



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

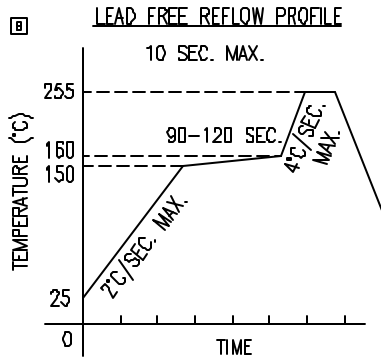
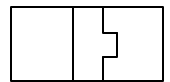
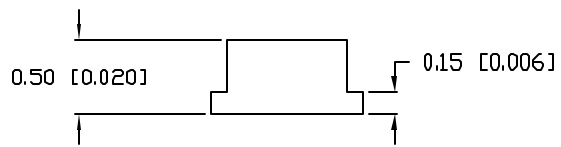
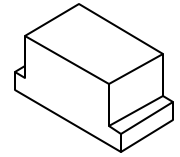
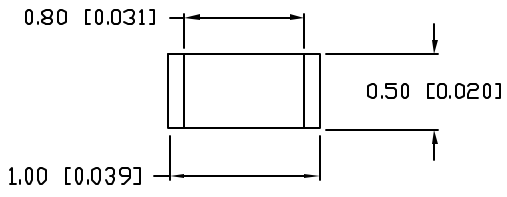
- ▶ Board or Panel Indication or Illumination
- ▶ Annunciator and Control Panels
- ▶ Telecom Switches and Central Station Equipment
- ▶ Large Panel Indicators

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		REV.
SML-LX0402USBC-TR		B

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10967.	3.14.03
B	E.C.N. #10983 & 11148.	12.12.05



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		463		nm	
FORWARD VOLTAGE		3.3	3.8	V_f	
REVERSE VOLTAGE	5.0			V_r	$I_f=100\mu\text{A}$
AXIAL INTENSITY		60		med	$I_f=20\text{mA}$
VIEWING ANGLE		120		2x theta	
EMITTED COLOR:	BLUE				
EPOXY LENS FINISH:	WATER CLEAR				

LIMITS OF SAFE OPERATION AT 25°C

PARAMETER	MAX	UNITS
PEAK FORWARD CURRENT*	100	mA
STEADY CURRENT	30	mA
POWER DISSIPATION	110	mW
DERATE FROM 25°C	-1.2	mW/°C
OPERATING TEMP.	-40 TO +85	°C
STORAGE TEMP.	-40 TO +85	°C

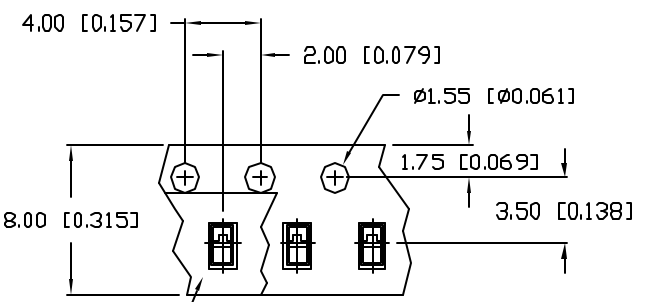
* $t < 10\mu\text{s}$

NOTES:

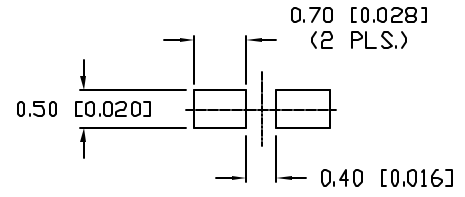
- PARTS PACKAGED IN CONDUCTIVE COVER AND CARRIER TAPE.
- THE CATHODE IS ORIENTED TOWARDS THE TAPE SPROCKET HOLE.



CAUTION: MOISTURE SENSITIVE DEVICE PER JEDEC LEVEL 4 STANDARDS



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 -0.00, MAX= +0.00 -DECIMAL PRECISION

UNCONTROLLED DOCUMENT

REV.	PART NUMBER
B	SML-LX0402USBC-TR

1.0mm x 0.5mm SURFACE MOUNT LED,
463nm InGaN BLUE 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: 12.12.05
JD			PAGE: 1 OF 1
			SCALE: N/A