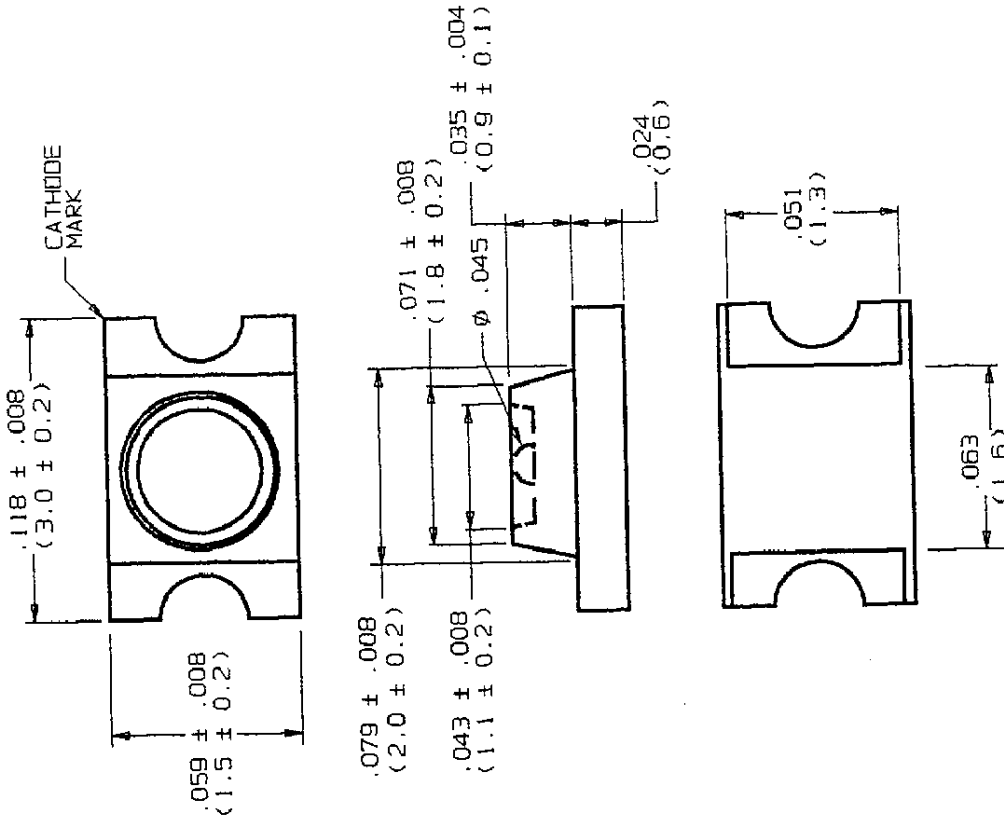


REV	ECR NO./DESCRIPTION	DATE
A	17289 KB NEW RELEASE	12/15/98



NOTES:  
1. ALL DIMENSIONS ARE IN INCHES (mm).

THIS Dwg IS THE PROPERTY OF CHICAGO MINIATURE LAMP INC. AND IS PROPRIETARY IN GENERAL AND IN DETAIL. IT SHALL NOT BE COPIED OR ITS CONTENTS REVEALED TO OUTSIDE PARTIES WITHOUT THE WRITTEN CONSENT OF CHICAGO MINIATURE LAMP INC.		FOR INSPECTION USE ONLY SPC DOCUMENTATION REQ. (X R CHARTS) TOLERANCE UNLESS OTHERWISE SPECIFIED FRACTION ± 1/64 INCHES .XX ± .010 (0.25) .XXX ± .010 (0.25) ANGLE ± 1 deg.	MODEL NO. --- MATERIAL: --- DIST V/S 1 OF 4 SHEET	SCALE: NTS A15601 REV A	DRAWN K. BARRETT CHECKED [Signature] ENG. APPROV [Signature]	TITLE SURFACE MOUNT LED
CHICAGO MINIATURE LAMP INC. 147 CENTRAL AVE. HACKENSACK, NJ 07601		CHICAGO MINIATURE LAMP INC.				

ORIGINAL

REV	ECR NO./DESCRIPTION	DATE
	SEE SHEET ONE	

**ELECTRO-OPTICAL CHARACTERISTICS:**

PART NUMBER	EMITTED COLOR	LENS COLOR	LIMITS INTENSITY		FORWARD VOLTAGE			PEAK WAVELENGTH (nm)	VIEWING ANGLE	MAXIMUM RATINGS				
			MIN. mcd	TYP. mcd	nA	TYP.	MAX.			nA	I <sub>F</sub> (mA)	V <sub>F</sub>	P <sub>D</sub> PEAK (mW)	
CM011-21VGC/TR8	GREEN	CLEAR	12.0	23.0	20	2.1	2.8	20	570	20°	25	5.0	150	105
CM011-21VYC/TR8	YELLOW	CLEAR	7.0	16.0	20	2.0	2.8	20	585	20°	30	5.0	150	105
CM011-21VRC/TR8	H.E. RED	CLEAR	6.0	15.0	20	2.0	2.8	20	640	20°	30	5.0	150	105
CM011-21SRC/TR8	SUPER RED	CLEAR	18.0	30.0	20	1.7	2.4	20	660	20°	30	5.0	150	100
CM011-21UGC/TR8	GREEN	CLEAR	18.5	31.0	20	1.7	2.8	20	570	20°	30	5.0	150	150

