

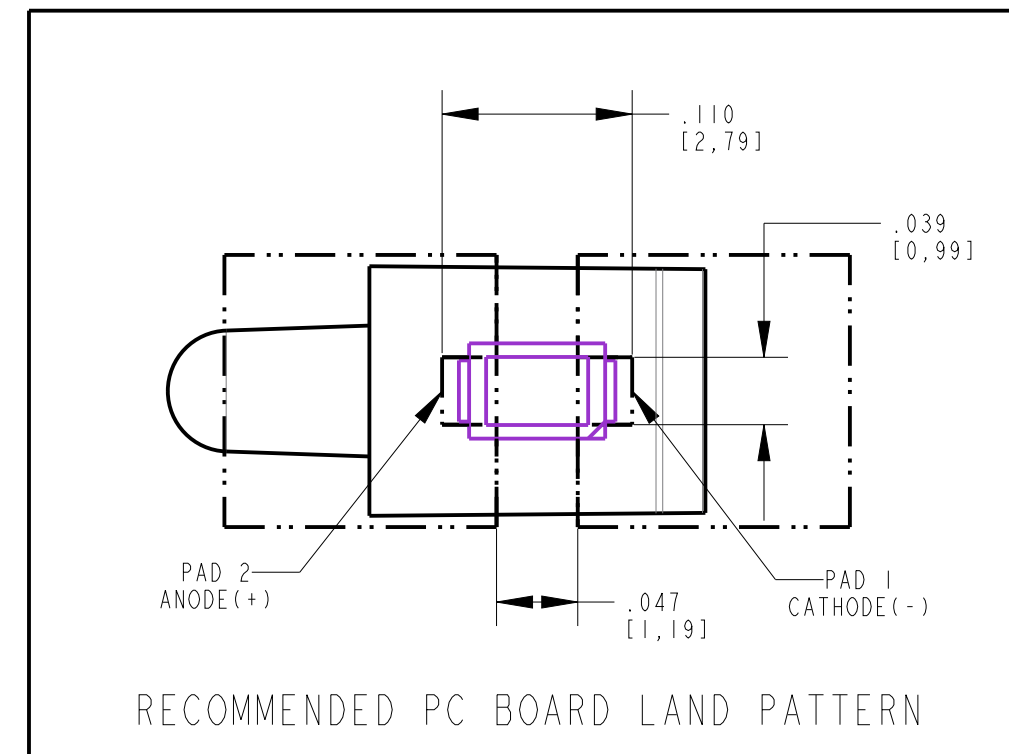
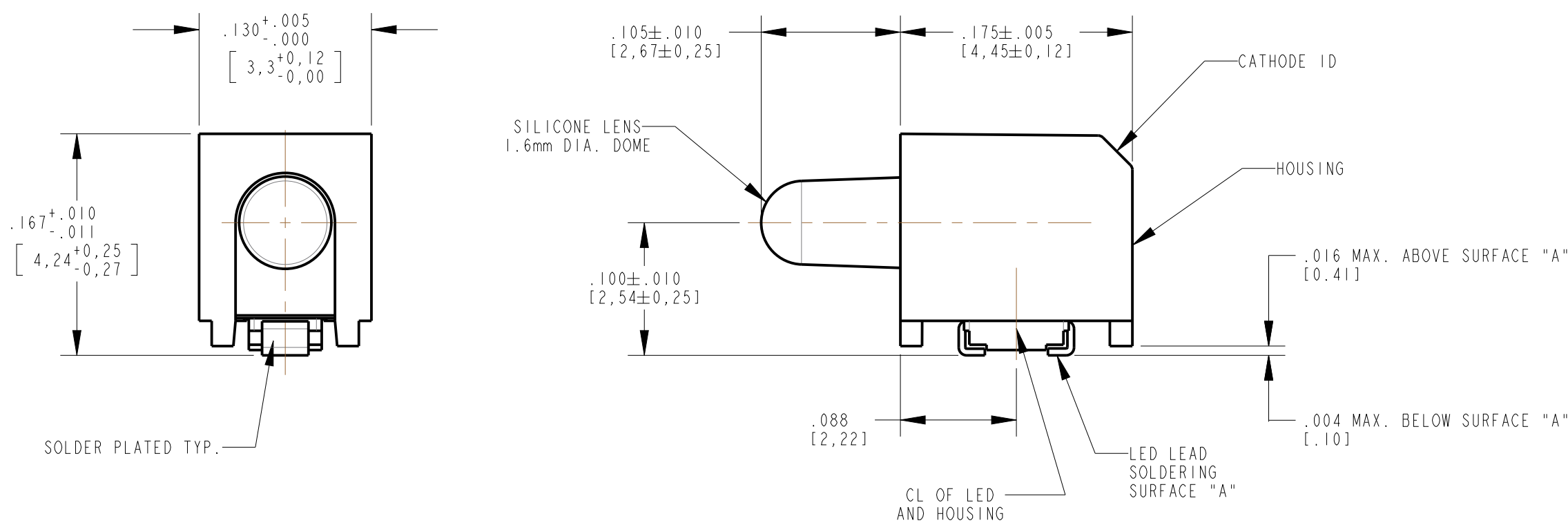
PART NUMBER	LED COLOR	MSL
594-2001-002F	RED	3
594-2001-007F		
594-2001-013F		
594-2501-002F	ORANGE	3
594-2501-007F		
594-2501-013F		
594-2401-002F	YELLOW	3
594-2401-007F		
594-2401-013F		
594-2301-002F	YELGRN	3
594-2301-007F		
594-2301-013F		
594-2901-002F	GREEN	3
594-2901-007F		
594-2901-013F		
594-2804-002F	WHITE - 2MA	2
594-2804-007F		
594-2804-013F		
594-2004-002F	RED - 2MA	2
594-2004-007F		
594-2004-013F		
594-2404-002F	YELLOW - 2MA	2
594-2404-007F		
594-2404-013F		
594-2504-002F	ORANGE - 2MA	2
594-2504-007F		
594-2504-013F		
594-2604-002F	ICE BLUE - 2MA	2
594-2604-007F		
594-2604-013F		

