

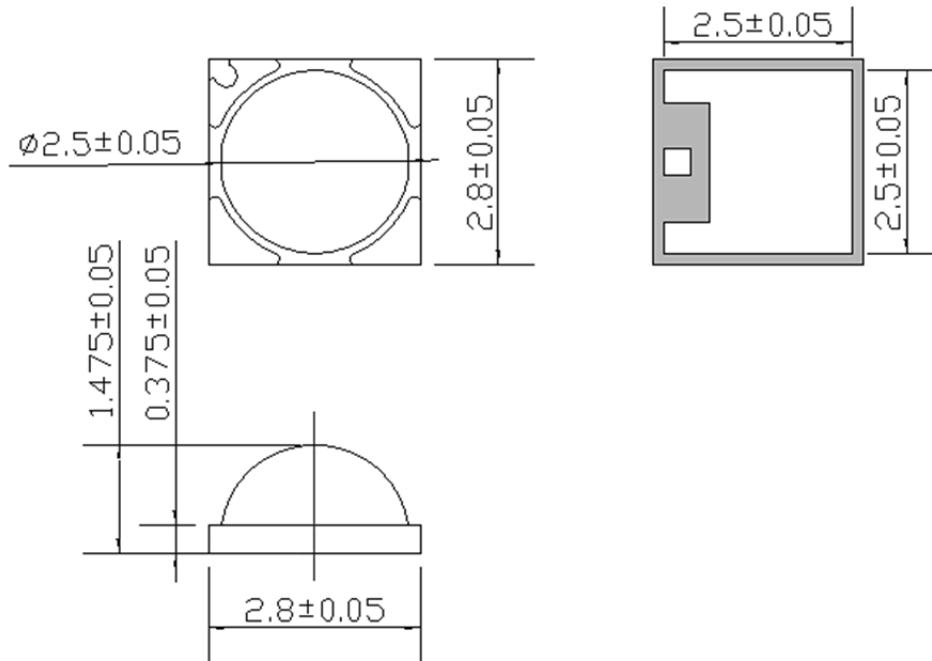


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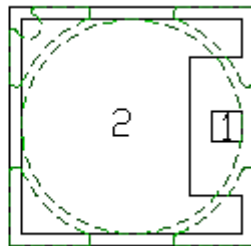
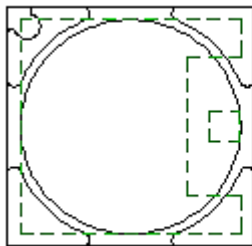
L990D-MEC

2.8 x 2.8 x 1.5 mm Dome Lens Red Power LED

PACKAGE OUTLINES



PAD CONFIGURATION



PAD	Function
1	Cathode
2	Anode, Thermal

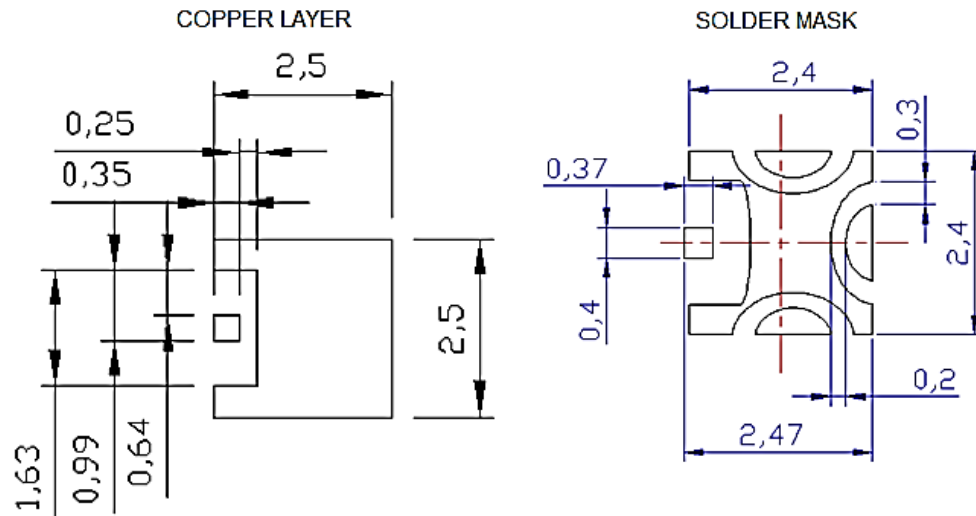


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RECOMMENDED SOLDER PATTERN





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ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

