



We Tame Photons to Work for You!



Products > LEDs > Surface Mount > 0603 Package > Half Moon Solder Terminals



Features / Options

- ▶ State-of-the-Art, High Brightness Chip Technology
- ▶ Choice of Colors and Lens Finishes
- ▶ Lead Frame / Lens Casting Reliability
- ▶ Easy-to-Solder Leads, Tin Finish
- ▶ Available Bulk or on Tape and Reel
- ▶ Lead Trimming and Forming Available
- ▶ Custom Shapes, Easily Tooled, Low Minimum

Applications / Uses

- ▶ Board or Panel Indication or Illumination
- ▶ Annunciator and Control Panels
- ▶ Telecom Switches and Central Station Equipment
- ▶ Large Panel Indicators

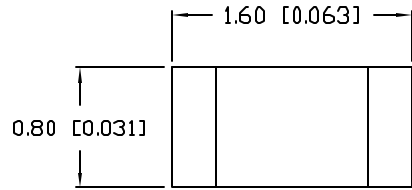
| Part Number:      | Brightness | Dice Material | Emitted Color | Peak Wavelength | Epoxy Lens     | Operating Typ Vf (V) | Intensity Typ, mcd @ 20 mA | View Angle 2x Theta |  |   |
|-------------------|------------|---------------|---------------|-----------------|----------------|----------------------|----------------------------|---------------------|--|---|
| SML-LX0603GW-TR   | STANDARD   | GaP           | Green         | 565             | White Diffused | 2.1                  | 18                         | 160                 |  | — |
| SML-LX0603IW-TR   | STANDARD   | GaAsP         | Red           | 635             | White Diffused | 2                    | 14                         | 160                 |  | — |
| SML-LX0603SIW-TR  | HIGH       | AlInGaP       | Red           | 636             | White Diffused | 2.0                  | 60                         | 140                 |  | — |
| SML-LX0603SOW-TR  | HIGH       | AlInGaP       | Orange        | 610             | White Diffused | 2.0                  | 60                         | 140                 |  | — |
| SML-LX0603SRW-TR  | STANDARD   | GaAlAs        | Red           | 660             | White Diffused | 1.8                  | 45                         | 140                 |  | — |
| SML-LX0603SUGW-TR | HIGH       | AlInGaP       | Green         | 574             | White Diffused | 2.2                  | 45                         | 140                 |  | — |
| SML-LX0603SYW-TR  | HIGH       | AlInGaP       | Yellow        | 590             | White Diffused | 2.0                  | 60                         | 140                 |  | — |
| SML-LX0603UPGW-TR | HIGH       | InGaN         | Green         | 525             | White Diffused | 3.5                  | 45                         | 140                 |  | — |
| SML-LX0603USBW-TR | HIGH       | InGaN         | Blue          | 470             | White Diffused | 3.5                  | 20                         | 140                 |  | — |
| SML-LX0603UWD-TR  | HIGH       | InGaN         | White         | -               | Diffused       | 3.5                  | 65                         | 140                 |  | — |

SML-LX0603YW-TR      STANDARD      GaAsP      Yellow      585      White Diffused      2      14      160

UNCONTROLLED DOCUMENT

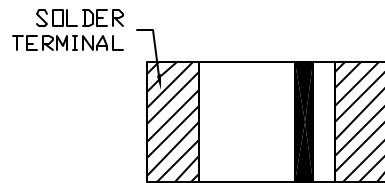
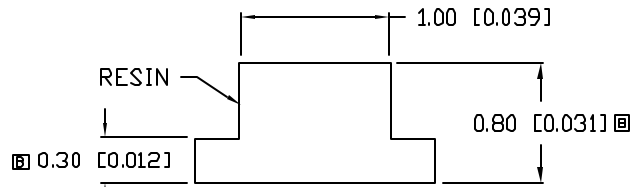
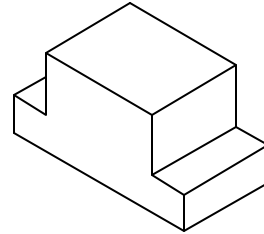
PART NUMBER  
SML-LX0603UWD-TR