ABSOLUTE MAXIMUM RATINGS AT 25°C FOR 20mA PARTS							
LED COLOR	POWER DISSIPATION (mW)	FORWARD CURRENT (mA)	PEAK FORWARD CURRENT (mA)	REVERSE VOLTAGE (V)	OPERATING TEMPERATURE (°C)	STORAGE TEMPERATURE (°C)	JUNCTION TEMPERATURE (°C)
RED	48	20	100	5	-40 TO +85	-40 TO +100	90
ORANGE	60		80				90
YELLOW	48		100				90
YELLOW GREEN	48		100				90
GREEN	70		100				95

OPERATING CHARACTERISTICS AT 25°C FOR 20mA PARTS											
LED COLOR	IF (mA)	LUMINOUS INTENSITY (mcd)			DOMINANT WAVELENGTH (nm)			REVERSE CURRENT (MAX)	FORWARD VOLTAGE (V)		THERMAL RESISTIVITY (°C/W)
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		TYP.	MAX.	
RED	20		54			625	10µA @ VR=5V	1.8	2.4	290	
ORANGE			38			605		1.8	2.4	290	
YELLOW			48			590		1.8	2.4	290	
YELLOW GREEN			9			570		1.8	2.4	290	
GREEN			312			525		2.8	3.5	110	

OPERATING CHARACTERISTICS AT 25°C 2mA PARTS																
LED COLOR (nm)	TEST CONDITION	CHROMACITY COORDINATE		LUMINOUS INTENSITY (mcd)			DOMINANT WAVELENGTH (nm)			REVERSE CURRENT (MAX)	FORWARD VOLTAGE (V)			VIEWING ANGLE (DEG) @ 50% IV	THERMAL RESISTIVITY (°C/W)	
		IF (mA)	Cx	Cy	MIN.	TYP.	MAX.	MIN.	TYP.		MAX.	MIN.	TYP.			MAX.
RED (630)	2					2		624	630	636	10µA @ VR=12V	1.7	1.8	2.2	120	R,O,Y +280 B,W +230
ORANGE (606)						3		600	606	609		1.7	1.8	2.2		
YELLOW (588)						2.2		580	587	595		1.7	1.8	2.2		
ICE BLUE		0.2	0.3			3					10µA @ VR=5V	2.5	2.75	3.1		
WHITE		.33	.33			5					10µA @ VR=5V	2.5	2.75	3.1		

