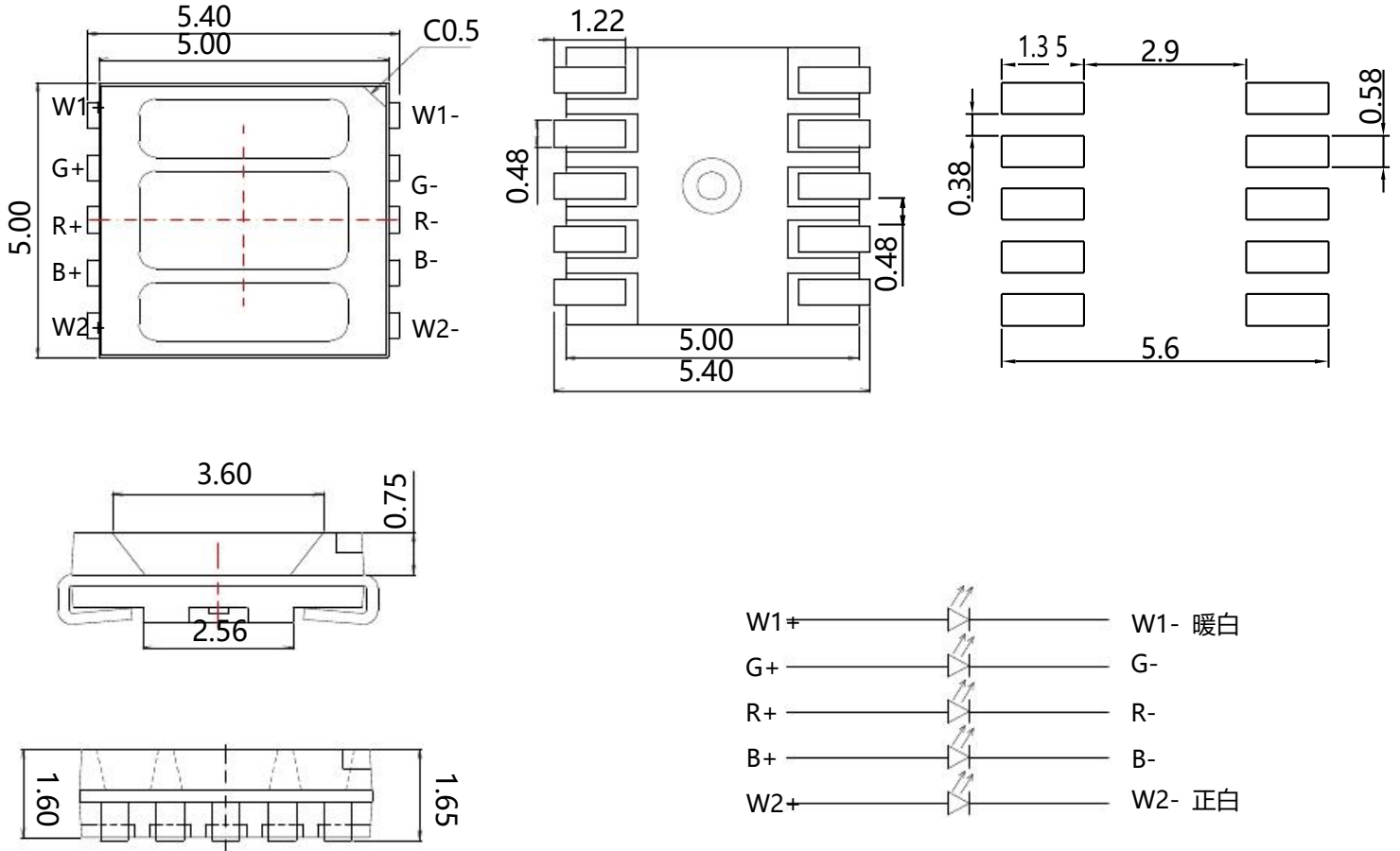


SPECIFICATION
CSPF1919RGBWC
PACKAGE OUTLINES


- 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	Viewing Angle
CSPF1919RGBWC	InGaAlP	Red	Water Clear	120°
	InGaN	True Green	Water Clear	120°
	InGaN	Blue	Water Clear	120°
	InGaN	White	Yellow Diffused	120°



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ABSOLUTE MAXIMUM RATINGS
(TA=25°C)

