

599 SERIES

MicroLED® SMD LED

Single-Color 0805

2.00 x 1.30 x 0.80mm

MECHANICAL / SPECIFICATIONS

DIMENSIONS:
2.00 x 1.30 x 0.80mm

STANDARD PACKAGING:
4000 pcs on 7in. reel

CERTIFICATIONS & RATINGS

ROHS Compliant

FEATURES & BENEFITS

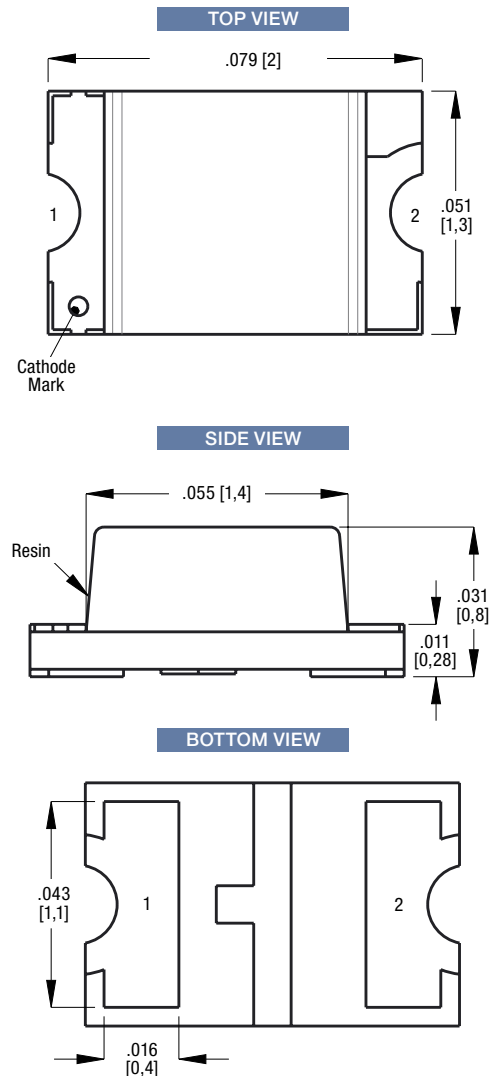
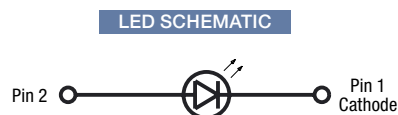
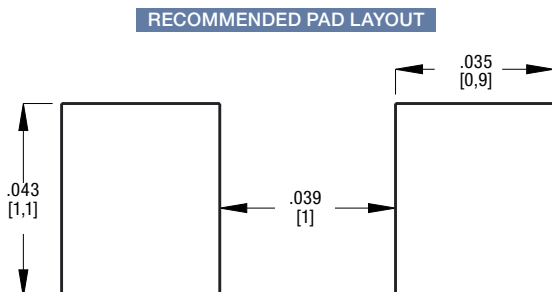
MOISTURE SENSITIVITY LEVEL: 2a

Compatible with Automatic Placement Equipment

COUNTRY OF ORIGIN

Taiwan

DIMENSIONS inches [mm]



ELECTRICAL/OPTICAL CHARACTERISTICS AT Ta=25°C

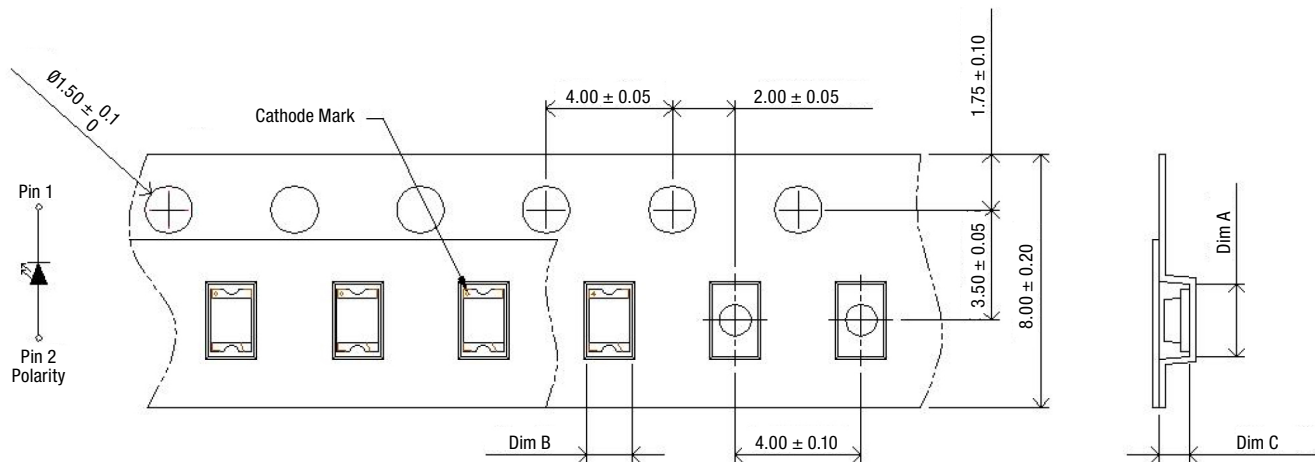
				Luminous Intensity (mcd)			Dominant Wavelength (nm)			Forward Voltage (V)			Viewing Angle (°deg.)	Reverse Current Intensity (μA)
				If=20mA										
Part Number	Emitted Color	Material	Lens Color	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		(Ir) VR=5V
599-1110-147F	● Red	AlGaInP	Non-Tinted, Diffused	45	112	285	615	624	630	1.6	2	2.4	130	10
599-1130-147F	● Orange	AlGaInP	Non-Tinted, Diffused	45	112	285	600	605	612	1.6	2	2.4		10
599-1140-147F	● Yellow	AlGaInP	Non-Tinted, Diffused	45	71	180	584	589	595	1.6	2	2.4		10
599-1160-147F	● Yellow-Green	AlGaInP	Non-Tinted, Diffused	45	71	113	567	571	577	1.6	2.1	2.4		100
599-1180-147F	● Green	InGaN	Non-Tinted, Diffused	112	285	360	520	525	530	2.9	3.3	3.7		100
599-1190-147F	● Blue	InGaN	Non-Tinted, Diffused	45	71	180	464	470	476	2.7	3.3	3.7		10
599-2100-147F	○ White	InGaN	Tinted, Diffused	320	430	630	*x=0.29 y=0.285			2.7	3.3	3.7		10

