



INSTRUCTIONS:

THE SYMBOL (Q) REFERS TO ITEMS THAT RELATE TO THE QUALITY CONTROL FUNCTION; THE (P) SYMBOL REFERS TO ITEMS THAT WILL BE HANDLED BY PRODUCTION.

1. (Q) SILK-SCREEN BLACK INK AROUND PERIMETER TO SPECIFIED THICKNESS; ONE SIDE ONLY.
2. (Q) INK SPLATTER BEYOND THE INK PERIMETER SPECIFIED IS NOT ACCEPTABLE.
3. IF MASKING IS USED TO MEET THE "NO INK SPLATTER" REQUIREMENT ABOVE, THE MASKING IS TO FACILITATE THE QUICK REMOVAL OF STRAY INK. THE MASKING MAY BE DONE IN A NUMBER OF WAYS:
 - A PRINTABLE MASK MAY BE USED
 - MASKING TAPE MAY BE USED
 (Q) REGARDLESS, THE MASKING MATERIAL MUST NOT LEAVE ANY ADHESIVE RESIDUE AND MUST BE EASILY REMOVABLE
4. (Q) MATERIAL: 0.076±0.006" THK CLEAR SODA LIME FLOAT GLASS.
5. (Q) ANTI-GLARE TREATMENT: ACID ETCHED ON ONE SIDE; GLOSS SHALL BE 100 ± 10
6. (Q) GLASS EDGES MUST BE SEAMED (FOR SAFETY REASONS). THIS MEANS THAT THERE SHALL BE NO SHARP EDGES.
7. (Q) PARTS TO BE INDIVIDUALLY PROTECTED AGAINST COSMETIC DAMAGE AND BREAKAGE DURING SHIPPING.
8. (C) (Q) **THE SUPPLIER'S GLASS QUALITY** VISUAL STANDARDS: 60/40 (SCRATCH / DIG). THIS STANDARD IS BASED ON MIL-O-13830 BUT MODIFIED FOR SIMPLICITY:
 - A. PARTS ARE TO BE FREE OF ANY SINGLE SCRATCH (REGARDLESS OF LENGTH OR THE DISTRIBUTION OF SCRATCHES ON ONE PIECE OF GLASS) WHICH EXCEEDS THE MAXIMUM ALLOWABLE WIDTH OF A SCRATCH DEFINED BY THE "60" SCRATCH CATEGORY
 - B. PARTS ARE TO BE FREE OF ANY SINGLE DIG (REGARDLESS OF THE TOTAL NUMBER OF DIGS OR THEIR DISTRIBUTION ON THE SURFACE OF ONE PIECE OF GLASS) WHICH EXCEEDS THE MAXIMUM ALLOWABLE DIAMETER OF A DIG DEFINED BY THE "40" DIG CATEGORY
 - C. PARTS ARE TO BE FREE OF OTHER GLASS DEFECTS SUCH AS BUBBLES, SOLID INCLUSIONS ("STONES"), CRACKS ("CHECKS"), KNOTS, CORDS, STRIAE, STAINS, CORDS, REAM, STRAIN, LAPS, AND EDGE CHIPS THAT ENCROACH MORE THAN 0.030" FROM THE EDGE TOWARDS THE VIEWING AREA.
9. (C) (P) **THE LARSON DAVIS PRODUCTION GLASS QUALITY** VISUAL STANDARD IS THAT THE GLASS SHALL NOT HAVE PERMANENT DEFECTS VISIBLE TO THE HUMAN EYE WHEN THE GLASS IS PLACED OVER AN 831/LXT BACKLIT DISPLAY (P/N A770.02). NO MAGNIFICATION IS ALLOWED DURING THIS INSPECTION PROCESS. IF GLASS DEFECTS ARE FOUND THAT ARE VISIBLE UNDER THESE CONDITIONS BUT DO NOT EXCEED THE 60/40 STANDARD IN NOTE 8 ABOVE, THAT PIECE OF GLASS BECOMES **"PRODUCTION SCRAP"GLASS. THIS GLASS SHALL BE SCRAPPED BUT IT IS NOT RETURNABLE TO THE SUPPLIER.**
10. (C) (Q) **THE LARSON DAVIS INCOMING QA INSPECTION** GLASS QUALITY STANDARD IS LISTED IN NOTE 8 ABOVE. VISUALLY VERIFY THE **GLASS** QUALITY BY TAKING THE GLASS INTO A DARK ROOM WITH A SINGLE FLOURESCENT LIGHT SOURCE IN THE MIDDLE OF A BLACK WALL (T12 BULB, 15W, COOL WHITE) . STAND 12-14" AWAY FROM THE LIGHT SOURCE, AND HOLD THE GLASS UP TO THE LIGHT SO THAT YOU CAN SEE THROUGH THE GLASS. WHILE LOOKING AT THE BLACK AREA JUST BELOW THE LIGHT, SLOWLY MOVE THE GLASS (PERPENDICULARLY TO THE BULB) STARTING AT ONE EDGE OF THE GLASS AND PROCEEDING TO THE OPPOSITE EDGE. WHILE MOVING THE GLASS LOOK FOR DEFECTS. THIS PART OF THE INSPECTION SHOULD TAKE ABOUT 20 SECONDS. THEN, VISUALLY COMPARE QUESTIONABLE GLASS DEFECTS AGAINST THE EDMUND OPTICS SCRATCH & DIG PADDLE (LD P/N T770.0005). DO NOT USE MAGNIFICATION DURING THIS INSPECTION.
11. (C) (Q) IF THE GLASS IS TOO DIRTY TO PROPERLY INSPECT USE GLASS CLEANER AND A LINT-FREE CLOTH TO WIPE CLEAN. THEN, CONTINUE WITH THE VISUAL INSPECTION.