ABSOLUTE MAXIMUM RATINGS AT 25°C FOR 2mA PARTS						
LED COLOR (nm)	FORWARD CURRENT (mA)	SURGE CURRENT (mA) t<10µs; D=.005	REVERSE VOLTAGE (V)	OPERATING TEMPERATURE (°C)	STORAGE TEMPERATURE (°C)	JUNCTION TEMPERATURE (°C)
RED (630)	20	100	12	-40 TO +100	-40 TO +100	+100
ORANGE (606)	20	100				
YELLOW (588)	20	100				
ICE BLUE	15	150	5			
WHITE	20	200	5			



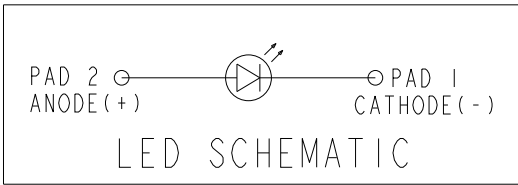
REV	REVISIONS	DRN	CKD	APP	DATE
A	NEW RELEASE	JGL		NO	4/02/19
B	REMOVED 20mA BLUE LED, REMOVED I <sub>F</sub> =5,20 mA FROM FORWARD VOLTAGE, REVISED NOTE 8	JGL	LD	NO	12/19/19

NOTES :

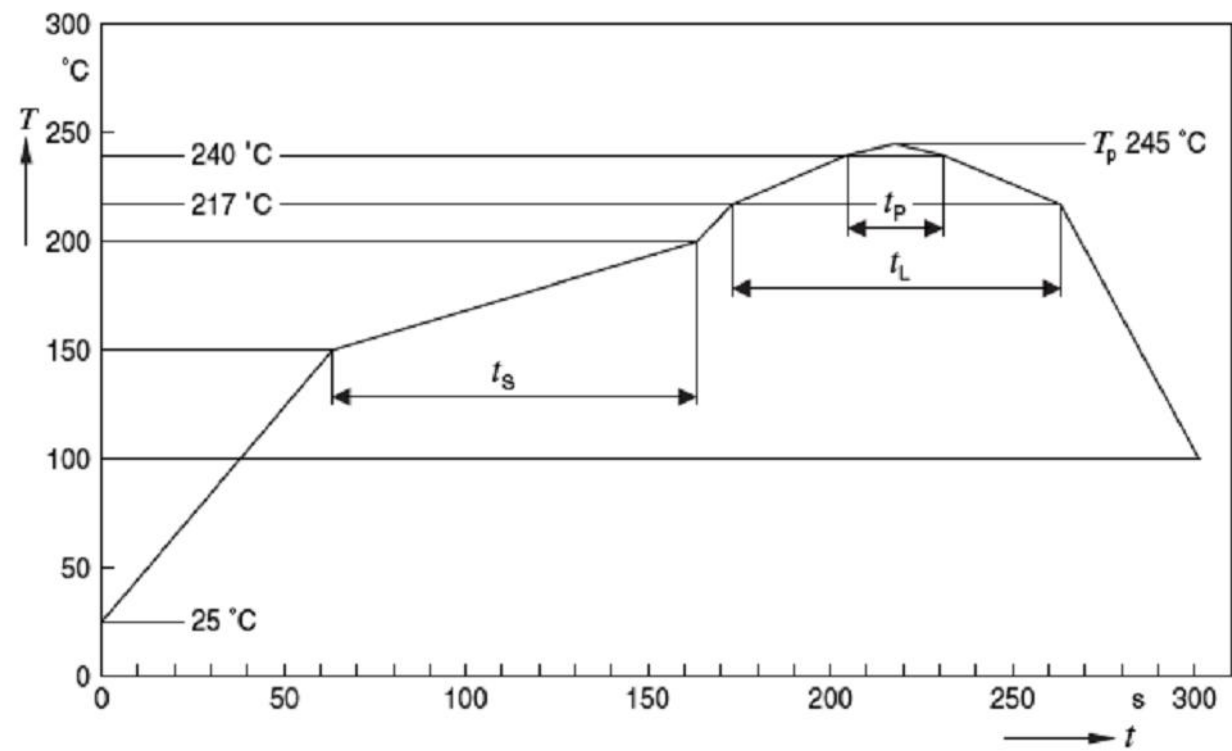
- MILLIMETER DIMENSIONS SHOWN FOR REFERENCE ONLY
- PAD NUMBERS ARE FOR REFERENCE ONLY , DESIGNATION NON-EXISTENT ON PART
- STORAGE CONDITIONS FOR TAPED PRODUCT: RE-TAPING MAY BE NECESSARY FOR PRODUCTS STORED MORE THAN TWELVE MONTHS
- ORDER QUANTITY IS LED ASSEMBLIES , NOT REELS
- ...-002F SUFFIX MEANS PARTS ARE PACKED ON A 20 pc SAMPLE STRIP  
...-007F SUFFIX MEANS PARTS ARE PACKED ON A 7 INCH REEL , 400 pcs/REEL  
...-013F SUFFIX MEANS PARTS ARE PACKED ON A 13 INCH REEL , 1600 pcs/REEL
- FRONT AND REAR TERMINALS OF THE ASSEMBLY TO BE WITHIN .005 COPLANARITY
- LED LEAD FRAME MATERIAL:  
CORE MATERIAL = COPPER ALLOY
- DIALIGHT PART NUMBERS FOR 20mA AND 2mA PARTS,  
594-2x01-002F 594-2x01-007F 594-2x01-013F; 594-2X04-002F, 594-2X04-007F, 594-2X04-013F.
- DRY PACK PACKAGING CONSIST OF A DESICCANT, HUMIDITY INDICATOR CARD IN A VACUUM SEALED MOISTURE BARRIER BAG, MOISTURE SENSITIVITY LABEL LEVEL 2 ON OUTSIDE OF BAG, AS PER JEDEC STD. 033 FOR 2mA PARTS. MSL3 FOR 20mA PARTS.
- ATTENTION: OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

