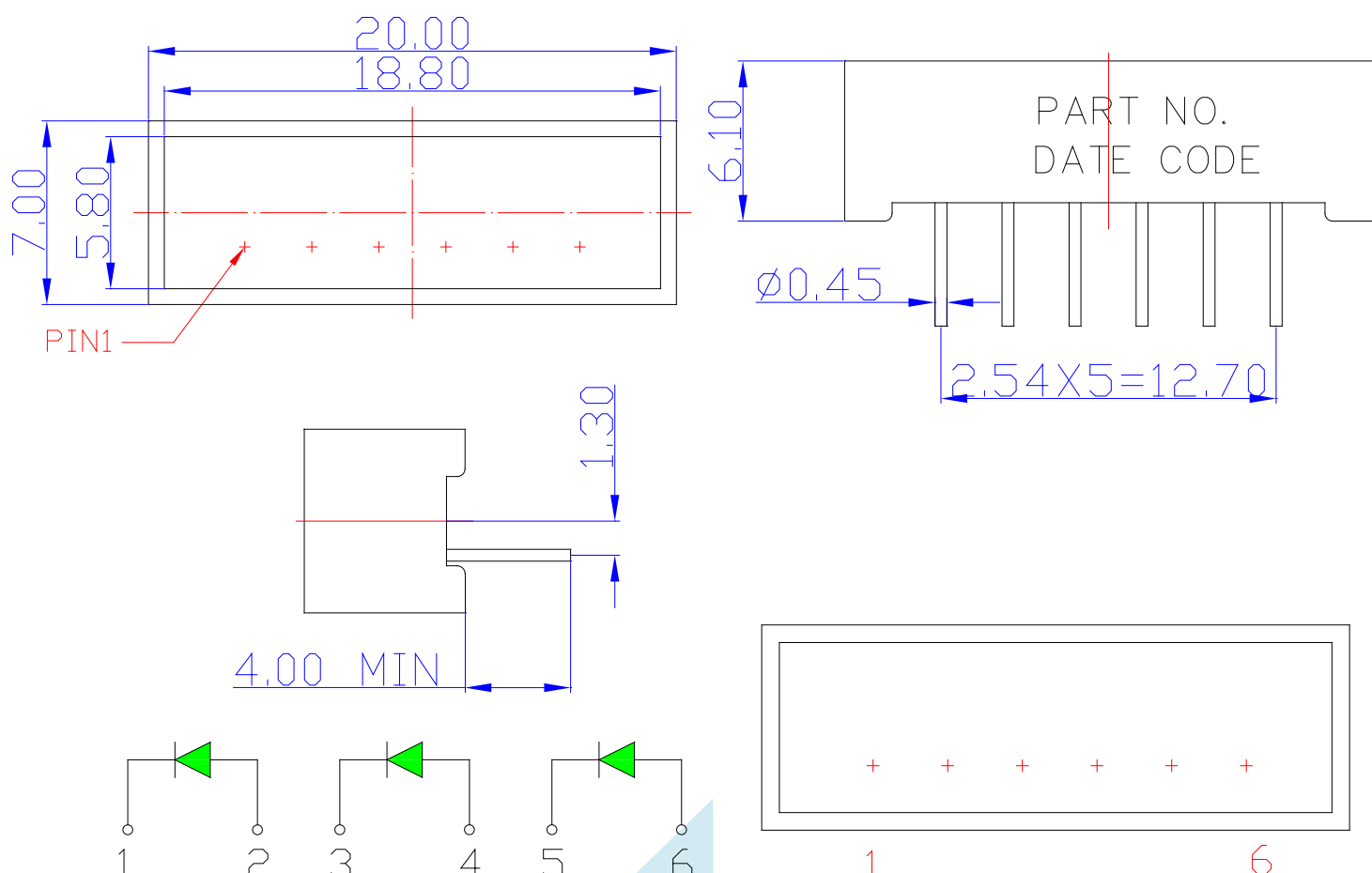


## SPECIFICATIONS CDL83GG1W

### OUTLINES DIMENSIONS



The technical drawing includes the following dimensions and features:

- Top View:** Overall length is 20.00 mm, with an inner length of 18.80 mm. The total width is 7.00 mm, and the inner width is 5.80 mm. A central horizontal line is marked with six red '+' symbols. A red arrow points to the first '+' symbol, labeled "PIN1".
- Side View:** The package height is 6.10 mm. The bottom edge features six pins with a diameter of  $\phi 0.45$  mm. The total width of the pin array is  $2.54 \times 5 = 12.70$  mm. The top surface is labeled "PART NO." and "DATE CODE".
- Pin Detail View:** Shows a cross-section of the package with a height of 1.30 mm and a minimum width of 4.00 mm.
- Pin Configuration:** Three circuit diagrams show the internal connections for pins 1-2, 3-4, and 5-6. Pins 1, 3, and 5 are connected to the anode (triangle symbol), while pins 2, 4, and 6 are connected to the cathode (line symbol).
- Pin Array:** A rectangular area containing six red '+' symbols, with pins 1 and 6 labeled at the bottom corners.

**Notes:**

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

Part Number	Chip Material	Color of Emission	Lens Type	Description
CDL83GG1W	GaP	Green	White Segment	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 per dice	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	-	8	-	mcd
Forward Voltage	VF	IF = 20mA	-	2.2	2.6	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Peak Wavelength	λp	IF = 20mA	-	557	-	nm
Dominant Wavelength	λd	IF = 20mA	-	560	-	nm
Spectral Line half-width	Δλ	IF = 20mA	-	25	-	nm



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## OPTICAL CHARACTERISTIC CURVES

(25 °C Free Air Temperature Unless Otherwise Specified)