Parameter	Symbol	Value	Unit
Forward Current	I_F	350	mA
Forward Pulse Current*	I_{FP}	500	mA
Power Dissipation	P_D	1.05	W
Thermal Resistance, Junction-Case	$R_{th, J-C1}$	5	°C/W
Reverse Voltage	V_R	5	V
LED Junction Temperature	T_J	125	°C
Operating Temperature Range	T_{OPR}	-40~+80	°C
Storage Temperature Range	T_{STG}	-40~+120	°C
Soldering Condition	T_{SOL}	260°C for 5 seconds	

*Note: Forward Pulse Current=1/10 Duty Cycle, 400msec Pulse Width

OPTICAL-ELECTRO CHARACTERISTICS

(Ta=25°C)

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Forward Voltage	$I_F=350mA$	V_F	1.83	2.3	3.03	V
Reverse Current		I_R	--	--	100	μA
Luminous Flux		Φ_V	--	50	--	Lm
Dominant Wavelength		λ_D	620	--	630	Nm



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BIN CODE LIST REFERENCE

Item	Bin Code	Symbol	Condition	Min	Max	Unit
Forward Voltage	C	V_F	$I_F=350mA$	1.83	2.07	V
	D			2.07	2.31	
	E			2.31	2.55	
	F			2.55	2.79	
	G			2.79	3.03	
	H			3.03	3.27	
	J			3.27	3.51	
	K			3.51	3.75	
	L			3.75	3.99	
	M			3.99	4.23	
Luminous Flux	B	Φ_V	$I_F=350mA$	10.7	13.9	Lm
	C			13.9	18.1	
	D			18.1	23.5	
	E			23.5	30	
	F			30	40	
	G			40	50	
	H			50	60	
	J			60	70	
	K			70	80	
	L			80	90	
	M			90	100	
	N			100	120	
Radiant Flux	A	Φ_E	$I_F=350mA$	175	225	mW
	B			225	275	
	C			275	350	
	D			350	425	
	E			425	500	

Notes:

1. Forward Voltage measurement allowance is $\pm 0.1V$
2. Luminous flux & radiant flux measurement allowance is $\pm 10\%$