**ATTENTION:**  
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

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SCALE: 10.000	DRAWING NUMBER	REV
C-18409		B
TOLERANCES: UNLESS OTHERWISE SPECIFIED		
FRACTIONS: ±1/64		
DECIMALS (.XX): ±.01		
DECIMALS (.XXX): ±.005		
DECIMALS (.XXXX): ±.0005		
ANGLES: ±1°		
FINISH		
FSCM 83330		
SHEET 1 OF 2 FAMILY TABLE:		
1501 ROUTE 34 SOUTH FARMINGDALE, NJ 07727 (732) 919-3119 www.dialight.com		



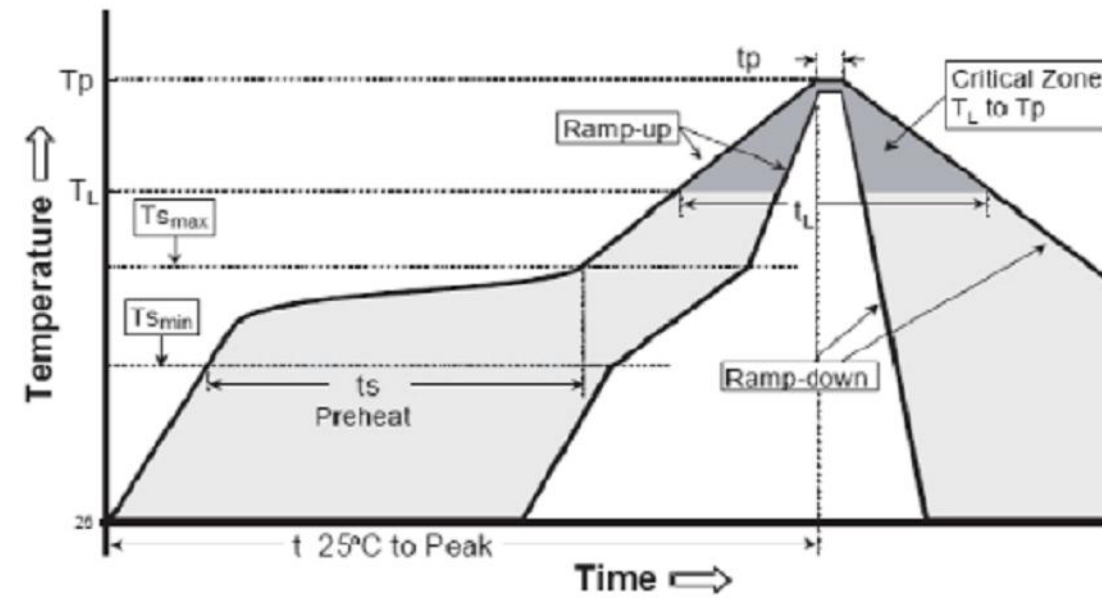
2mA LED  
RECOMMENDED RoHS SOLDER PROFILE



