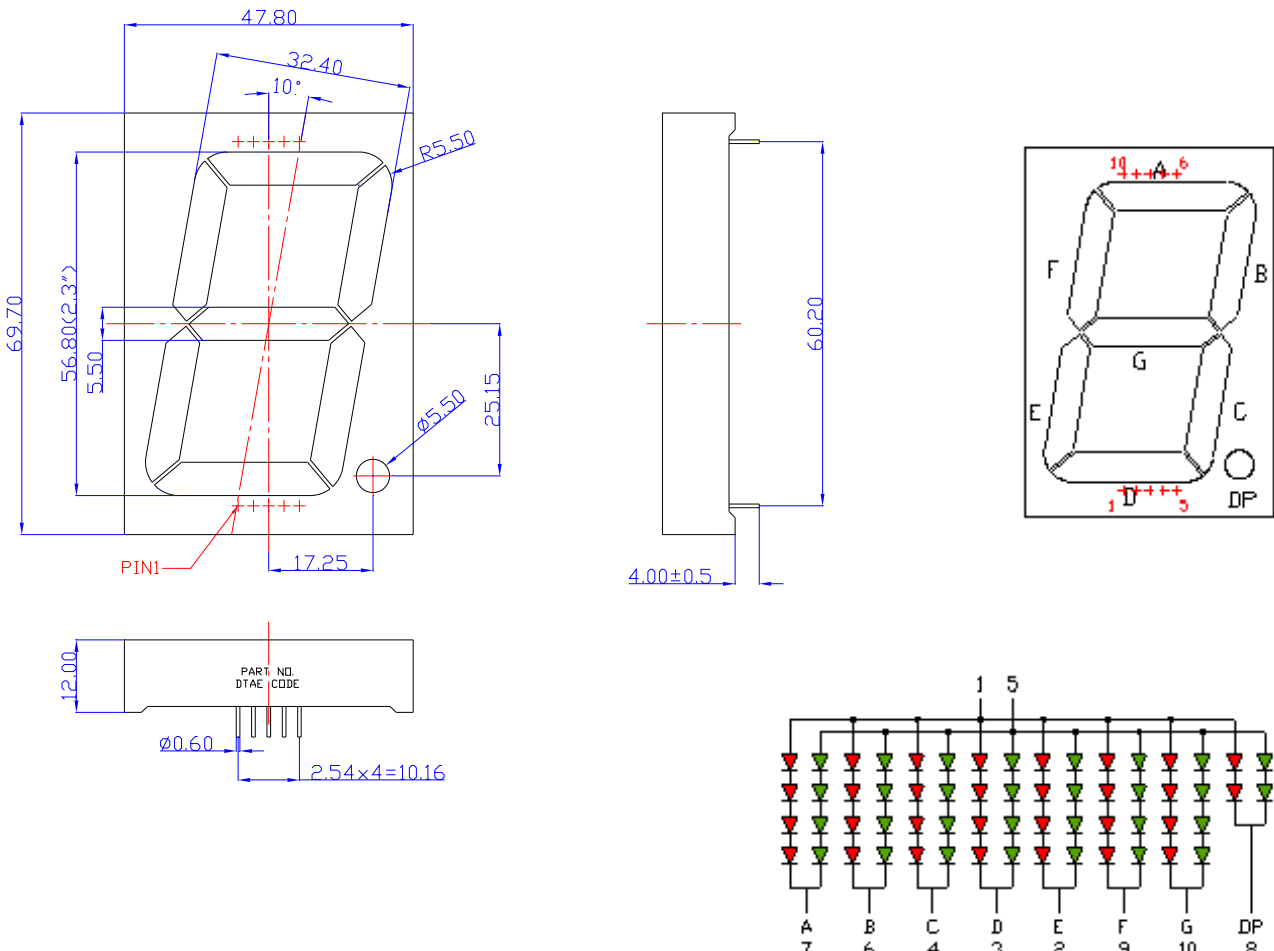


SPECIFICATIONS **CDSA23R2G2W**

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
CDSA23R2G2W	InGaAlP	Red	White Segment	Common Anode
	InGaAlP	Green		



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ABSOLUTE MAXIMUM RATINGS - RED (InGaAlP)
(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	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 - RED (InGaAlP)
(TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 10mA	-	60	-	mcd
Forward Voltage (DP)	VF	IF = 20mA	-	(4.0) 8.0	(5.2) 10.4	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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ABSOLUTE MAXIMUM RATINGS - GREEN (InGaAlP) (TA=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	PD	85	mW
Pulse Forward Current	IFP	120	mA
Continuous Forward Current	IF	30	mA
Reverse Voltage	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 - TRUE GREEN (InGaN) (TA=25°C)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	IV	IF = 10mA	-	50	-	mcd
Forward Voltage (DP)	VF	IF = 20mA	-	(4.0) 8.0	(5.2) 10.4	V
Reverse Leakage Current	IR	VR = 5V	-	-	10	µA
Peak Wavelength	λP	IF = 20mA	-	573	-	nm
Dominant Wavelength	λD	IF = 20mA	566	571	576	nm
Spectral Radiation Bandwidth	Δλ	IF = 20mA	-	20	-	nm