**NOTE:**

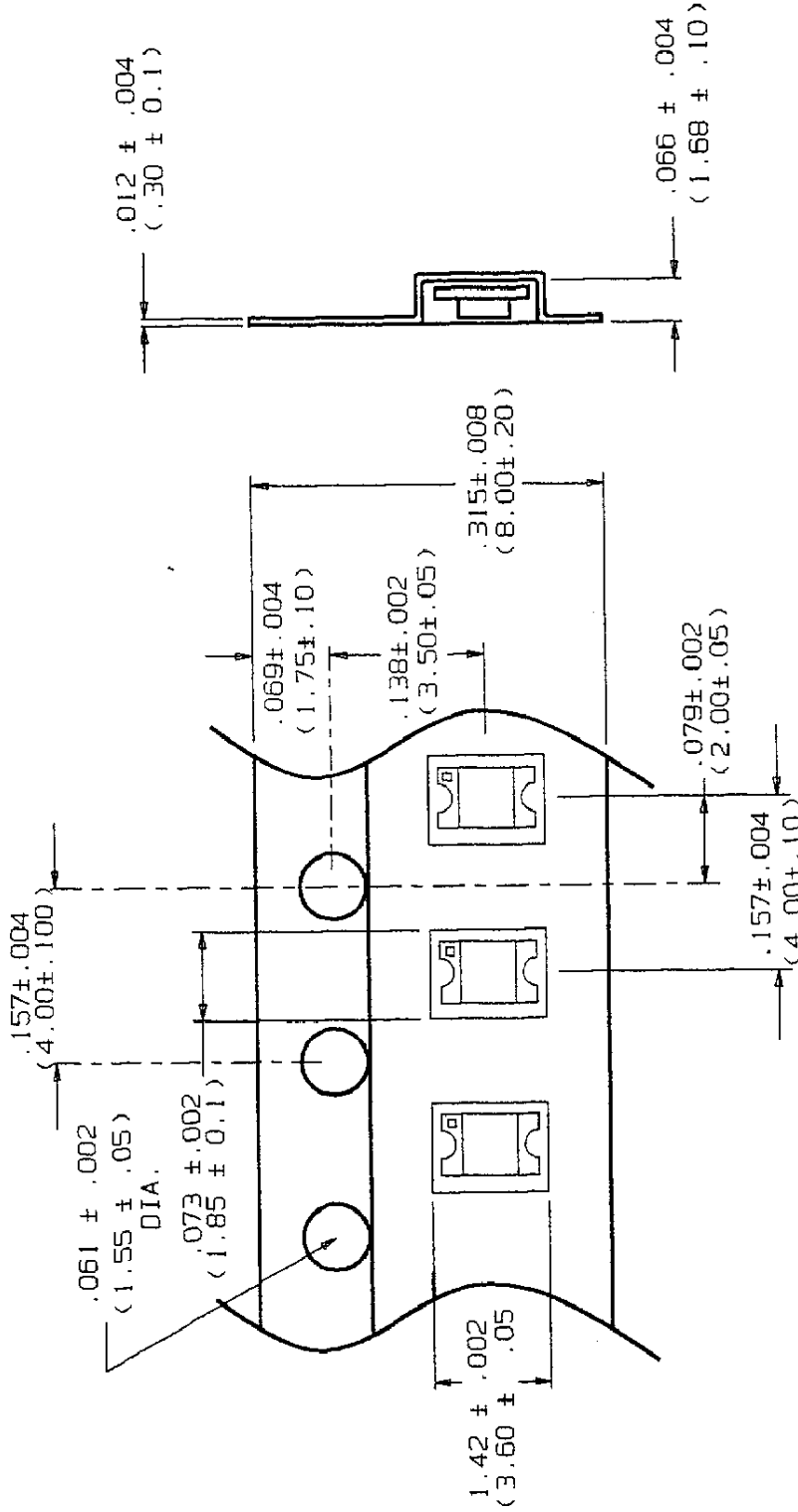
1. SOLDER REFLOW: PREHEAT @ 120°C FOR 2 MINUTES OR LESS  
REFLOW @ 260°C FOR 5 SECONDS OR LESS
2. OPERATING TEMPERATURE RANGE: -40°C TO +85°C  
STORAGE TEMPERATURE RANGE: -40°C TO +85°C