Name	Code	λ Min (Nm)	λ Max (Nm)
Red	R4	620	625
	R5	625	630

Note: Wavelength measurement allowance is $\pm 2nm$



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CHARACTERISTIC DIAGRAM

Fig. Forward Current vs. Forward Voltage

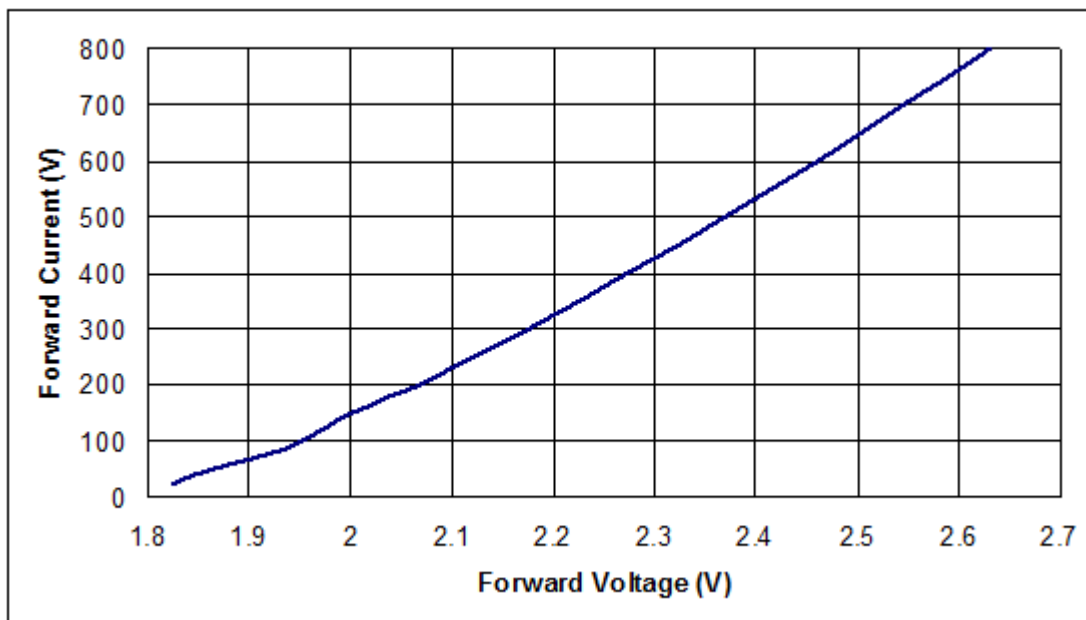
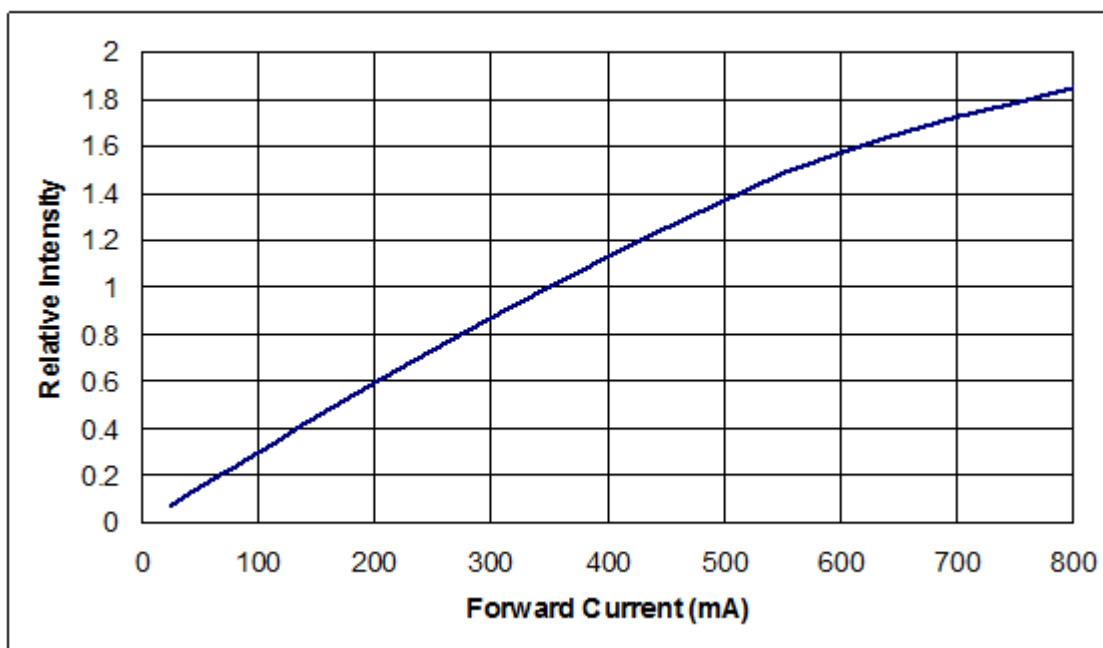