Parameter	Symbol	Max Rating		Unit
		RGB	White	
Forward Current	IF	30	40	mA
Reverse Voltage	VR	5	5	V
Power Dissipation	Pd	500	500	mW
Operating Temperature Range	TOP	-40~+85		°C
Storage Temperature Range	TSTG	-40~+100		°C
Peak Pulsing Current (tp ≤ 10 μ S, duty cycle = 0.005)	IFP	80	80	mA
Soldering Temperature	TSOL	Max 260°C for 5 sec Max		



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OPTICAL-ELECTRICAL CHARACTERISTICS
(TA=25°C)

Parameter	Symbol	Test Condition	Color	Value			Unit
				Min	Typ	Max	
Luminous Intensity	Iv	IF = 20mA	Red	600	900	-	mcd
			Green	1200	1800	-	
			Blue	320	530	-	
			2400K	8	10.5	-	lm
			6500k	10.5	12	-	lm
Forward Voltage	VF	IF = 20mA	Red	-	2.0	2.35	V
			Green	-	3.1	3.3	
			Blue	-	3.2	3.4	
			2400k	-	2.9	3.0	
			6500k	-	2.9	3.0	
Viewing Angle at 50% Iv	2θ1/2	IF = 20mA	-	-	120	-	Deg
Dominant Wavelength	λD	IF = 20mA	Red	-	606	-	nm
			Green	-	525	-	
			Blue	-	470	-	
			2400k	-	2400	-	k
			6500k	-	6500	-	k
Color Rendering Index	CRI	IF = 20mA	80			-	-

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

*Tolerance of forward voltage is +/- 0.05V

*Tolerance of luminous intensity +/- 1nm



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TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

