



We Tame Photons to Work for You!



Products > LEDs > Surface Mount > SOT-23 Package > Half Moon Solder Terminals

Features / Options

Applications / Uses



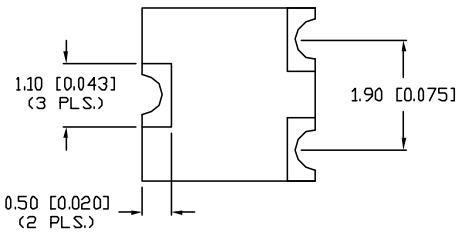
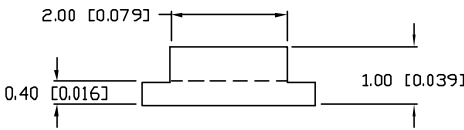
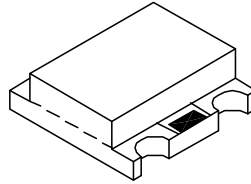
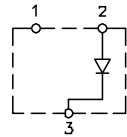
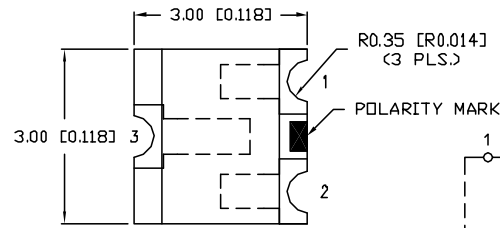
- ▶ State-of-the-Art, High Brightness Chip Technology
- ▶ Choice of Colors and Lens Finishes
- ▶ Lead Frame / Lens Casting Reliability
- ▶ Easy-to-Solder Leads, Tin Finish
- ▶ Available Bulk or on Tape and Reel
- ▶ Lead Trimming and Forming Available
- ▶ Custom Shapes, Easily Tooled, Low Minimum

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

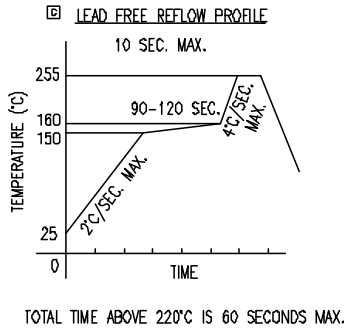
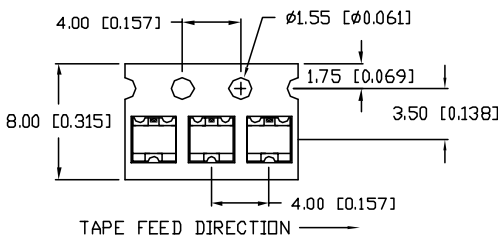
| Part Number: | Brightness | Dice Material | Emitted Color | Peak Wavelength | Epoxy Lens | Operating Typ Vf (V) | Intensity Typ, mcd @ 20 mA | View Angle 2x Theta | | |
|-------------------|------------|---------------|---------------|-----------------|------------|----------------------|----------------------------|---------------------|--|---|
| SML-LX15AC-RP-TR | STANDARD | GaAsP | Amber | 605 | Clear | 2.0 | 10 | 140 | | — |
| SML-LX15AC-TR | STANDARD | GaAsP | Amber | 605 | Clear | 2.0 | 10 | 140 | | — |
| SML-LX15AGC-RP-TR | STANDARD | GaAsP | | 605 | Clear | 2.0/2.2 | 10 | 140 | | — |
| SML-LX15AGC-TR | STANDARD | GaAsP | Amber/Green | 605 | Clear | 2.0/2.2 | 10 | 140 | | — |
| SML-LX15AYC-RP-TR | STANDARD | GaAsP | Amber/Green | 605 | Clear | 2.0/2.1 | 10 | 140 | | — |
| SML-LX15AYC-TR | STANDARD | GaAsP | Amber/Yellow | 605 | Clear | 2.0/2.1 | 10 | 140 | | — |
| SML-LX15GC-RP-TR | STANDARD | GaP | Green | 565 | Clear | 2.1 | 10 | 140 | | — |
| SML-LX15GC-TR | STANDARD | GaP | Green | 565 | Clear | 2.1 | 10 | 140 | | — |
| SML-LX15GGC-RP-TR | STANDARD | GaP | Green | 565 | Clear | 2.2 | 10 | 140 | | — |
| SML-LX15GGC-TR | STANDARD | GaP | Green/Green | 565 | Clear | 2.2 | 10 | 140 | | — |