THIS Dwg IS THE PROPERTY OF CHICAGO MINIATURE LAMP INC. AND IS PROPRIETARY IN GENERAL AND IN DETAIL. IT SHALL NOT BE COPIED OR ITS CONTENTS REVEALED TO OUTSIDE PARTIES WITHOUT THE WRITTEN CONSENT OF CHICAGO MINIATURE LAMP INC.		(9) FOR INSPECTION USE ONLY (X) SPC DOCUMENTATION RED. (X R CHARTS) TOLERANCE UNLESS OTHERWISE SPECIFIED FRACTION ± 1/64 DECIMALS .XX ± .010X(0.25) .XXX ± .010 (0.25) ANGLE ± 1 deg.		DIST V/S 2 OF 4		MATERIAL: - SCALE: NTS A15601		REV A	
PART NO. SEE TABLE MODEL NO. ... DO NOT SCALE		DRAWN K. BARRETT CHECKED [Signature] ENG. APPROV [Signature]		SURFACE MOUNT LED		CHICAGO MINIATURE LAMP INC. 147 CENTRAL AVE. HICKENBACH, NJ 07801		TITLE	

**ORIGINAL**

REV	ECR NO./DESCRIPTION	DATE
	SEE SHEET ONE	

PROGRESSIVE DIRECTION

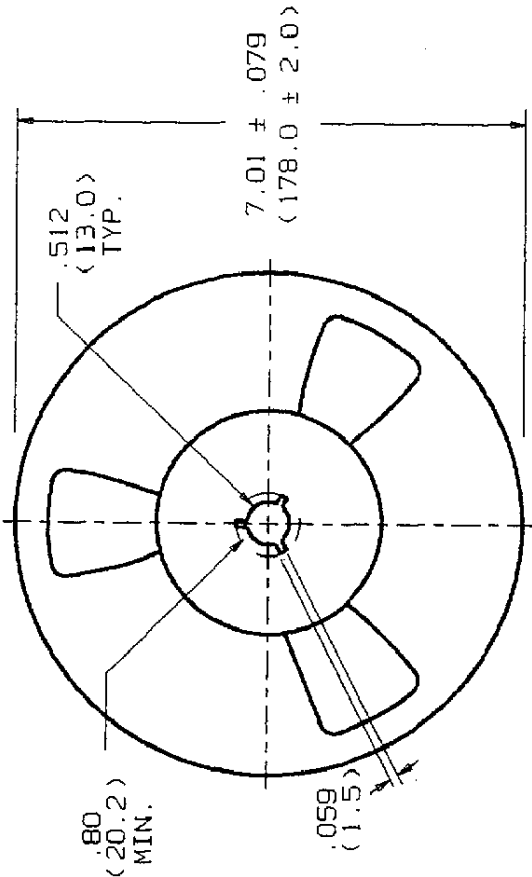


NOTES:  
1. ALL DIMENSIONS ARE IN INCHES (mm).

THIS DWG IS THE PROPERTY OF CHICAGO MINIATURE LAMP INC. AND IS PROPRIETARY IN GENERAL AND IN DETAIL. IT SHALL NOT BE COPIED OR ITS CONTENTS REVEALED TO OUTSIDE PARTIES WITHOUT THE WRITTEN CONSENT OF CHICAGO MINIATURE LAMP INC.		FOR INSPECTION USE ONLY SPC DOCUMENTATION REQ. (X R CHARTS) TOLERANCE UNLESS OTHERWISE SPECIFIED FRACTION ± 1/64 INCHES .XX ± .010 (0.25) MM ± .010 (0.25) ANGLE ± 1 deg.		TITLE SURFACE MOUNT LED	
DO NOT SCALE PART NO. SEE TABLE MODEL NO.		DRAWN K. BARRETT CHECKED ENG. APPROV.		CHICAGO MINIATURE LAMP INC. 147 CENTRAL AVE. HACKENSACK, NJ 07601	
DIST V/S 3 OF 4		SCALE: NTS A15601		REV A	

ORIGINAL

REV	ECR NO./DESCRIPTION	DATE
	SEE SHEET ONE	



NOTES:  
1. ALL DIMENSIONS ARE IN INCHES (mm).

THIS Dwg IS THE PROPERTY OF CHICAGO MINIATURE LAMP INC. AND IS PROPRIETARY IN GENERAL AND IN DETAIL. IT SHALL NOT BE COPIED OR ITS CONTENTS REVEALED TO OUTSIDE PARTIES WITHOUT THE WRITTEN CONSENT OF CHICAGO MINIATURE LAMP INC.		FOR INSPECTION USE ONLY SPC DOCUMENTATION REQ. (X R CHARTS) TOLERANCE UNLESS OTHERWISE SPECIFIED FRACTION ± 1/64 INCHES .XX ± .01X(0.25) .XXX ± .010 (0.25) ANGLE ± 1 deg.	
DO NOT SCALE PART NO. SEE TABLE MODEL NO. - MATERIAL: -		DRAWN K BARRETT CHECKED [Signature] ENCL. APPR [Signature] SCALE: NTS	
DIST V/S 4 OF 4 SHEET 4 OF 4		REV A A15601	
TITLE: SURFACE MOUNT LED		CHICAGO MINIATURE LAMP INC. 147 CENTRAL AVE. HADDONSBICK, NJ 07801	

ORIGINAL