REV.  
B

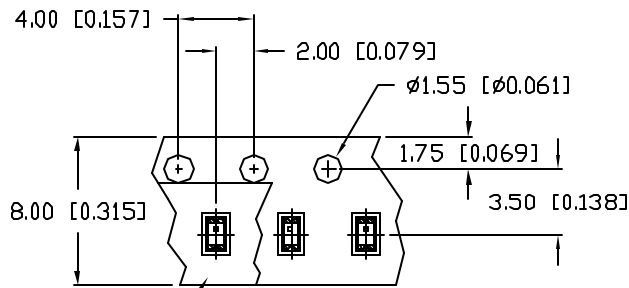


ANODE CATHODE

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

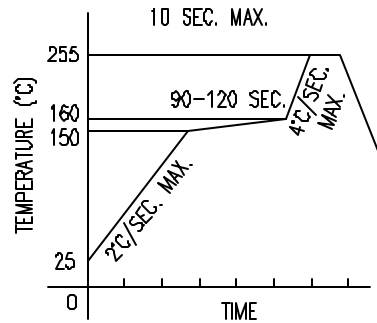


0.35 [0.014]  
(2 PLS.)



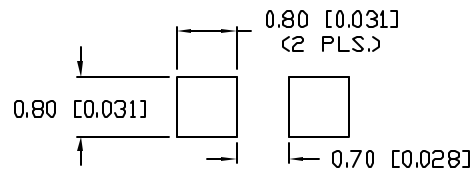
TOP TAPE  
TAPE FEED DIRECTION →

LEAD FREE REFLOW PROFILE



TOTAL TIME ABOVE 220°C IS 60 SECONDS MAX.

RECOMMENDED SOLDER PAD LAYOUT



NOTES:

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

| REV. | E.C.N. NUMBER AND REVISION COMMENTS | DATE     |
|------|-------------------------------------|----------|
| A    | E.C.N. #11148.                      | 12.06.04 |
| B    | E.C.N. #11456.                      | 12.03.07 |

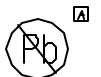
ELECTRO-OPTICAL CHARACTERISTICS  $T_A=25^\circ\text{C}$

| PARAMETER                    | SYMBOL          | MIN | TYP | MAX | UNITS    | TEST COND           |
|------------------------------|-----------------|-----|-----|-----|----------|---------------------|
| PEAK WAVELENGTH              |                 |     | -   |     | nm       |                     |
| FORWARD VOLTAGE              | $V_f$           |     | 3.5 | 4.0 | V        | $I_f=20\text{mA}$   |
| REVERSE VOLTAGE              | $V_r$           | 5   |     |     | V        | $I_f=10\mu\text{A}$ |
| AXIAL INTENSITY(*1)          | $I_v$           |     | 160 |     | mcd      | $I_f=20\text{mA}$   |
| CHROMATICITY COORDINATES(*2) | X               |     | 0.3 |     |          | $I_f=20\text{mA}$   |
|                              | Y               |     | 0.3 |     |          |                     |
| VIEWING ANGLE                |                 |     | 140 |     | 2x theta |                     |
| EMITTED COLOR:               | WHITE           |     |     |     |          |                     |
| EPOXY LENS FINISH:           | YELLOW DIFFUSED |     |     |     |          |                     |

LIMITS OF SAFE OPERATION AT 25°C

| PARAMETER             | SYMBOL    | MAX        | UNITS      |
|-----------------------|-----------|------------|------------|
| PULSE FORWARD CURRENT | $I_p$     | 80         | mA         |
| STEADY CURRENT        | $I_f$     | 30         | mA         |
| POWER DISSIPATION     | $P_D$     | 78         | mW         |
| OPERATING TEMP.       | $T_{OPR}$ | -30 TO +80 | °C         |
| STORAGE TEMP.         | $T_{STG}$ | -40 TO +85 | °C         |
| SOLDERING TEMP.       |           | +260       | °C         |
| 2.0mm FROM BODY       |           |            | 3 SEC. MAX |
| 20                    |           |            |            |

CAUTION: MOISTURE SENSITIVE DEVICE  
PER JEDEC LEVEL 4 STANDARDS



UNCONTROLLED DOCUMENT

\*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 -0.00 MAX=+0.00 -DECIMAL PRECISION

REV. B PART NUMBER SML-LX0603UWD-TR

1.6mm x 0.8mm PCB CHIP, SURFACE MOUNT LED,  
ULTRA WHITE LED, YELLOW DIFFUSED.

CONFIDENTIAL INFORMATION  
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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: CT CHECKED BY: APPROVED BY: DATE: 8.28.03  
PAGE: 1 OF 1  
SCALE: N/A