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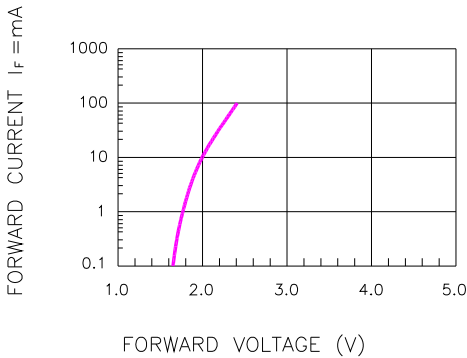
OPTICAL CHARACTERISTIC CURVES - RED
**Typical Electro-optical Characteristic Curves
(25 °C Free Air Temperature Unless Otherwise Specified)**


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

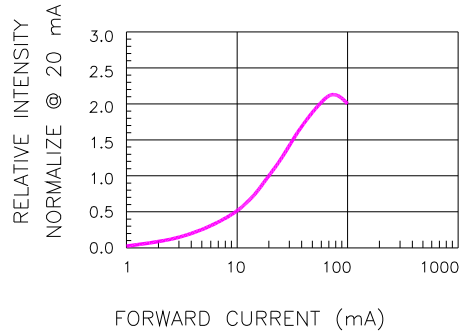


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

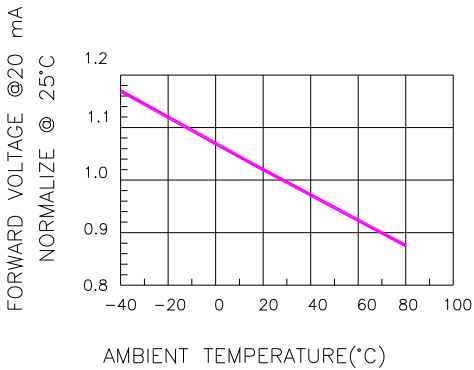


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

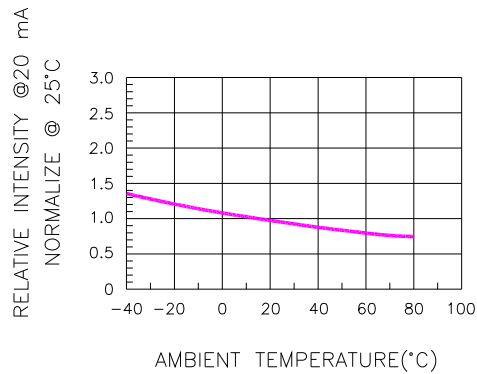


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

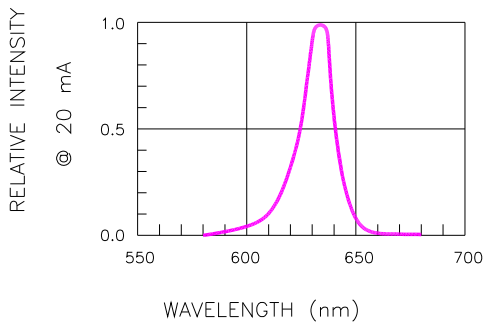


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

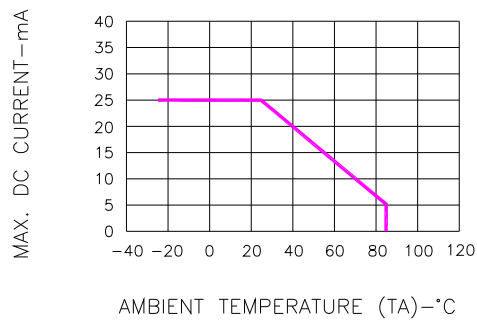


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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OPTICAL CHARACTERISTIC CURVES - GREEN