Fig. Relative Intensity vs. Forward Current



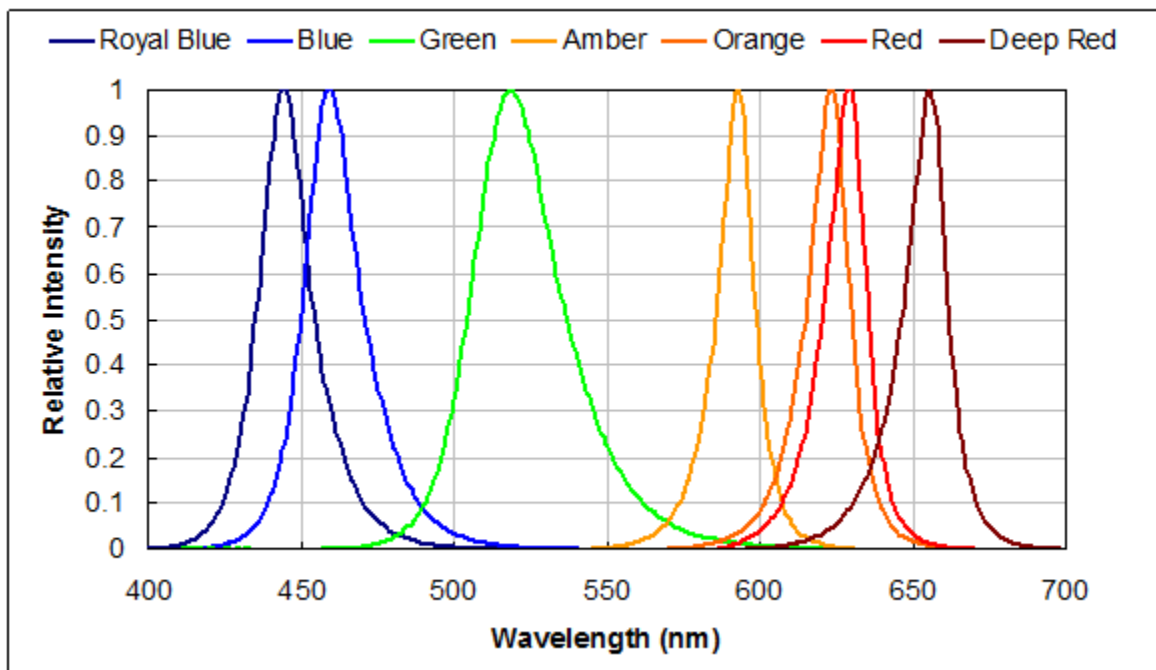


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Fig. Relative Intensity vs. Wavelength.



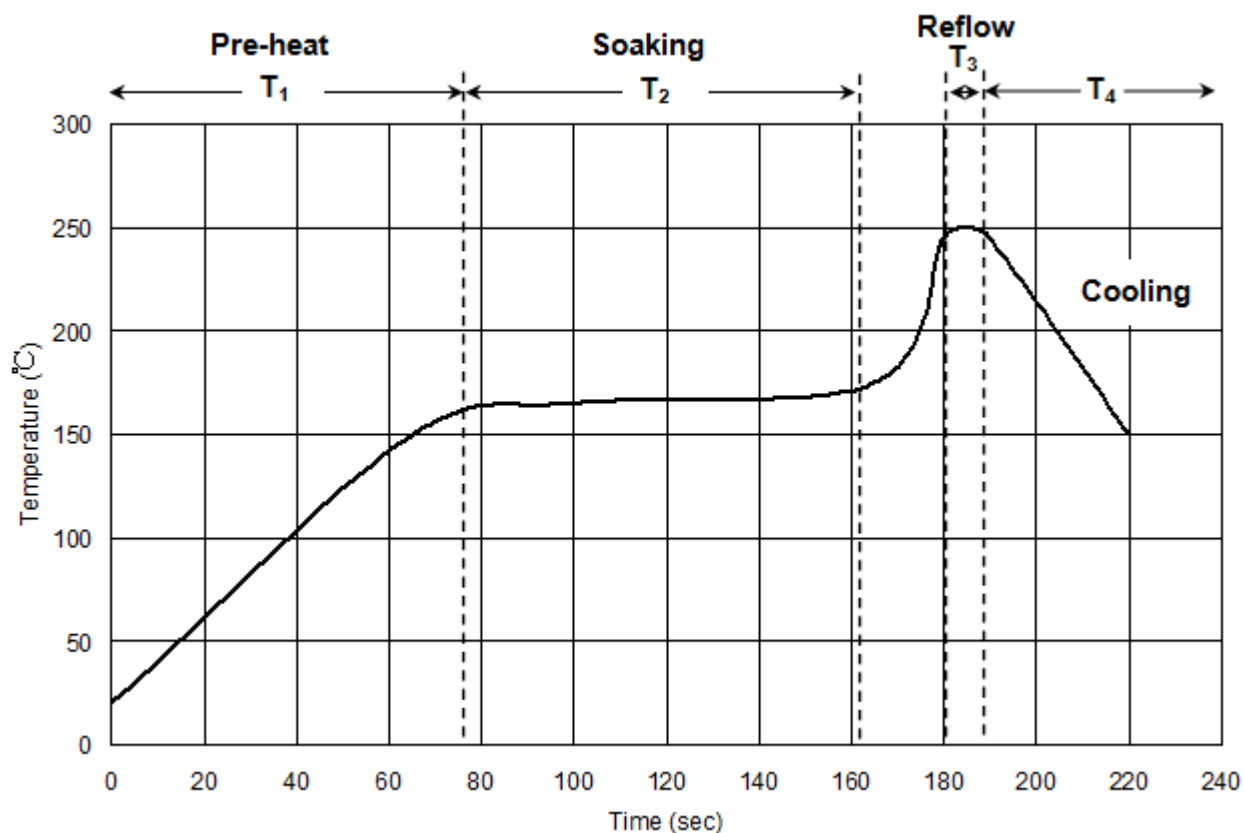


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REFLOW SOLDERING CHARACTERISTICS