Fig.1-Forward Voltage Vs. Forward Current

伏安特性曲线

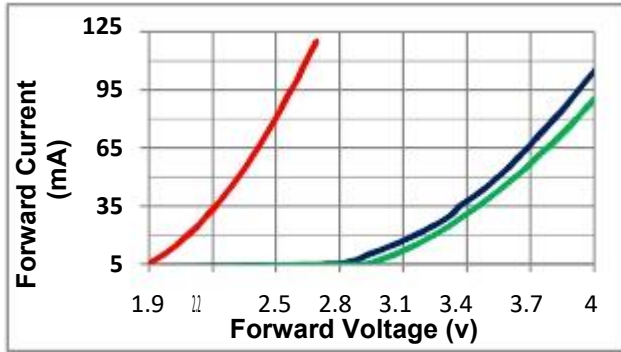


Fig.2-Forward Current Vs. Relative Intensity

正向电流与相对光强特性曲线

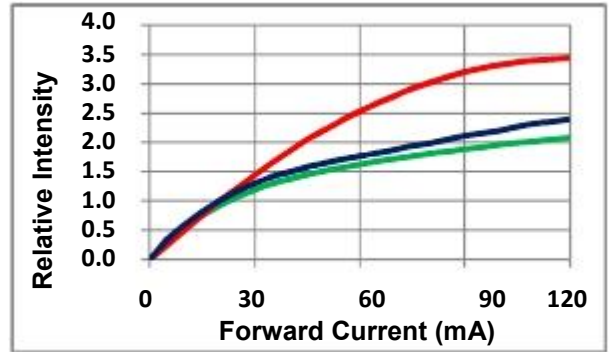


Fig.3-Temperature Vs. Relative Intensity

环境温度与相对光强特性曲线

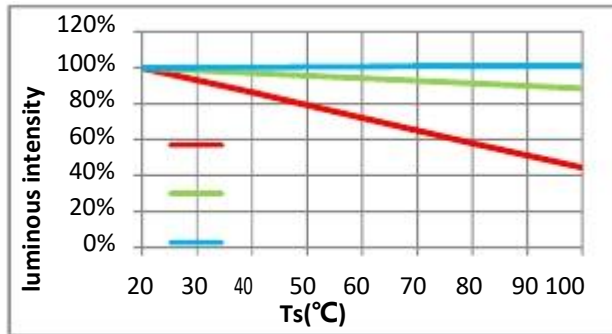


Fig.4- Spectrum Distribution

光谱分布特性曲线

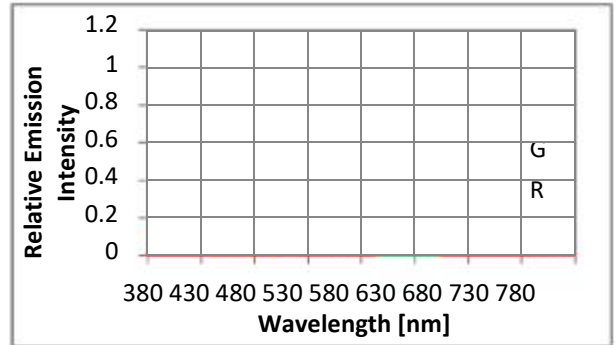


Fig.5-Forward Voltage Vs. Temperature

电压与温度特性曲线

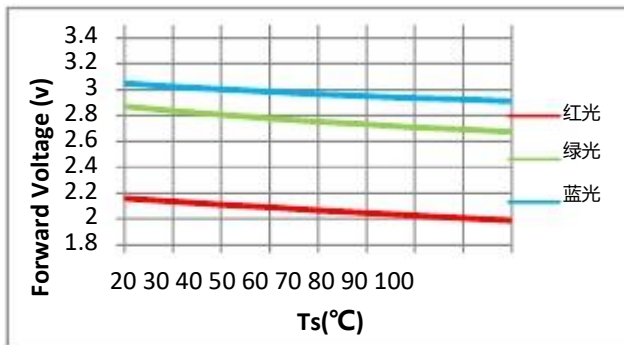
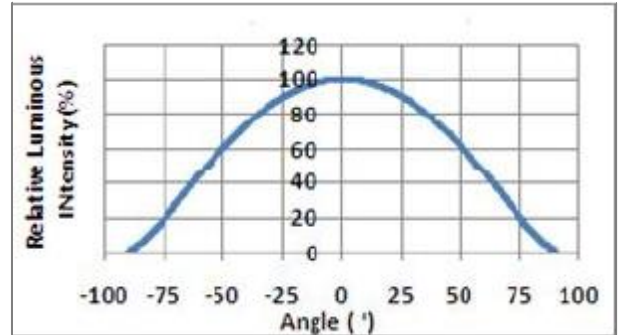


Fig.6-Radiation diagram

辐射特性曲线



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TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (WHITE)

