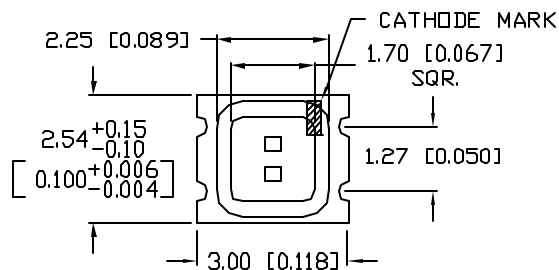
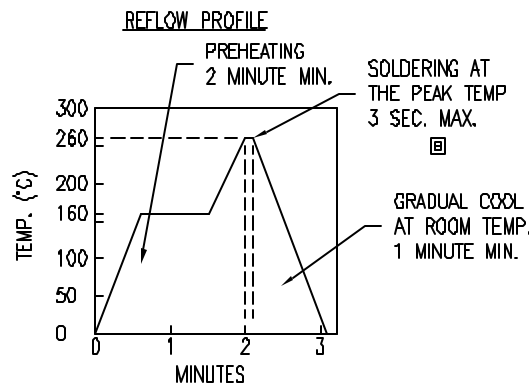
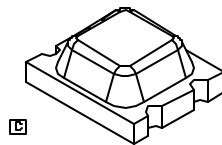
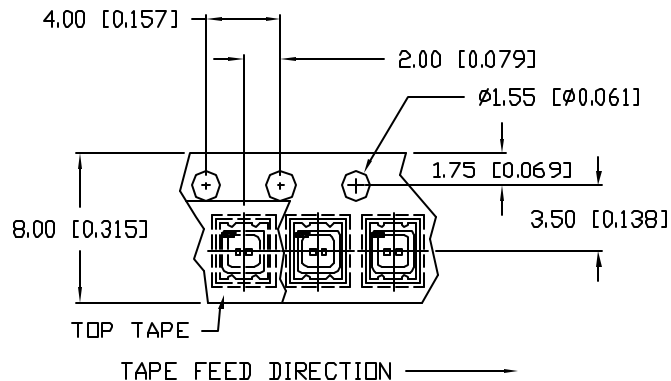
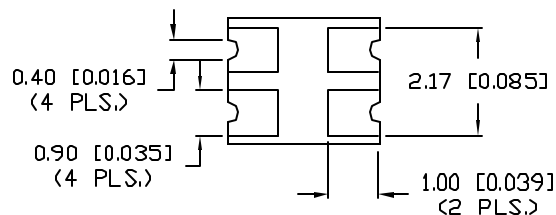
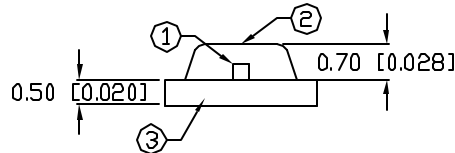
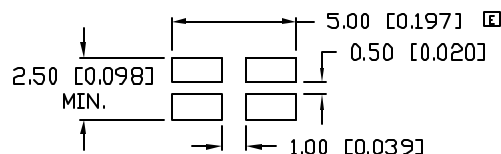


UNCONTROLLED DOCUMENT

RED  
RED

## RECOMMENDED SOLDER PAD LAYOUT



## NOTES:

1. PART SUPPLIED ON SUPER 8 TAPE AND REEL, 3,000 PIECES PER REEL.
2. THE CATHODE IS ORIENTED TOWARDS THE TAPE SPROCKET HOLE.
3. WHITE CERAMIC CARRIER.

CAUTION: MOISTURE SENSITIVE DEVICE  
PER JEDEC LEVEL 4 STANDARDS



PART NUMBER

CCL-CRS10SRSR

REV.

F

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #10390 & #10BRDR & REDRAWN.	10.2.98
B	E.C.N. 10484. ADDED SOLDER PROFILE	12.11.98
C	E.C.N. #10695. & REDRAWN IN 3D.	1.12.01
D	E.C.N. #10967.	3.14.03
E	E.C.N. #11271.	9.16.05
F	E.C.N. #11148.	12.01.06

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

PARAMETER	MIN	TYP	MAX	UNITS	TEST COND
PEAK WAVELENGTH		660 (RED)		nm	
FORWARD VOLTAGE		1.7	2.3	$V_f$	
REVERSE VOLTAGE	3.0			$V_r$	$I_f=100\mu\text{A}$
AXIAL INTENSITY		8		mcd	$I_f=20\text{mA}$
VIEWING ANGLE		180		2x theta	
EMITTED COLOR:	RED				
EPOXY LENS FINISH:	WATER CLEAR				

LIMITS OF SAFE OPERATION AT  $25^\circ\text{C}$ 

PARAMETER	COLORS	MAX	UNITS
PEAK FORWARD CURRENT*		60	mA
STEADY CURRENT		15	mA
POWER DISSIPATION		45	mW
DERATE FROM $25^\circ\text{C}$		-0.13	mW/ $^\circ\text{C}$
OPERATING TEMP.		-30 TO +75	$^\circ\text{C}$
STORAGE TEMP.		-40 TO +85	$^\circ\text{C}$

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

SOLDER HEAT PROOF TEST:	DIPPING FOR 5 SEC. AT $250^\circ\text{C}$ , 2 TIMES.
THERMAL SHOCK TEST:	15 MIN. AT $+90^\circ\text{C}$ , AND 15 MIN. AT $-30^\circ\text{C}$ , 25 CYCLES.
VIBRATION TEST:	50Hz, FULL AMPLITUDE WIDTH; 1.5mm, 2 HOURS VERTICALLY AND HORIZONTALLY, RESPECTIVELY.
MOISTURE TEST:	$T_d=60^\circ\text{C}$ , $R_h=90\%$ , 1,000 HOURS.
IRON SOLDERING:	20W IRON (SHARP TIP), $280-320^\circ\text{C}$ , 5 SEC. MAX.,
SOLDER DIP METHOD:	TEMP. IS $240-260^\circ\text{C}$ AND TIME IS WITHIN 10 SEC.
RE-FLOW SOLDERING:	SEE CHART.

UNCONTROLLED DOCUMENT

\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE:  $X=\pm 1$  ( $\pm 0.038$ ),  $X.X=\pm 0.5$  ( $\pm 0.020$ ),  $X.XX=\pm 0.25$  ( $\pm 0.010$ ),  $X.XXX=\pm 0.127$  ( $\pm 0.005$ ). LEAD SIZE= $\pm 0.05$  ( $\pm 0.002$ ), LEAD LENGTH= $\pm 0.75$  ( $\pm 0.030$ ). MIN.=<sup>+DECIMAL PRECISION</sup><sub>-0.00</sub> MAX.=<sup>+0.00</sup><sub>-DECIMAL PRECISION</sub>

REV.

F

PART NUMBER

CCL-CRS10SRSR

3.0mm x 2.5mm CERAMIC SURFACE MOUNT LED,  
660nm SUPER RED LED, WATER CLEAR LENS.

## CONFIDENTIAL INFORMATION

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

## 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.



290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
US WEB: www.lumex.com  
TW WEB: www.lumex.com.tw

DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE: 12.01.06
JC			PAGE: 1 OF 1
			SCALE: N/A

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Lumex:

CCL-CRS10SRSR