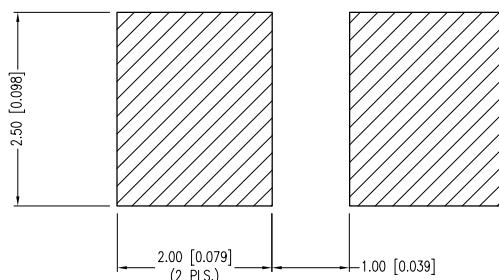


RECOMMENDED SOLDER PAD LAYOUT



PART NUMBER		CCL-CRS10R			REV.	G
DATE		E.C.N. NUMBER AND REVISION COMMENTS			REV.	
04.27.93		REDRAWN.			A	
10.02.98		E.C.N. #10390 & #10BRDR & REDRAWN.			B	
12.11.98		E.C.N. #10484. ADDED SOLDER SPECS.			C	
01.12.01		E.C.N. #10695. & REDRAWN.			D	
03.14.03		E.C.N. #10967.			E	
12.01.06		E.C.N. #11148.			F	
06.17.11		E.C.N. #10BRDR. & REDRAWN/#11730.			G	

ELECTRO-OPTICAL CHARACTERISTICS TA =25°C If=20mA					
PARAMETER	MIN	TYP.	MAX	UNITS	TEST COND
PEAK WAVELENGTH		635		nm	
FORWARD VOLTAGE		2.0	2.5	Vf	
REVERSE VOLTAGE	4.0			Vr	Ir=100μA
AXIAL INTENSITY		12		mod	If=20mA
VIEWING ANGLE		180		2x theta	
EMITTED COLOR:	RED				
EPOXY LENS FINISH:	WATER CLEAR				

LIMITS OF SAFE OPERATION AT 25°C		
PARAMETER	MIN	UNITS
PEAK FORWARD CURRENT*	100	mA
STEADY CURRENT	25	mA
POWER DISSIPATION	65	mW
DERATE FROM 25°C	-33	mW/°C
OPERATING TEMP.	-30 TO +75	°C
STORAGE TEMP.	-40 TO +85	°C

\* t&lt;10μS

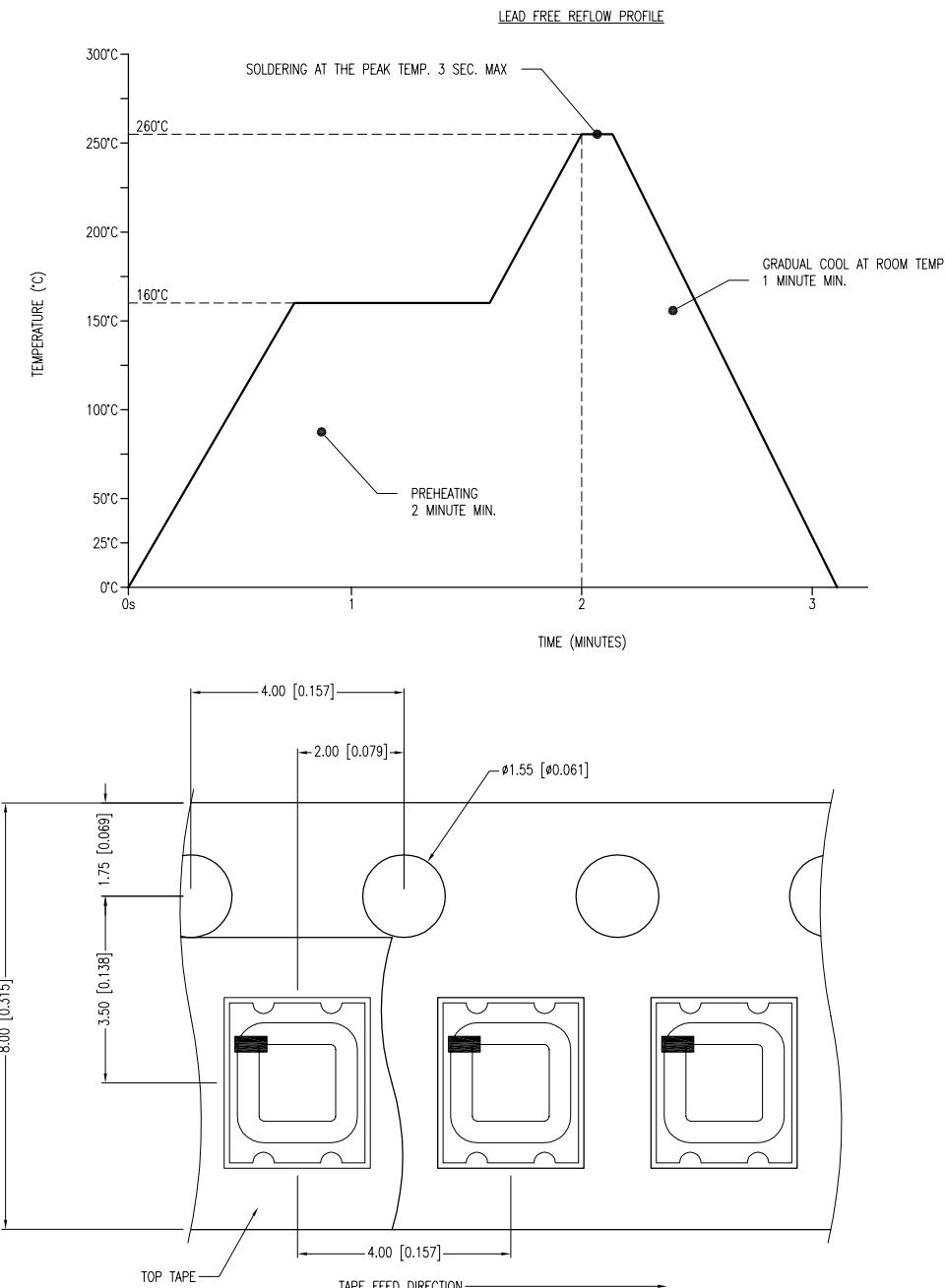
SOLDER HEAT PROOF TEST:	DIPPING FOR 5 SEC. AT 250°C, 2 TIMES.
THERMAL SHOCK TEST:	15 MIN. AT +90°C, AND 15 MIN. AT -30°C, 25 CYCLES.
VIBRATION TEST:	50Hz, FULL AMPLITUDE. WIDTH: 1.5mm, 2 HOURS VERTICALLY AND HORIZONTALLY, RESPECTIVELY.
MOISTURE TEST:	Ta=60°C, Rh=90%, 1,000 HOURS.
IRON SOLDERING:	20W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

G E

CAUTION: MOISTURE SENSITIVE DEVICE  
PER JEDEC LEVEL 2A STANDARDS

\*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= -0.00 DECIMAL PRECISION MAX= +0.00

UNCONTROLLED DOCUMENT



\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 ( $\pm 0.039$ ), X.X=±0.5 ( $\pm 0.020$ ), X.XX=±0.25 ( $\pm 0.010$ ), X.XXX=±0.127 ( $\pm 0.005$ ). LEAD SIZE=±0.05 ( $\pm 0.002$ ), LEAD LENGTH=±0.75 ( $\pm 0.030$ ). MIN=  $^{+0.00}$  MAX=  $^{+0.00}$   $^{-0.00}$

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