Fig.1-Forward Voltage Vs. Forward Current
伏安特性曲线

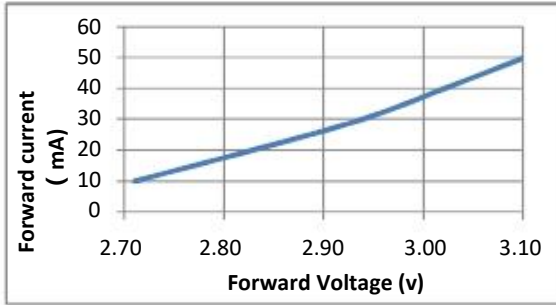


Fig.2-Forward Current Vs. Relative Intensity
正向电流与相对光强特性曲线

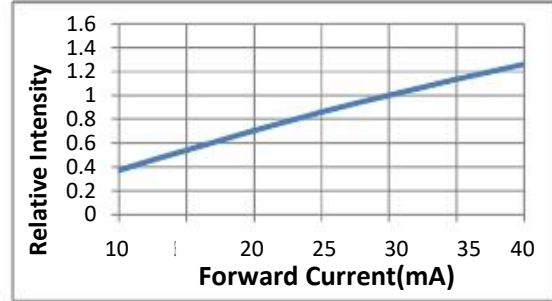


Fig.3- Pin Temperature Vs. Relative Intensity
引脚温度与相对光强特性曲线

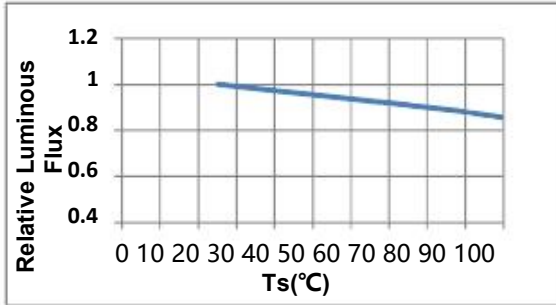


Fig.4-Pin Temperature Vs. Forward Current
引脚温度与正向电流特性曲线

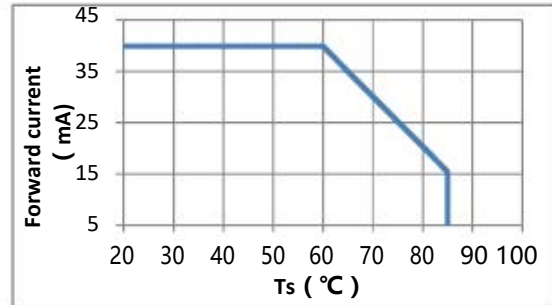


Fig.5-Forward Voltage Vs.Pin Temperature
电压与引脚温度特性曲线

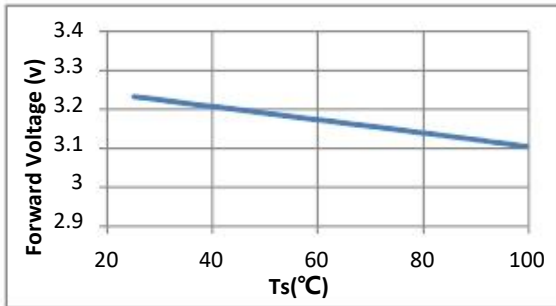


Fig.6-Radiation diagram
辐射特性曲线

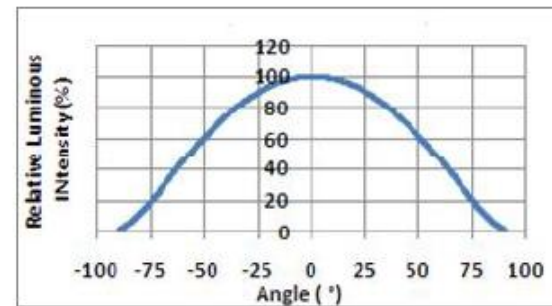
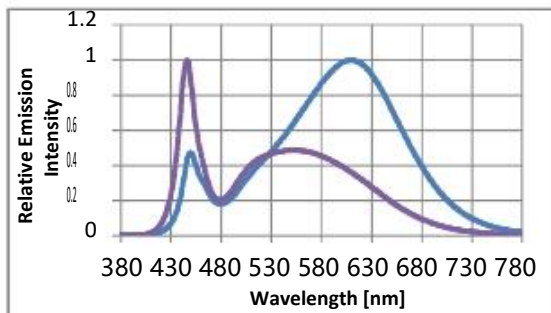


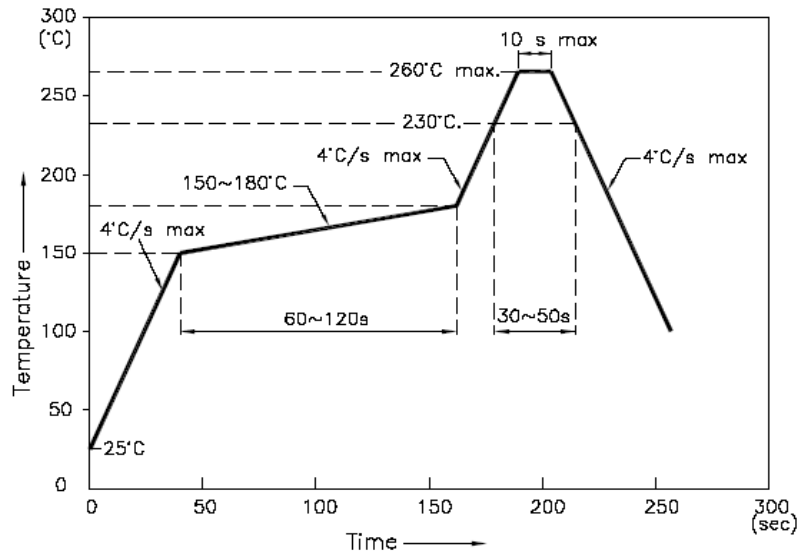
Fig.7- Spectrum Distribution
光谱分布特性曲线



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SOLDERING CONDITIONS

- **Reflow Temp/Time**



Notes:

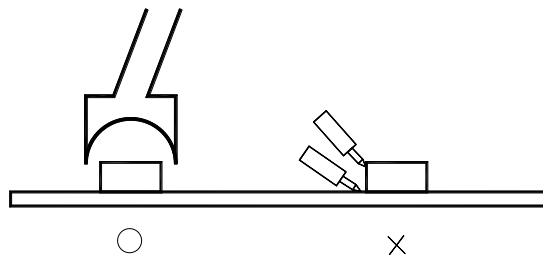
1. We recommend the reflow temperature 245°C (±5°C). The maximum soldering temperature should be limited to 260°C
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Soldering iron

- Basic spec is ≤ 5sec when 260°C. If temperature is higher, time should be shorter (+10°C → -1sec). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 230°C.