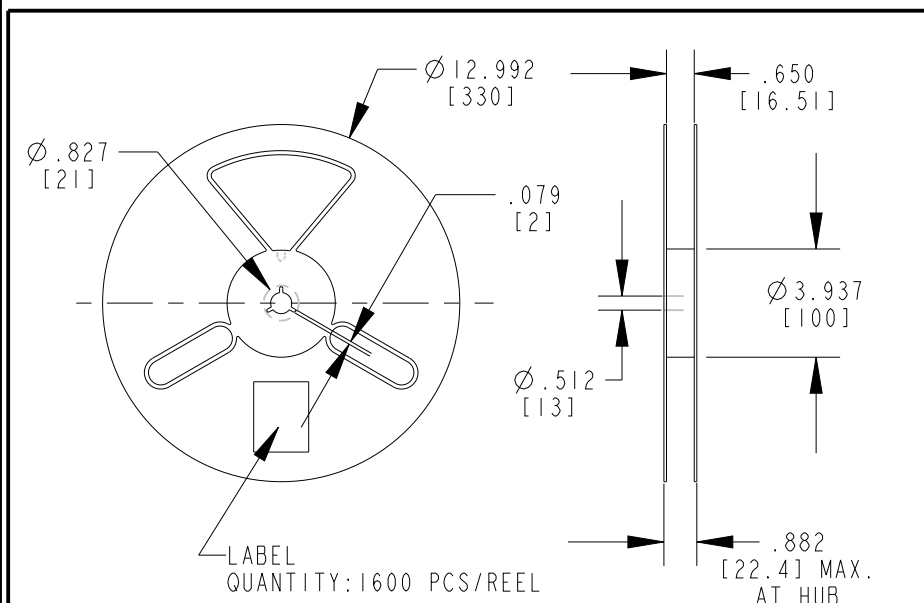
MARK	DEFINITION	CONDITION
$T_{S_{max}}$	Maximum of pre-heating temperature	260 °C
$T_{S_{min}}$	Minimum of pre-heating temperature	150 °C
$T_s$	Time form $T_{S_{min}}$ to $T_{S_{max}}$	60-120 sec
$T_L$	Reference temperature	217 °C
$t_L$	Retention time for $T_L$	within 80s
$T_p$	Peak Temperature	245 °C
$t_p$	Time for peak temperature	within 20s
$DTr/Dt$	Temperature rising rate	under 3° C/sec
$DTd/Dt$	Temperature decreasing rate	under -3° C/sec

