



We Tame Photons to Work for You!



Products > LEDs > Surface Mount > 0402 Package

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:	SPEC	Brightness	Dice Material	Emitted Color	Peak Wavelength	Epoxy Lens	Operating Typ Vf (V)	Intensity Typ, mcd @ 20 mA	View Angle 2x Theta		
SML-LX0402DRC-TR		STANDARD	GaAlAs	Red	660	Clear	2.0	25	120		—
SML-LX0402GC-TR		STANDARD	GaP	Green	565	Clear	2.2	10	120		—
SML-LX0402SIC-TR		HIGH	AlInGaP	Red	636	Clear	2.0	140	120		—
SML-LX0402SOC-TR		HIGH	AlInGaP	Orange	610	Clear	2.0	120	120		—
SML-LX0402SUGC-TR		HIGH	AlInGaP	Green	574	Clear	2.2	45	120		—
SML-LX0402SYC-TR		HIGH	AlInGaP	Yellow	590	Clear	2.0	60	120		—
SML-LX0402UPGC-TR		HIGH	InGaN	Green	525	Clear	3.5	110	120		—
SML-LX0402USBC-TR		HIGH	InGaN	Blue	470	Clear	3.5	20	120		—
SML-LX0402YC-TR		STANDARD	GaAsP	Yellow	585	Clear	2.0	10	120		—

UNCONTROLLED DOCUMENT

PART NUMBER
SML-LX0402SIC-TR

REV.
E

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10873.	6.4.02
B	E.C.N. #10967.	3.14.03
C	E.C.N. #10983.	4.18.03
D	E.C.N. #11148.	12.03.04
E	E.C.N. #11341.	7.14.06

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

PARAMETER	MIN	TYP	MAX	UNITS	TEST COND
PEAK WAVELENGTH		636		nm	
FORWARD VOLTAGE		2.0	2.6	V_f	
REVERSE VOLTAGE	5.0			V_r	$I_f=100\mu\text{A}$
AXIAL INTENSITY		140		mcd	$I_f=20\text{mA}$
VIEWING ANGLE		120		$2x$ 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	170	mW
DERATE FROM 25°C	-1.2	mW/ $^{\circ}\text{C}$
OPERATING TEMP.	-40 TO +85	$^{\circ}\text{C}$
STORAGE TEMP.	-40 TO +85	$^{\circ}\text{C}$

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

NOTES:

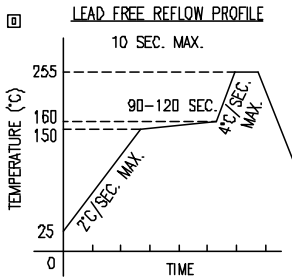
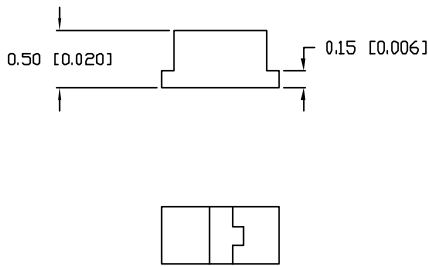
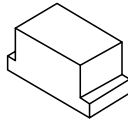
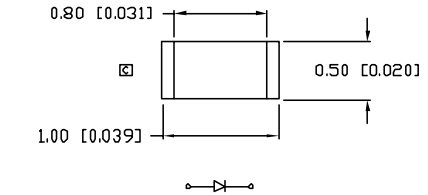
- PARTS PACKAGED IN CONDUCTIVE COVER AND CARRIER TAPE.
- THE CATHODE IS ORIENTED TOWARDS THE TAPE SPROCKET HOLE.



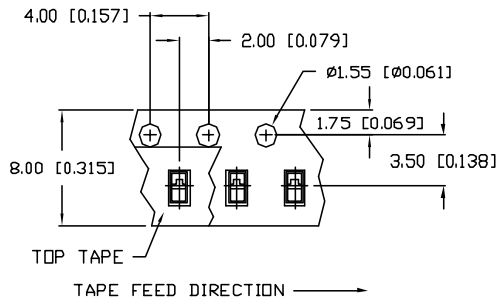
CAUTION: MOISTURE SENSITIVE DEVICE
PER JEDEC LEVEL 4 STANDARDS

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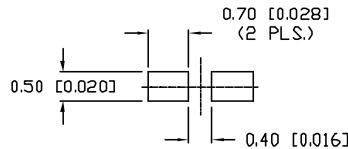
LEAD SIZE= ± 0.05 (0.002), LEAD LENGTH= ± 0.75 (± 0.030), NN= ± 0.00 (DECIMAL PRECISION) MAX= ± 0.00 (DECIMAL PRECISION)



TOTAL TIME ABOVE 220°C IS 60 SECONDS MAX.



RECOMMENDED SOLDER PAD LAYOUT



*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).

REV. E PART NUMBER SML-LX0402SIC-TR

1.0mm x 0.5mm SURFACE MOUNT LED,
636nm AlInGaP 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.



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SCALE: N/A