



We Tame Photons to Work for You!



Products > LEDs > Surface Mount > Right Angle > 3mm x 2mm

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:	SPEC	Brightness	Dice Material	Emitted Color	Peak Wavelength	Epoxy Lens	Operating Typ Vf (V)	Intensity Typ, mcd @ 20 mA	View Angle 2x Theta	Sample Cart	Stock Check
SML-LXR851DRC-TR		STANDARD	GaAlAs	Red	660	Clear	2.0	25	120		—
SML-LXR851GC-TR		STANDARD	GaP	Green	565	Clear	2.2	11	160		—
SML-LXR851IC-TR		STANDARD	GaAsP	Red	635	Clear	2.0	8	160		—
SML-LXR851IYC-TR		STANDARD	GaAsP	Red/Yellow	635	Clear	2.0/2.1	10	160		—
SML-LXR851SGSIC-TR		STANDARD	GaP	Green/Red	565	Clear	2.2/2.0	20	120		—
SML-LXR851SIC-TR		HIGH	AllnGaP	Red	636	Clear	2.0	70	160		—
SML-LXR851SISGC-TR		HIGH	AllnGaP	Red/Green	636	Clear	2.0/2.1	50	120		—
SML-LXR851SISUGCTR		HIGH	AllnGaP	Red/Green	636	Clear	2.0/2.1	50	120		—
SML-LXR851SIUPGUBC		HIGH	AllnGaP/InGaN	RGB	636/525/470	Clear	2/3.5/3.5	90/180/70	120		—
SML-LXR851SOC-TR		HIGH	AllnGaP	Orange	610	Clear	2.0	75	160		—

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PART NUMBER

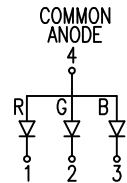
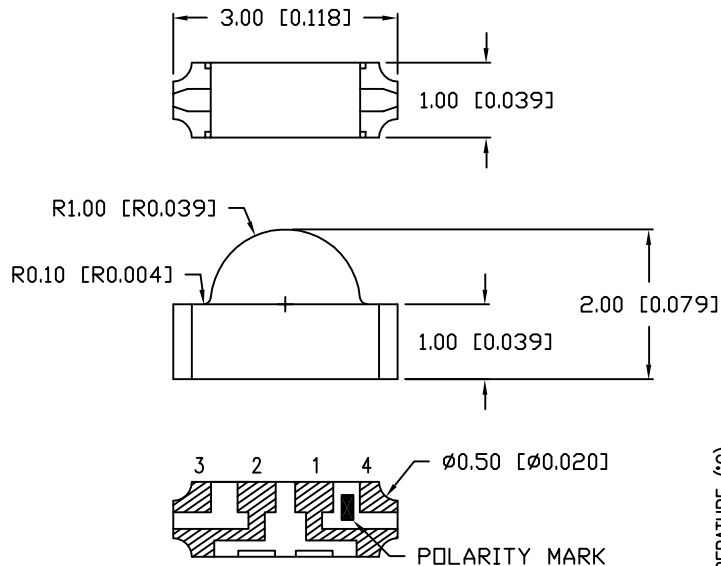
REV.

SML-LXR851SIUPGUBC

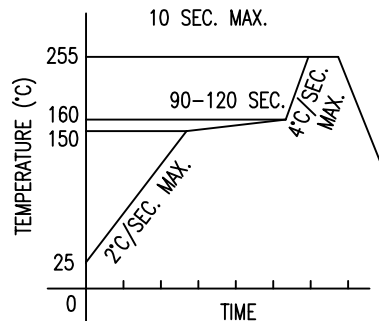
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REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11148.	8.28.07

UNDER REVISION

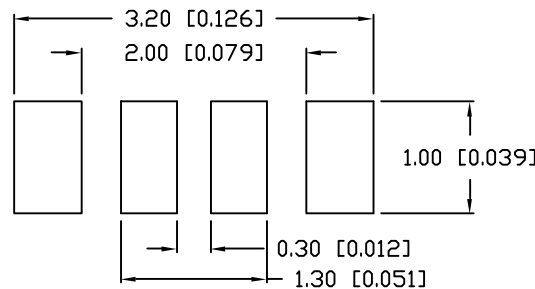


LEAD FREE REFLOW PROFILE



TOTAL TIME ABOVE 220°C IS 60 SECONDS MAX.

RECOMMENDED SOLDER PAD LAYOUT



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

PARAMETER	MIN	TYP	MAX	UNITS	TEST COND
PEAK WAVELENGTH		636 (RED)		nm	
		525 (GREEN)		nm	
		470 (RED)		nm	
FORWARD VOLTAGE (R)		2.0	2.6	V_f	
	(G)	3.5	4.0	V_f	
	(B)	3.5	4.0	V_f	
REVERSE VOLTAGE	5.0			V_r	$I_r=100\mu\text{A}$
AXIAL INTENSITY (R/G/B)		90/180/70		mcd	$I_f=20\text{mA}$
VIEWING ANGLE		120		2x theta	
EMITTED COLOR: PER POSITION IN NOTES					
EPOXY LENS FINISH: WATER CLEAR					

LIMITS OF SAFE OPERATION AT 25°C PER CHIP

PARAMETER	COLORS	MAX	UNITS
PEAK FORWARD CURRENT*	(R/G/B)	60/100/100	mA
STEADY CURRENT		25	mA
POWER DISSIPATION		105	mW
DERATE FROM 25°C		-1.2	$\text{mW}/^\circ\text{C}$
OPERATING, STORAGE TEMP.		-40 TO +85	$^\circ\text{C}$

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

NOTES:

- THE COMMON ANODE PIN IS ORIENTED TOWARDS THE TAPE SPROCKET HOLE.

CAUTION: MOISTURE SENSITIVE DEVICE
PER JEDEC LEVEL 4 STANDARDS



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*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±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. A	PART NUMBER SML-LXR851SIUPGUBC
1.0mm x 3.0mm PCB RIGHT ANGLE SURFACE MOUNT LED, FULL COLOR RGB LED, COMMON ANODE, WATER CLEAR LENS, 2K PER 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: CT	CHECKED BY: APPROVED BY: DATE: 8.6.03 PAGE: 1 OF 1 SCALE: N/A