20mA LED  
RECOMMENDED RoHS SOLDER PROFILE

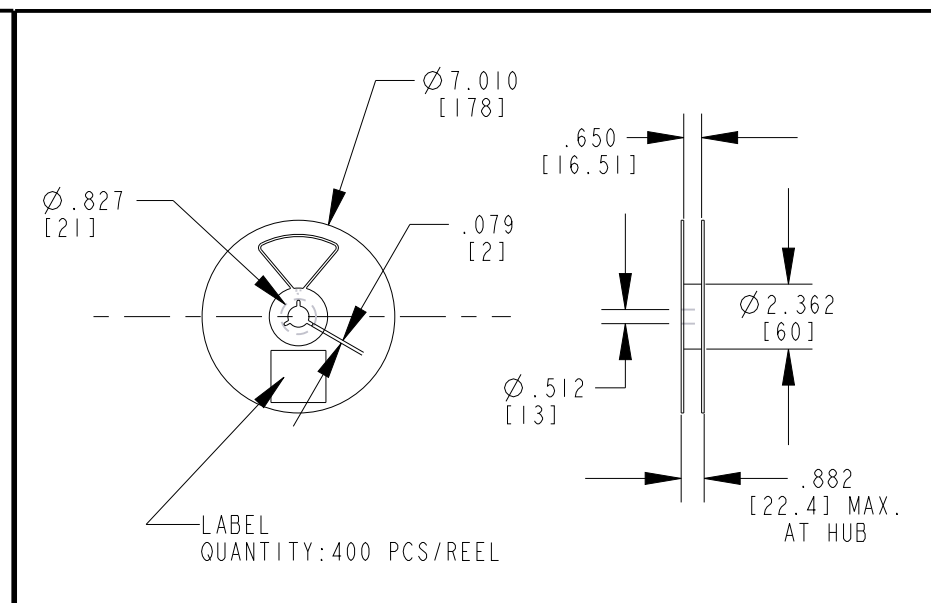
SMT Reflow Soldering Instructions SMT



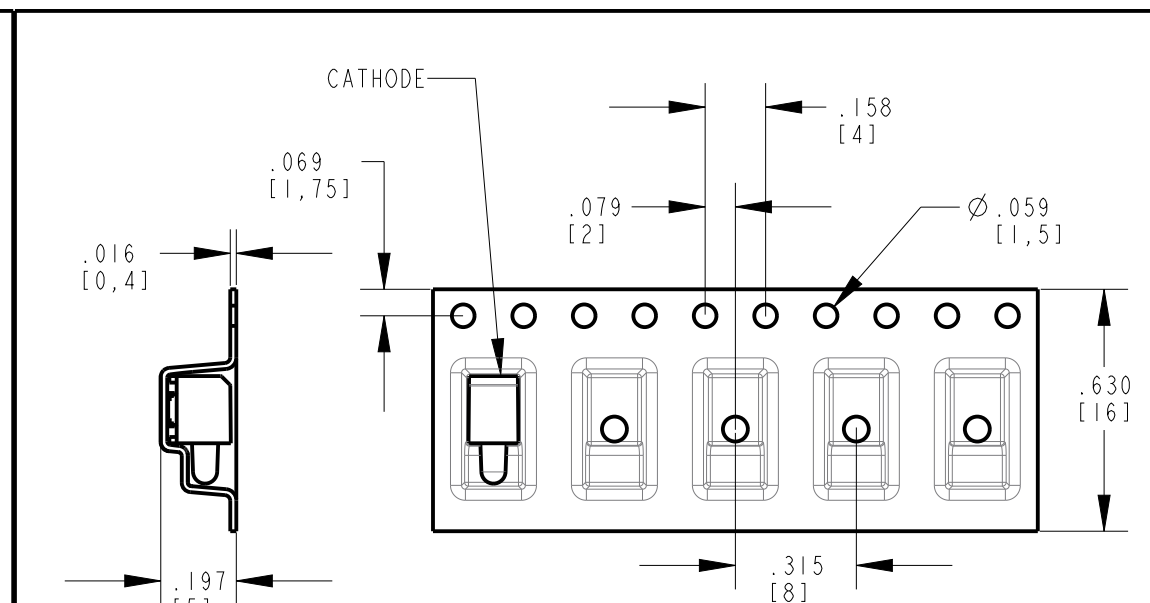
MARK	DEFINITION	CONDITION
$T_{S_{max}}$	Maximum of pre-heating temperature	200 °C
$T_{S_{min}}$	Minimum of pre-heating temperature	150 °C
$T_s$	Time form $T_{S_{min}}$ to $T_{S_{max}}$	60-120 sec
$T_L$	Reference temperature	217 °C
$t_L$	Retention time for $T_L$	within 60s
$T_p$	Peak Temperature	260 °C
$t_p$	Time for peak temperature	within 10s
$DTr/Dt$	Temperature rising rate	under 3° C/sec
$DTd/Dt$	Temperature decreasing rate	under -3° C/sec



13 INCH DIA. REEL SPECIFICATIONS



7 INCH DIA. REEL SPECIFICATIONS



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ALL DIM'S IN: INCHES (MM)	C-18409	B
TOLERANCES: UNLESS OTHERWISE SPECIFIED	TITLE	
FRACTIONS: ±1/64	MINI PRISM - ROUND LENS 1.6mm DIA.	
DECIMALS (.XX): ±.01	MATERIAL	
DECIMALS (.XXX): ±.005	FINISH	
DECIMALS (.XXXX): ±.0005	FSCM 83330	
ANGLES: ±1°	SHEET 2 OF 2 FAMILY TABLE:	
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