T1	Ramp up rate	1.0~3.0 °C/sec
	Pre-heat time	50~80 sec
T2	Soaking temperature	155~185 °C
	Dwell time during soaking	60~120 sec
T3	Reflow temperature	240~250 °C
	Reflow time	Max 10 sec
T4	Ramp up rate during reflow	1.2~2.3 °C/sec
	Cooling	1.0~6.0 °C.sec

Note: suggest using Sn96Ag3Cu0.5 lead free solder

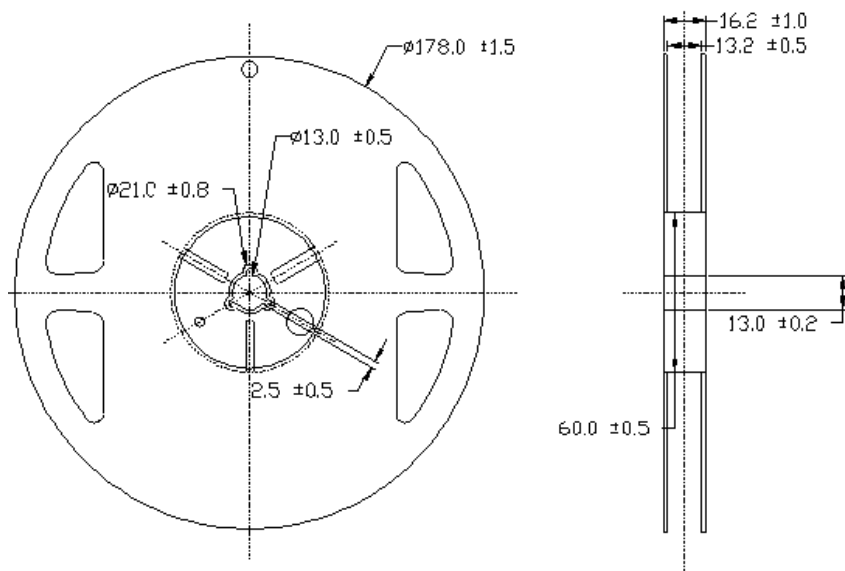
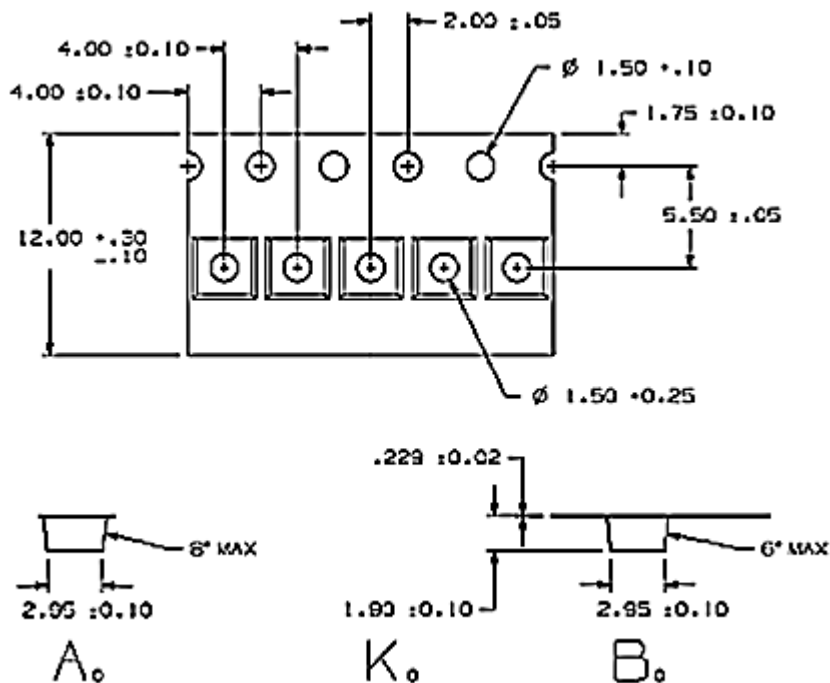


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SHIPPING PACKAGE DIMENSIONS



- Moisture proof bag
- 1 Reel/Bag
- 2000 (Max)/Reel