



We Tame Photons to Work for You!



Products > LEDs > Surface Mount > 2mm X 3mm Molded Package

Features / Options

Applications / Uses



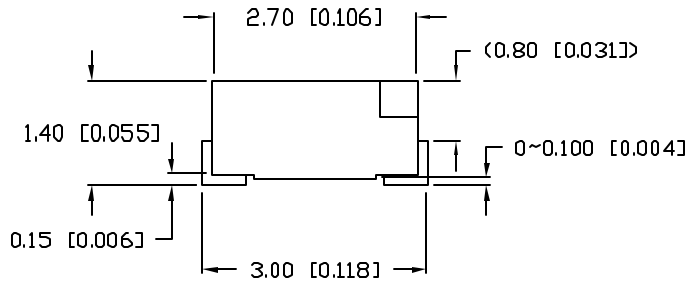
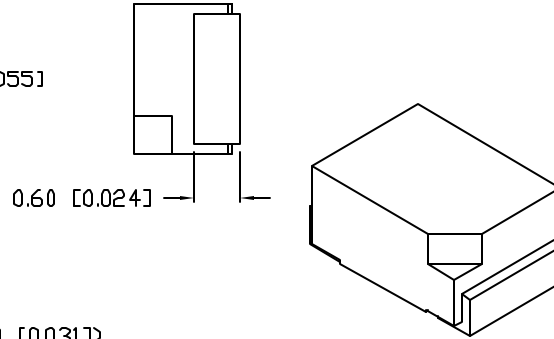
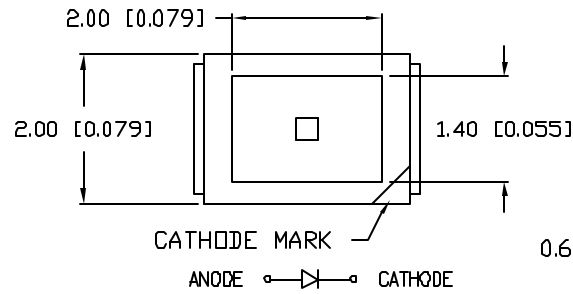
- ▶ State-of-the-Art, High Brightness Chip Technology
- ▶ Choice of Colors and Lens Finishes
- ▶ Lead Frame / Lens Casting Reliability
- ▶ Easy-to-Solder Leads, Tin Finish
- ▶ Available Bulk or on Tape and Reel
- ▶ Lead Trimming and Forming Available
- ▶ Custom Shapes, Easily Tooled, Low Minimum

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

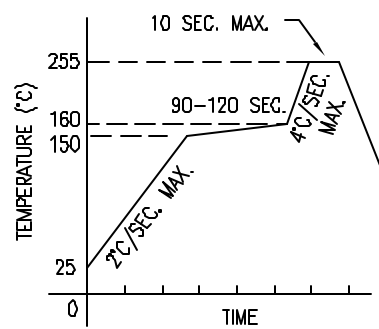
Part Number:	Brightness	Dice Material	Emitted Color	Peak Wavelength	Epoxy Lens	Operating Typ Vf (V)	Intensity Typ, mcd @ 20 mA	View Angle 2x Theta		
SML-LX23AC-TR	HIGH	AlInGaP	Amber	610	Clear	2.1	30	90		—
SML-LX23GC-TR	STANDARD	GaP	Green	565	Clear	2.1	20	90		—
SML-LX23IC-TR	STANDARD	GaAsP	Red	635	Clear	2	20	90		—
SML-LX23SIC-TR	HIGH	AlInGaP	Red	636	Clear	2.0	300	90		—
SML-LX23SOC-TR	HIGH	AlInGaP	Orange	610	Clear	1.95	300	90		—
SML-LX23SRC-TR	STANDARD	GaAlAs	Red	660	Clear	1.8	150	90		—
SML-LX23SUGC-TR	HIGH	AlInGaP	Green	574	Clear	2.25	80	90		—
SML-LX23SYC-TR	HIGH	AlInGaP	Yellow	590	Clear	2.0	200	90		—
SML-LX23UPGC-TR	HIGH	InGaN	Green	525	Clear	3.5	150	90		—
SML-LX23USBC-TR	HIGH	InGaN	Blue	470	Clear	3.5	60	90		—

UNCONTROLLED DOCUMENT

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

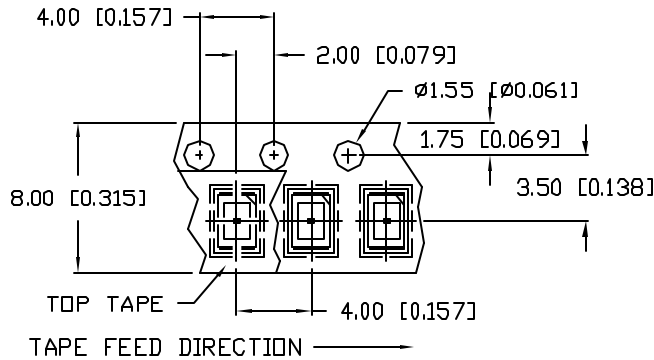
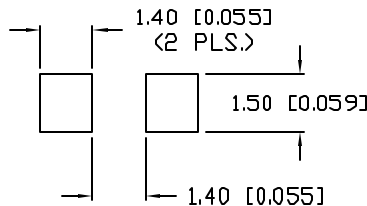


LEAD FREE REFLOW PROFILE



TOTAL TIME ABOVE 220°C IS 60 SECONDS MAX.

RECOMMENDED SOLDER PAD LAYOUT



PART NUMBER		REV.
SML-LX23USBC-TR		C
REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10898. & #10BRDR.	8.7.02
B	E.C.N. #10967.	3.14.03
C	E.C.N. #11148.	2.8.05

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		60		mcd	$I_f=20\text{mA}$
VIEWING ANGLE		90		2x theta	
EMITTED COLOR:	BLUE				
EPOXY LENS FINISH:	WATER CLEAR				

LIMITS OF SAFE OPERATION AT 25°C PER CHIP

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 TEMP.	-25 TO +80	°C
STORAGE TEMP.	-30 TO +85	°C

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

NOTES:

- THE CATHODE 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 -0.00, MAX.= +0.00 -DECIMAL PRECISION

REV.	PART NUMBER
C	SML-LX23USBC-TR
2mm x 3mm SURFACE MOUNT WITH REFLECTOR, 470nm ULTRA SUPER BLUE LED, WATER CLEAR LENS.	

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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: 10.17.00
ct			PAGE: 1 OF 1
			SCALE: N/A