

ELECTRICAL/OPTICAL CHARACTERISTICS

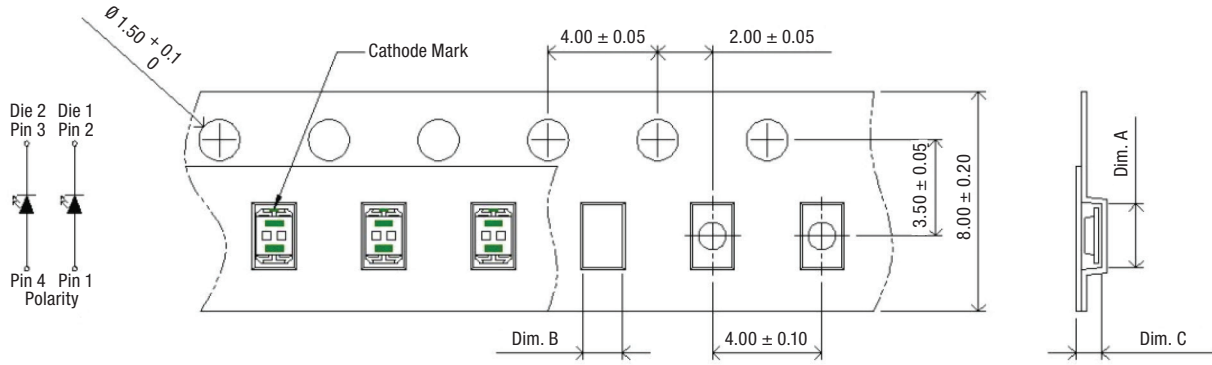
Part Number	Emitted Color	Material	Lens Color	Luminous Intensity			Dominant Wavelength			Forward Voltage			Viewing Angle (°deg.)	Reverse Current Intensity (µA)	LED Die Pin Out
				Min	Typ	Max	Min	Typ	Max	Min	Typ	Max			
				If=20mA										(Ir) VR=5V	
599-1T30-247F	● Yellow-Green	AlGaN	Non-Tinted Diffused	18	–	71.5	567.5	–	576.5	1.6	–	2.4	X=120 Y=118	10	LED Die 1
	● Orange			71.5	–	285	600	–	612	1.6	–	2.4	X=120 Y=125		LED Die 2
599-1T10-247F	● Red	AlGaN		45	–	180	625	–	635	1.6	–	2.4	X=120 Y=118	10	LED Die 1
	● Green	InGaN		112.5	–	360	520	–	535	2.7	–	3.9	X=120 Y=125		LED Die 2
599-1T00-247F	● Red	AlGaN		45	–	180	615	–	635	1.6	–	2.4	X=120 Y=118	10	LED Die 1
	● Blue	InGaN		71.5	–	285	460	–	472	2.7	–	3.9	X=120 Y=125		LED Die 2
599-1T70-247F	● Red	AlGaN		45	–	180	615	–	635	1.6	–	2.4	X=120 Y=118	10	LED Die 1
	● Yellow-Green			28.5	–	112.5	567.5	–	576.5	1.6	–	2.4	X=120 Y=125		LED Die 2
599-1T40-247F	● Yellow	AlGaN		28.5	–	112.5	587	–	594.5	1.6	–	2.4	X=120 Y=125	10	LED Die 1
	● Yellow-Green			71.5	–	226	567.5	–	576.5	1.6	–	2.4	X=120 Y=118		LED Die 2

ABSOLUTE MAXIMUM RATINGS AT TS=25°C

LED Color	Power Dissipation (mW)	Forward Current (mA)	Reverse Voltage (V)	Peak Forward Current *(mA)	Operating Temperature (°C)	Storage Temperature (°C)
● Yellow-Green ● Orange	48	20	5	100	-40 to +85	-40 to +100
● Red ● Green	48 78	20	5	100 80	-40 to +85	-40 to +100
● Red ● Blue	48 78	20	5	100 80	-40 to +85	-40 to +100
● Red ● Yellow-Green	48	20	5	40	-40 to +85	-40 to +100
● Yellow ● Yellow-Green	48	20	5	40	-40 to +85	-40 to +100