*Chromaticity Coordinates

ABSOLUTE MAXIMUM RATINGS AT Ta=25°C

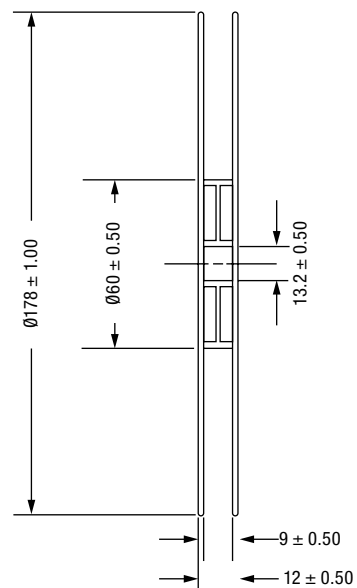
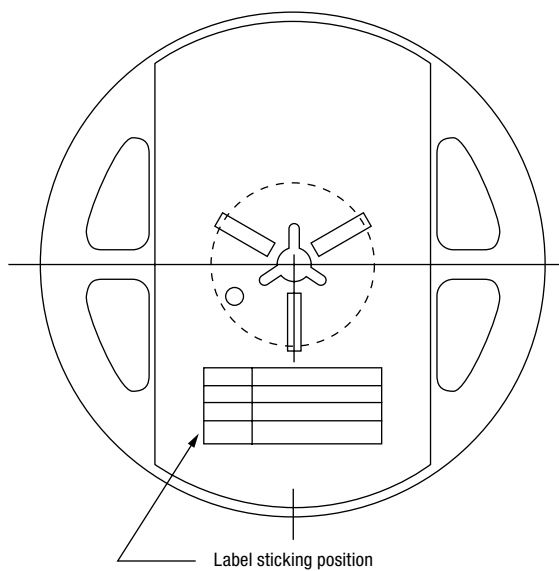
LED Color	Power Dissipation (mW)	Forward Current (mA)	Reverse Voltage (V)	Peak Forward Current *(mA)	Operating Temperature (°C)	Storage Temperature (°C)
● Red	48	20	5	100	-40 to +85	-40 to +100
● Orange	48			100	-40 to +85	-40 to +100
● Yellow	48			100	-40 to +85	-40 to +100
● Yellow-Green	48			80	-40 to +85	-40 to +100
● Green	78			60	-40 to +85	-40 to +100
● Blue	74			80	-40 to +85	-40 to +100
○ White	68			60	-40 to +85	-40 to +100

TAPE AND REEL SPECIFICATION



Dim A	Dim B	Dim C	Quantity/Reel
2.20 ± 0.05	1.42 ± 0.05	0.88 ± 0.05	4K

Unit: mm



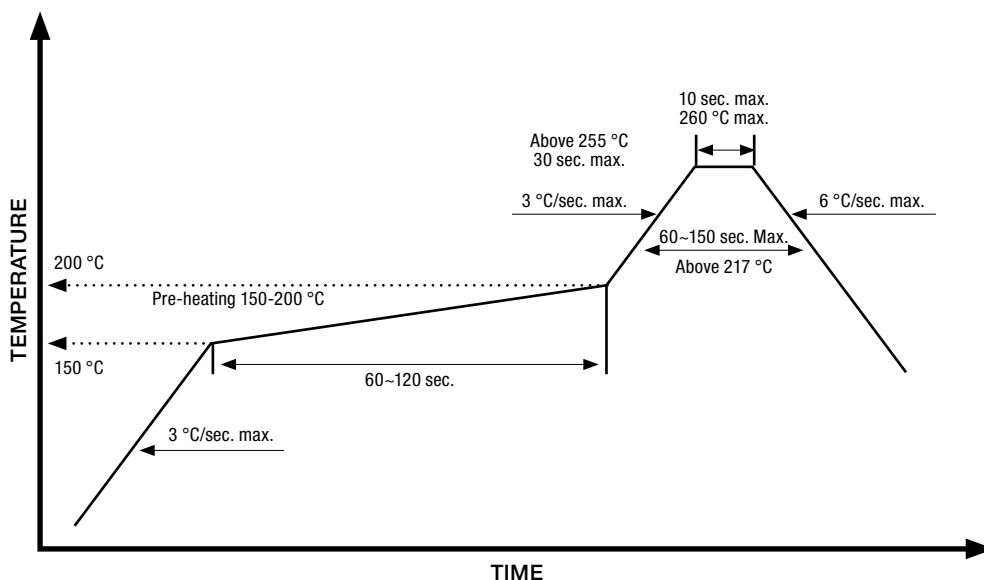
Unit: mm

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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