Rework

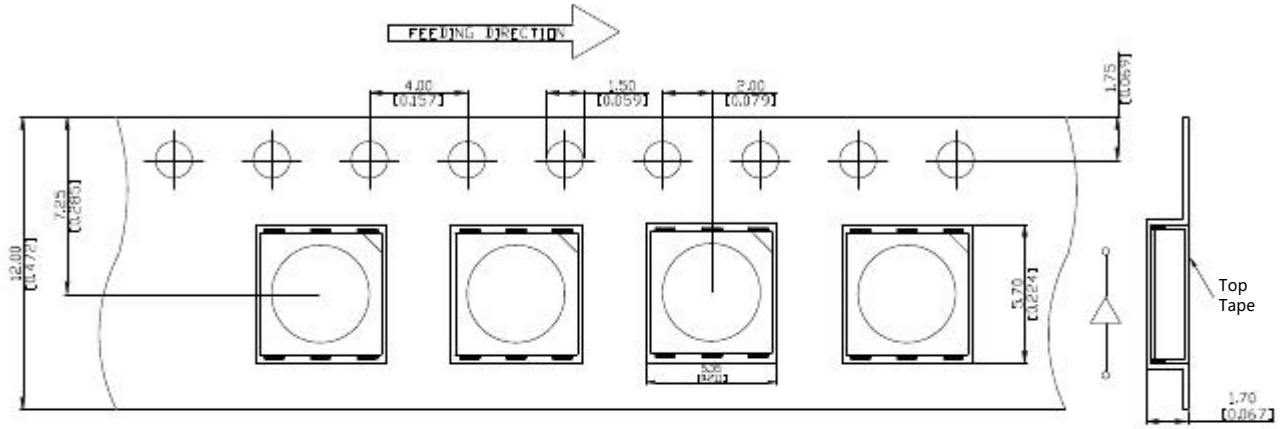
1. Customer must finish rework within 5 seconds under 260°C
2. Head of iron cannot touch copper foil
3. Twin-head type is preferred



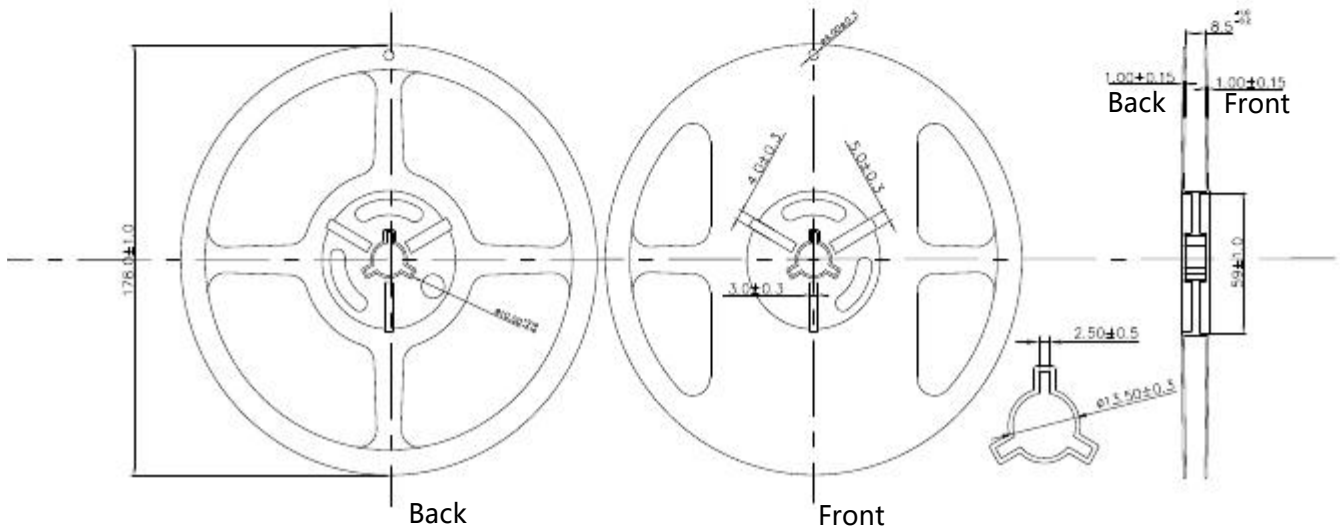
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REEL PACKAGING

Carrier Tape Dimensions 载带尺寸



Reel Dimension 卷盘尺寸



RoHS Compliant
Lead Free

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