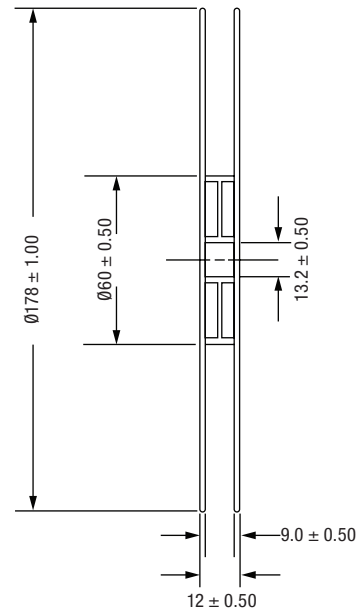
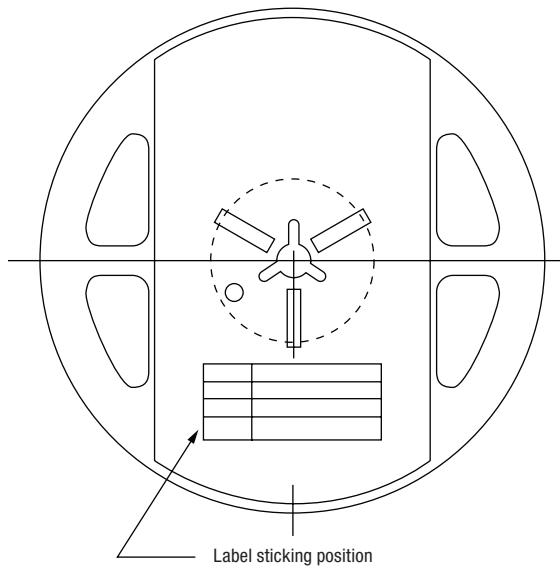
TAPE AND REEL SPECIFICATION

Top View Top Mount



Dim A	Dim B	Dim C	Quantity/Reel
2.30±0.1	1.40±0.1	0.60±0.1	4K

Unit: mm



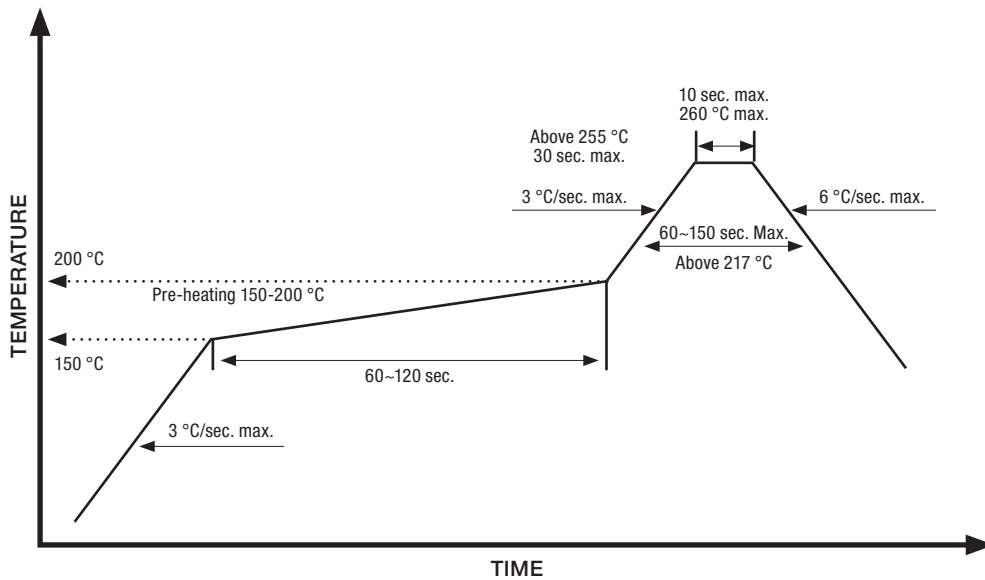
Unit: mm

REFLOW SOLDERING

Recommend soldering paste specifications:

1. Operating temp.: Above 217°C ,60~150 sec.
2. Peak temp.:260°C Max.,10sec Max.
3. Reflow soldering should not be done more than two times.
4. Never attempt next process until the component is cooled down to room temperature after reflow.
5. The recommended reflow soldering profile (measured on the surface of the LED terminal) is as following:

REFLOW SOLDER PROFILE



Mark	Definition	Condition
$T_{S_{max}}$	MAXIMUM OF PRE-HEATING TEMPERATURE	200°C
$T_{S_{min}}$	MINIMUM OF PRE-HEATING TEMPERATURE	150°C
T_S	TIME FORM $T_{S_{min}}$ To $T_{S_{max}}$	60-120 sec
T_L	REFERENCE TEMPERATURE	217°C
t_L	RETENTION TIME FOR T_L	WITHIN 60s
T_P	PEAK TEMPERATURE	260°C
t_p	TIME FOR PEAK TEMPERATURE	WITHIN 10s
DTr/Dt	TEMPERATURE RISING RATE	WITHIN 3°C/sec
DTd/Dt	TEMPERATURE DECREASING RATE	WITHIN 6°C/sec



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