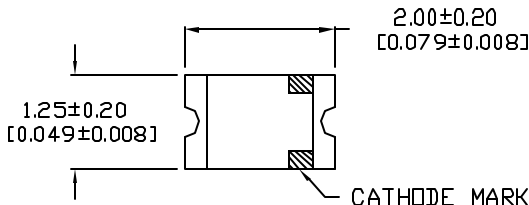
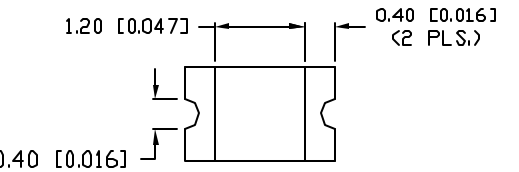
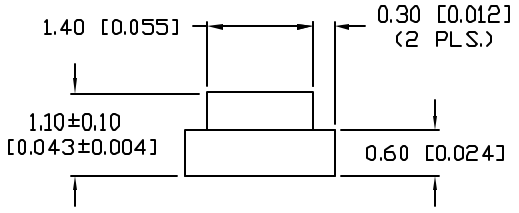
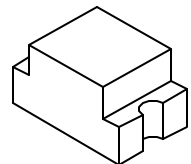


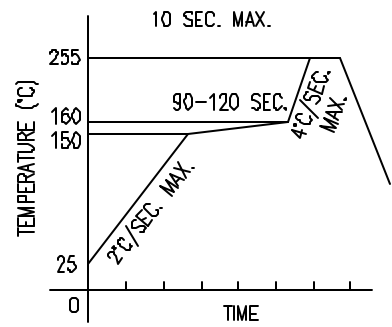
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| PART NUMBER       |                                     | REV.    |
| SML-LX0805USBC-TR |                                     | C       |
| REV.              | E.C.N. NUMBER AND REVISION COMMENTS | DATE    |
| A                 | E.C.N. #10862.                      | 5.9.02  |
| B                 | E.C.N. #10967.                      | 3.14.03 |
| C                 | E.C.N. #11148.                      | 1.17.05 |



**CAUTION: STATIC SENSITIVE DEVICE**  
 FOLLOW PROPER E.S.D. HANDLING PROCEDURES  
 WHEN WORKING WITH THIS PART.



**LEAD FREE REFLOW PROFILE**



TOTAL TIME ABOVE 220°C IS 60 SECONDS MAX.

ELECTRO-OPTICAL CHARACTERISTICS  $T_A=25^\circ\text{C}$   $I_f=20\text{mA}$

| PARAMETER          | MIN         | TYP | MAX | UNITS      | TEST COND            |
|--------------------|-------------|-----|-----|------------|----------------------|
| PEAK WAVELENGTH    |             | 470 |     | nm         |                      |
| FORWARD VOLTAGE    |             | 3.5 | 4.0 | $V_f$      |                      |
| REVERSE VOLTAGE    | 5.0         |     |     | $V_r$      | $I_f=100\mu\text{A}$ |
| AXIAL INTENSITY    |             | 25  |     | mcad       | $I_f=20\text{mA}$    |
| VIEWING ANGLE      |             | 140 |     | $2x$ theta |                      |
| EMITTED COLOR:     | BLUE        |     |     |            |                      |
| EPOXY LENS FINISH: | WATER CLEAR |     |     |            |                      |

**LIMITS OF SAFE OPERATION AT 25°C**

| PARAMETER             | MAX        | UNITS |
|-----------------------|------------|-------|
| PEAK FORWARD CURRENT* | 90         | mA    |
| STEADY CURRENT        | 30         | mA    |
| POWER DISSIPATION     | 100        | mW    |
| DERATE FROM 25°C      | -1.2       | mW/°C |
| OPERATING TEMP.       | -40 TO +85 | °C    |
| STORAGE TEMP.         | -40 TO +85 | °C    |

\*  $t < 10\mu\text{s}$

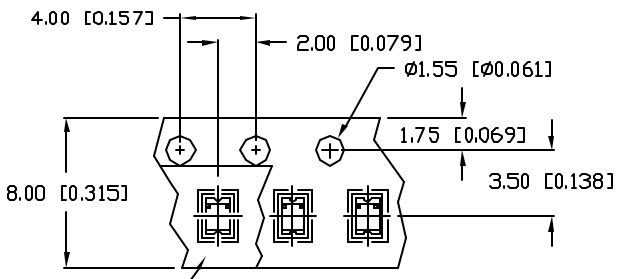
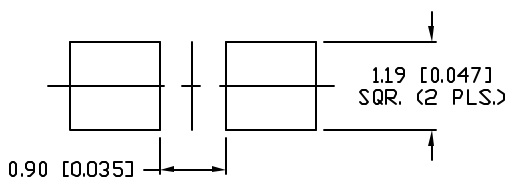
**NOTES:**

1. THE CATHODE IS ORIENTED TOWARDS THE TAPE SPROCKET HOLE.



**CAUTION: MOISTURE SENSITIVE DEVICE**  
 PER JEDEC LEVEL 4 STANDARDS

**RECOMMENDED SOLDER PAD LAYOUT**



TOP TAPE  
 TAPE FEED DIRECTION →

\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.038), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005). LEAD SIZE=±0.05 (0.002), LEAD LENGTH=±0.75 (±0.030). MIN= +DECIMAL PRECISION MAX= +0.00 -DECIMAL PRECISION

|      |                   |
|------|-------------------|
| REV. | PART NUMBER       |
| C    | SML-LX0805USBC-TR |

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290 E. HELEN ROAD  
 PALATINE, IL 60067-6976  
 PHONE: +1.847.359.2790  
 US WEB: www.lumex.com  
 TW WEB: www.lumex.com.tw

2.0mm x 1.25mm PCB SURFACE MOUNT, TAPE AND REEL,  
 470nm ULTRA SUPER BLUE, WATER CLEAR LENS.

**RELIABILITY NOTE**  
 OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.

|           |             |              |                |
|-----------|-------------|--------------|----------------|
| DRAWN BY: | CHECKED BY: | APPROVED BY: | DATE: 11.13.00 |
| BC        |             |              | PAGE: 1 OF 1   |
|           |             |              | SCALE: N/A     |