



We Tame Photons to Work for You!



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

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

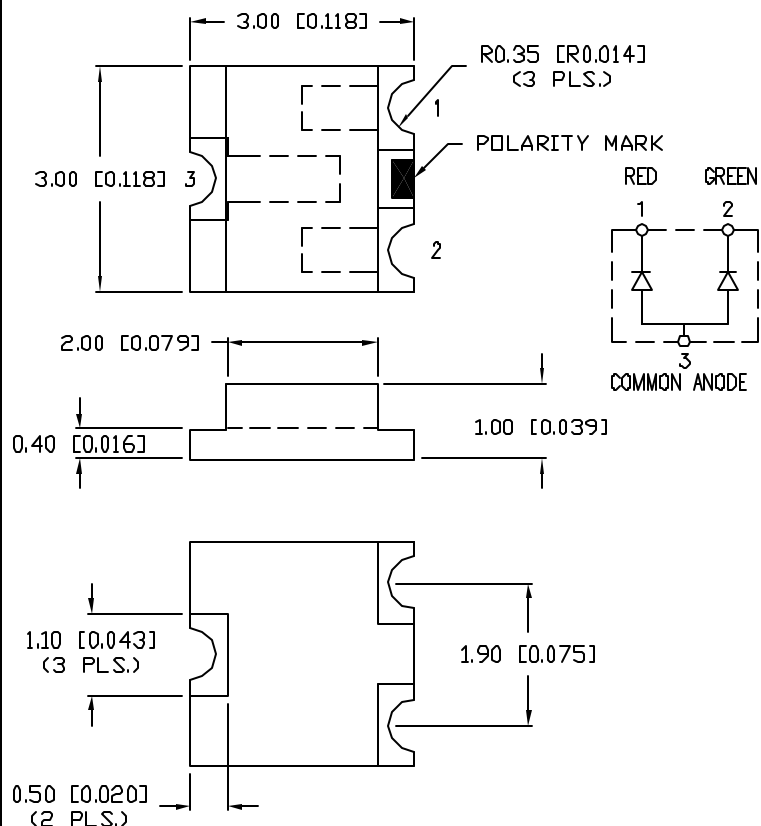
- ▶ Board or Panel Indication or Illumination
- ▶ Annunciator and Control Panels
- ▶ Telecom Switches and Central Station Equipment
- ▶ Large Panel Indicators



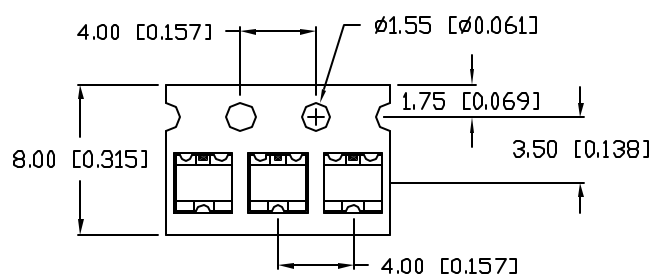
Part Number:		Brightness	Dice Material	Emitted Color	Peak Wavelength	Epoxy Lens	Operating Typ Vf (V)	Intensity Typ, mcd @ 20 mA	View Angle 2x Theta		
SML-LX15AC-RP-TR		STANDARD	GaAsP	Amber	605	Clear	2.0	10	140		—
SML-LX15AC-TR		STANDARD	GaAsP	Amber	605	Clear	2.0	10	140		—
SML-LX15AGC-RP-TR		STANDARD	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	GaAlAs	Red	660	Clear	1.7	20	140		—
SML-LX15SRC-TR		STANDARD	GaAlAs	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

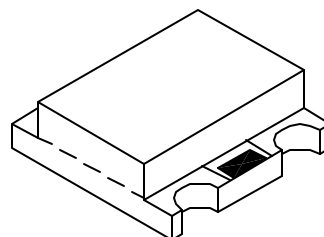


TAPE SPEC DETAIL

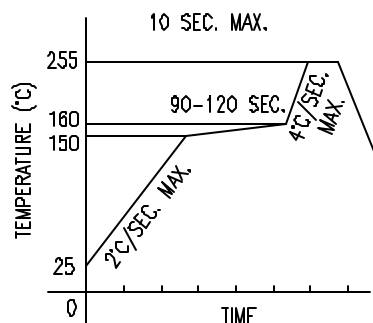


TAPE FEED DIRECTION

*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).

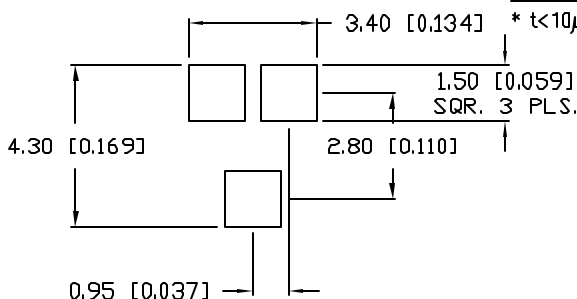


LEAD FREE REFLOW PROFILE



TOTAL TIME ABOVE 220°C IS 60 SECONDS MAX.

RECOMMENDED PAD LAYOUT



PART NUMBER
SML-LX15IGC-TR

REV.
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 (RED)		nm	
		565 (GREEN)		nm	
FORWARD VOLTAGE (R/G)		2.0/2.1	2.8	V_f	
REVERSE VOLTAGE	5.0			V_r	$I_r=100\mu\text{A}$
AXIAL INTENSITY		10		mcd	$I_f=20\text{mA}$
VIEWING ANGLE		140		2x theta	
EMITTED COLOR:	RED/GREEN				
EPOXY LENS FINISH:	WATER CLEAR				

LIMITS OF SAFE OPERATION AT 25°C PER CHIP

PARAMETER	COLORS	MAX	UNITS
PEAK FORWARD CURRENT*		160	mA
STEADY CURRENT	(R/G)	30/25	mA
POWER DISSIPATION		105	mW
DERATE FROM 25°C		-1.2	mW/°C
OPERATING, STORAGE TEMP.		-40 TO +85	°C

NOTES:

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

CAUTION: MOISTURE SENSITIVE DEVICE
PER JEDEC LEVEL 4 STANDARDS

UNCONTROLLED DOCUMENT

LEAD SIZE=±0.05 (0.002), LEAD LENGTH=±0.75 (±0.030), MIN.= +DECIMAL PRECISION -0.00, MAX.= +0.00 -DECIMAL PRECISION

REV.
D

PART NUMBER
SML-LX15IGC-TR

SOT-23 REPLACEMENT, SURFACE MOUNT LED,
635nm RED/565nm GREEN BICOLOR LED,
WATER CLEAR LENS, TAPE AND REEL

CONFIDENTIAL INFORMATION

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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:
JC

CHECKED BY:

APPROVED BY:

DATE: 11.28.06
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SCALE: N/A