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

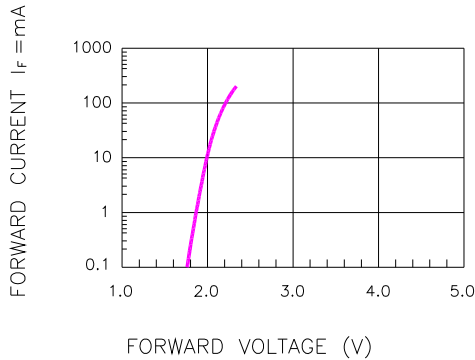


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

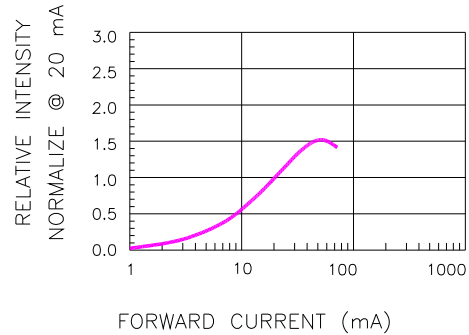


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

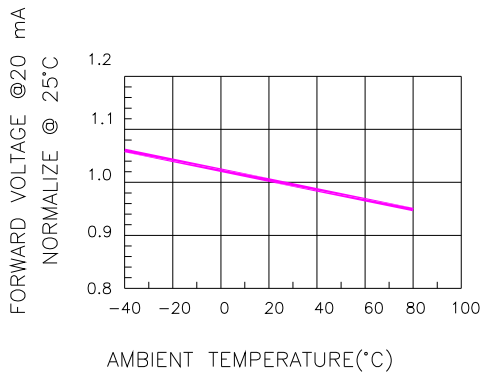


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

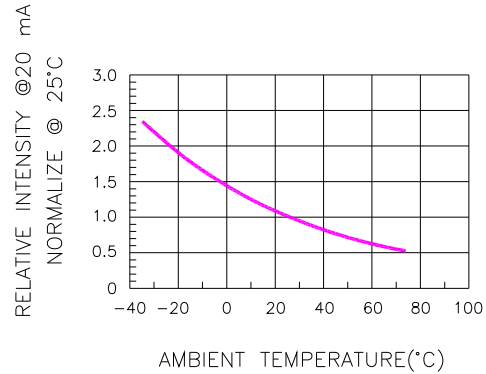


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

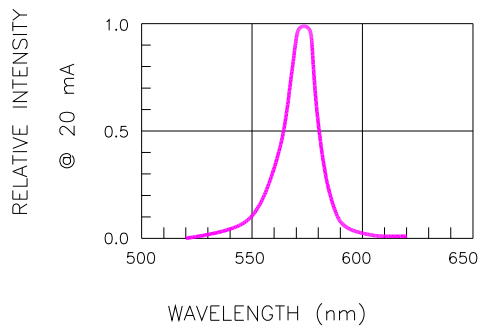


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

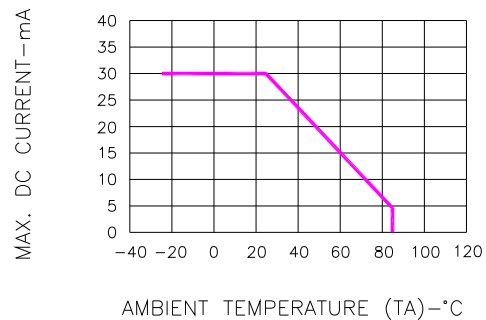


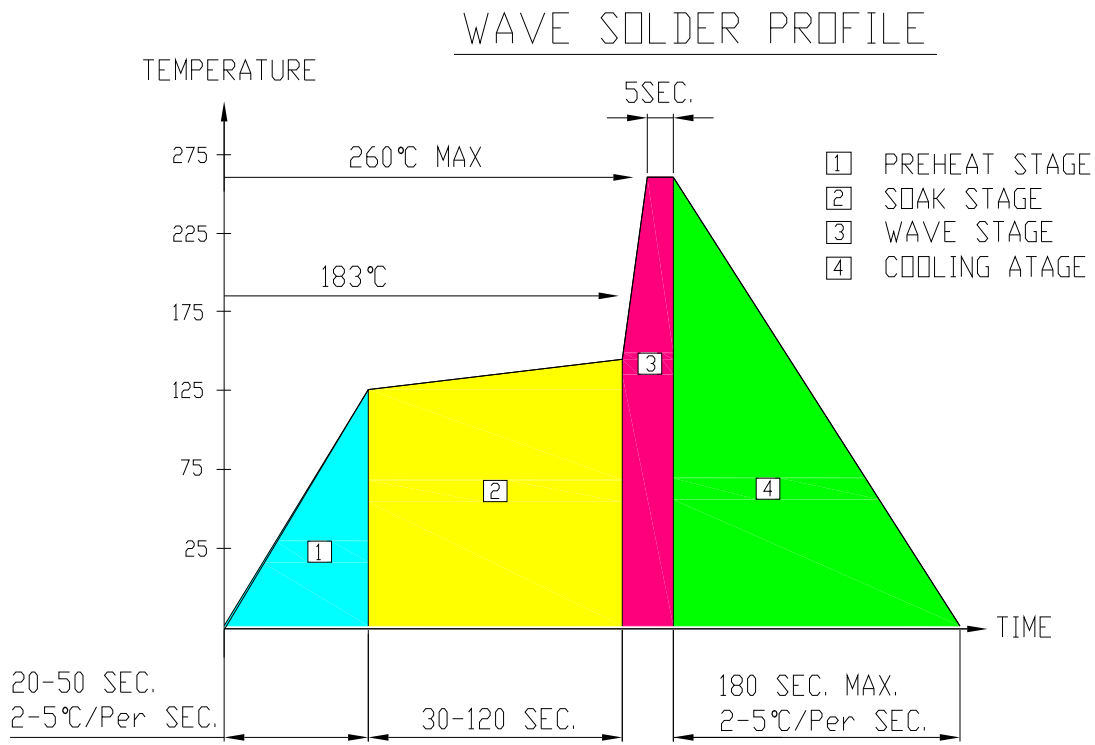
Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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RECOMMENDED SOLDERING PROFILE

● RECOMMEND SOLDERING PROFILE



● SOLDERING IRON

Basic spec is ≤ 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 ≤ 4 sec under 245°C.



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