| | | | | | | | | | | | |
|--------------------|--|----------|---------|--------------|-----|-------|---------|----|-----|--|---|
| SML-LX15GIC-RP-TR | | STANDARD | GaP | | 565 | Clear | 2.2/2.0 | 10 | 140 | | — |
| SML-LX15GIC-TR | | STANDARD | GaP | Green/Red | 565 | Clear | 2.2/2.0 | 10 | 140 | | — |
| SML-LX15GYC-RP-TR | | STANDARD | GaP | Green/Yellow | 565 | Clear | 2.2/2.1 | 10 | 140 | | — |
| SML-LX15GYC-TR | | STANDARD | GaP | Green/Yellow | 565 | Clear | 2.2/2.1 | 10 | 140 | | — |
| SML-LX15IC-RP-TR | | STANDARD | GaAsP | Red | 635 | Clear | 2.0 | 10 | 140 | | — |
| SML-LX15IC-TR | | STANDARD | GaAsP | Red | 635 | Clear | 2.0 | 10 | 140 | | — |
| SML-LX15IGC-RP-TR | | STANDARD | GaAsP | Red/Green | 635 | Clear | 2.0/2.2 | 10 | 140 | | — |
| SML-LX15IGC-TR | | STANDARD | GaAsP | Red/Green | 635 | Clear | 2.0/2.2 | 10 | 140 | | — |
| SML-LX15IIC-RP-TR | | STANDARD | GaAsP | Red | 635 | Clear | 2.0 | 10 | 140 | | — |
| SML-LX15IIC-TR | | STANDARD | GaAsP | Red/Red | 635 | Clear | 2.0 | 10 | 140 | | — |
| SML-LX15IYC-RP-TR | | STANDARD | GaAsP | Red/Yellow | 635 | Clear | 2.0/2.1 | 10 | 140 | | — |
| SML-LX15PGC-RP-TR | | STANDARD | GaP | Green | 555 | Clear | 2.2 | 5 | 140 | | — |
| SML-LX15PGC-TR | | STANDARD | GaP | Green | 555 | Clear | 2.2 | 5 | 140 | | — |
| SML-LX15SBC-RP-TR | | STANDARD | SiC | Blue | 430 | Clear | 4.5 | 40 | 140 | | — |
| SML-LX15SBC-TR | | STANDARD | SiC | Blue | 430 | Clear | 4.5 | 40 | 140 | | — |
| SML-LX15SGC-RP-TR | | STANDARD | GaP | Green | 565 | Clear | 2.2 | 15 | 140 | | — |
| SML-LX15SGC-TR | | STANDARD | GaP | Green | 565 | Clear | 2.2 | 15 | 140 | | — |
| SML-LX15SIC-RP-TR | | HIGH | AlInGaP | Red | 636 | Clear | 2.0 | 60 | 140 | | — |
| SML-LX15SIC-TR | | HIGH | AlInGaP | Red | 636 | Clear | 2.0 | 60 | 140 | | — |
| SML-LX15SOC-TR | | HIGH | AlInGaP | Orange | 610 | Clear | 2.0 | 60 | 140 | | — |
| SML-LX15SRC-RP-TR | | STANDARD | GaAIAs | Red | 660 | Clear | 1.7 | 20 | 140 | | — |
| SML-LX15SRC-TR | | STANDARD | GaAIAs | Red | 660 | Clear | 1.7 | 20 | 140 | | — |
| SML-LX15SUGC-RP-TR | | HIGH | AlInGaP | Green | 574 | Clear | 2.2 | 45 | 140 | | — |
| SML-LX15SUGC-TR | | HIGH | AlInGaP | Green | 574 | Clear | 2.2 | 45 | 140 | | — |
| SML-LX15SYC-RP-TR | | HIGH | AlInGaP | Yellow | 590 | Clear | 2.0 | 60 | 140 | | — |

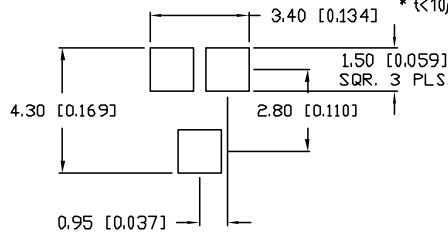
UNCONTROLLED DOCUMENT



TAPE SPEC DETAIL



RECOMMENDED PAD LAYOUT



| | | |
|---------------|-------------------------------------|----------|
| PART NUMBER | | REV. |
| SML-LX151C-TR | | D |
| REV. | E.C.N. NUMBER AND REVISION COMMENTS | DATE |
| A | E.C.N. #10967. | 3.14.03 |
| B | E.C.N. #11010. | 7.3.03 |
| C | E.C.N. #11148. | 11.30.05 |
| D | E.C.N. #11361 | 11.28.06 |

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

| PARAMETER | MIN | TYP | MAX | UNITS | TEST COND |
|--------------------|-------------|-----|-----|------------|----------------------|
| PEAK WAVELENGTH | | 635 | | nm | |
| FORWARD VOLTAGE | | 2.0 | 2.8 | V_f | |
| REVERSE VOLTAGE | 5.0 | | | V_r | $I_f=100\mu\text{A}$ |
| AXIAL INTENSITY | | 10 | | mcd | $I_f=20\text{mA}$ |
| VIEWING ANGLE | | 140 | | $2x$ theta | |
| EMITTED COLOR: | RED | | | | |
| EPOXY LENS FINISH: | WATER CLEAR | | | | |

LIMITS OF SAFE OPERATION AT 25°C

| PARAMETER | MAX | UNITS |
|--------------------------|------------|-------|
| PEAK FORWARD CURRENT* | 160 | mA |
| STEADY CURRENT | 30 | mA |
| POWER DISSIPATION | 100 | mW |
| DERATE FROM 25°C | -1.2 | mW/°C |
| OPERATING, STORAGE TEMP. | -40 TO +85 | °C |

NOTES:

- THE POLARITY MARK IS ORIENTED TOWARDS THE TAPE SPROCKET HOLE.

CAUTION: MOISTURE SENSITIVE DEVICE
PER JEDEC LEVEL 4 STANDARDS

UNCONTROLLED DOCUMENT

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), 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 |
| D | SML-LX151C-TR |
| SOT-23 REPLACEMENT, SURFACE MOUNT LED, 635nm RED LED, WATER CLEAR LENS, TAPE AND REEL | |

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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: | CHECKED BY: | APPROVED BY: | DATE: 11.28.06 |
| JC | | | PAGE: 1 OF 1 |
| | | | SCALE: N/A |