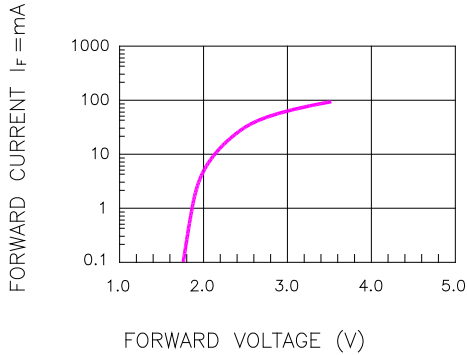


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

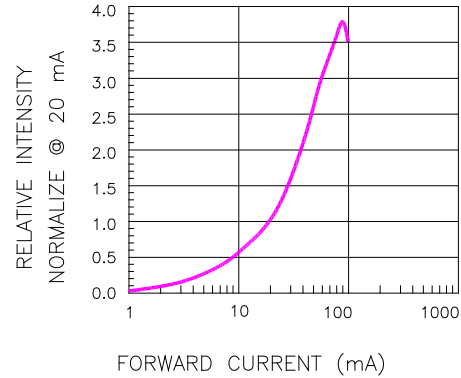


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

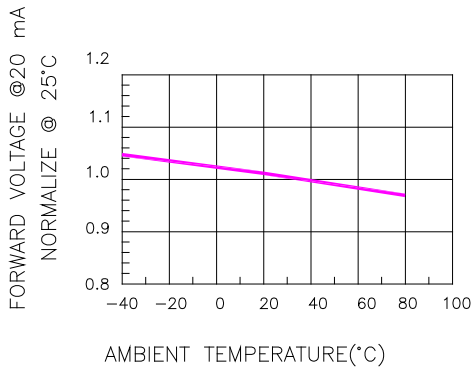


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

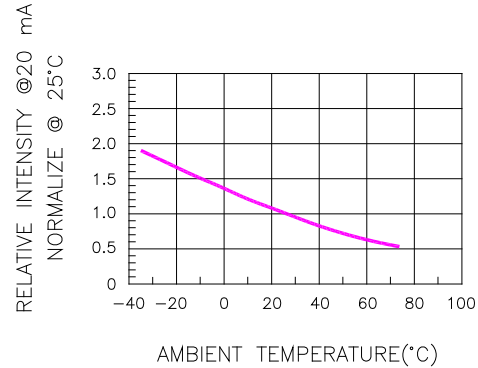


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

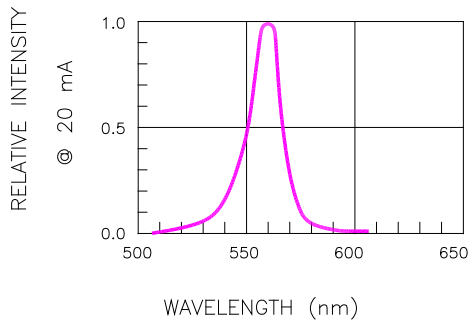


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

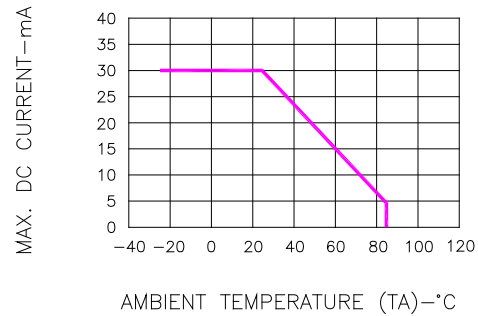


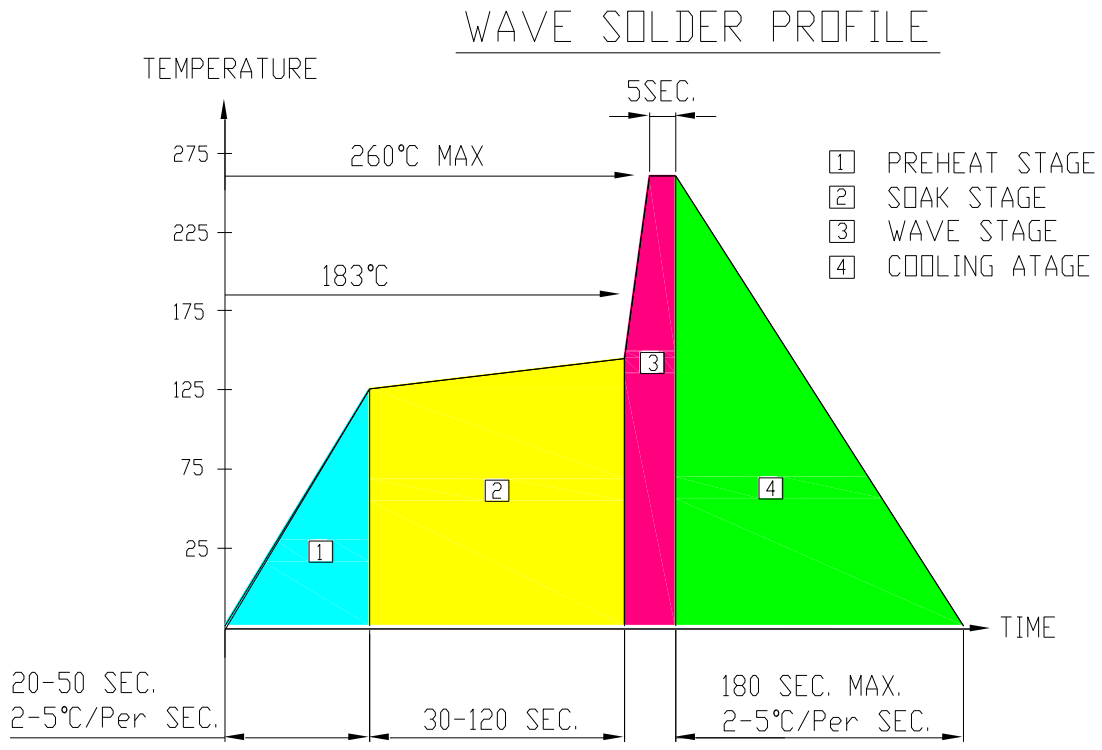
Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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.



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