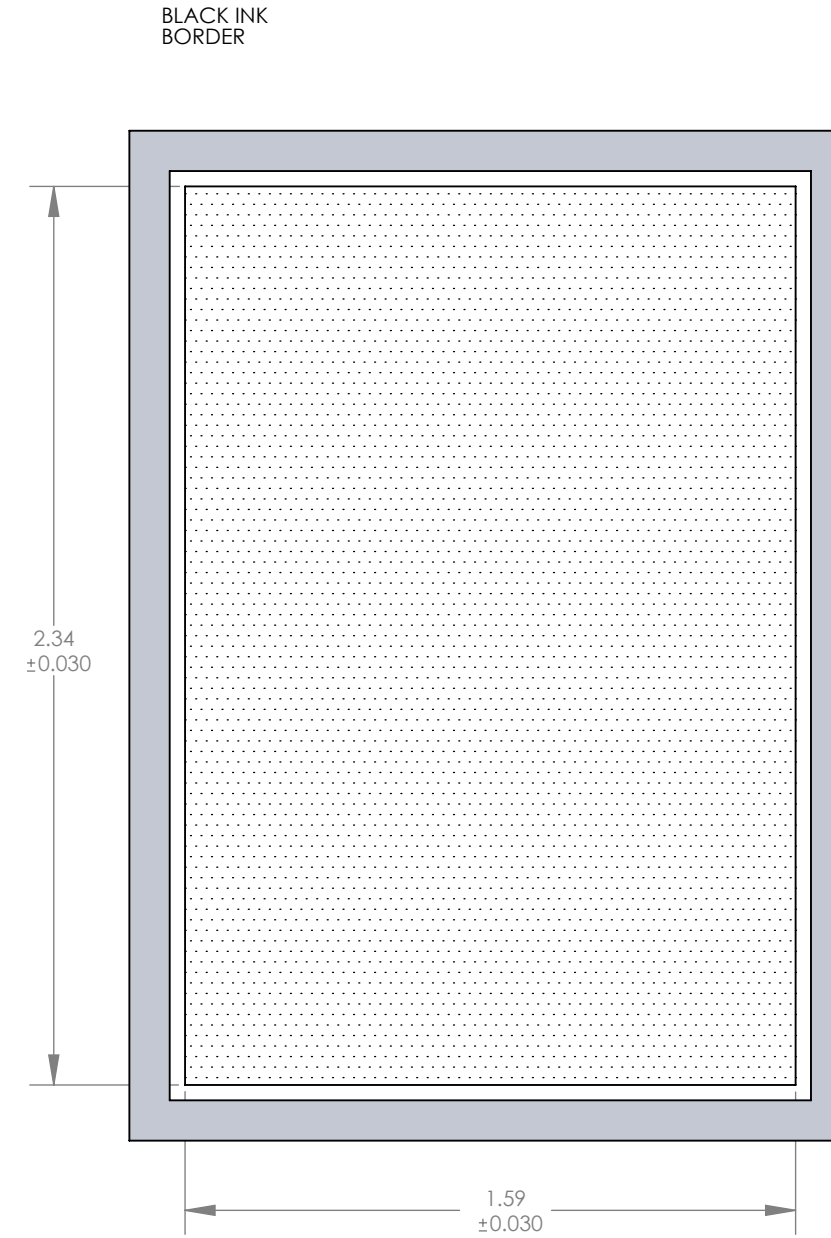
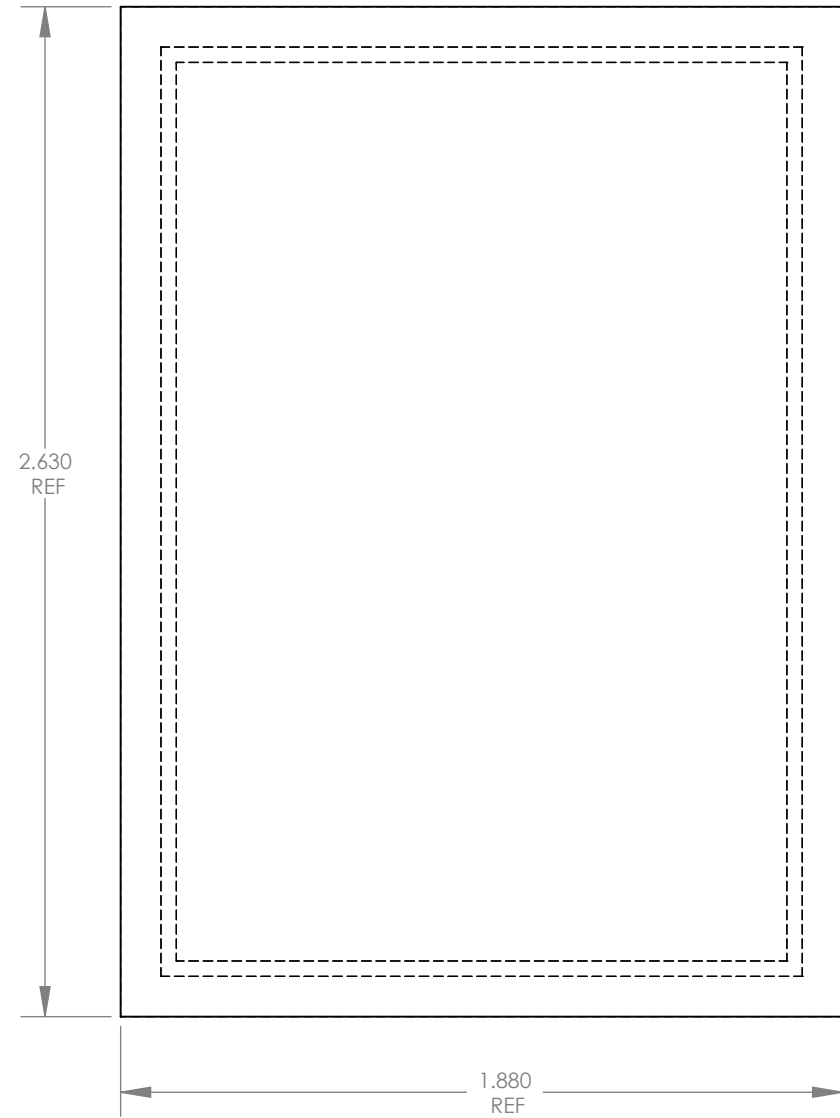
REV.	REVISION DESCRIPTION	DATE	BY	ECO
-	RELEASED FOR REVIEW	10/13/10	PJS	
A	ANTI-GLARE TREATMENT WAS BROADBAND A/R COATING; REMOVED NOTE FOR GLASS COATING VISUAL QUALITY STANDARD (GOING WITH ETCHED GLASS INSTEAD), ALSO REMOVED LARSON DAVIS GLASS COATING VISUAL QUALITY STANDARD (FOR THE SAME REASON); IN THE GLASS QUALITY VERIFICATION NOTE, ADDED "LCD DISPLAY P/N A770.02", REMOVED "LIGHTED MAGNIFIER" AND ALSO ADDED "MAGNIFICATION AND/OR MAGNIFIERS SHALL NOT BE USED TO DETERMINE IF THE GLASS PASSES OR FAILS THE GLASS QUALITY STANDARD".	10/29/10	PJS	
B	MODIFIED NOTE 9 TO APPLY ONLY TO PRODUCTION GLASS QUALITY STANDARDS; MODIFIED NOTE 10 TO APPLY ONLY TO INCOMING QA INSPECTION AND ADDING THE "DARK ROOM" INSPECTION METHOD.	11/11/10	PJS	FOR PROTOTYPE RUN ONLY
C	CHANGED DIMENSIONS ON DISPLAY BORDER TO MEET MANUFACTURING PROCESS. 0.100 ±0.010, AND 0.005 -0.003.	04/08/2011	WS	
D	UPDATED DOCUMENTATION OF CLEANING FOR INSPECTION.	12/3/13	EB	

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 COPYRIGHT © PCB PIEZOTRONICS, INC. FILE NAME: D0001.9007(D) Inspection of 831-LxT Glass Window

MATERIAL	--	DIMENSIONS ARE IN INCHES	NAME	DATE	 Provo, Utah, USA (801) 375-0177 INSPECTION OF 831-LxT GLASS WINDOW
FINISH	--	DIMENSIONAL TOLERANCES	DRAWN	11 OCT 10	
GENERAL NOTES		.X ±.050 .XX ±.010 .XXX ±.005 .XXXX ±.003 ANGULAR ±.5°	CHECKED		
BREAK ALL SHARP EDGES.		HOLE TOLERANCES Ø.013 - .249 +.003, -.002 Ø.250 - .499 +.005, -.003 OVER Ø.499 ±.005	ENGINEER	11 OCT 10	
			SIGNED		TITLE
			 DENOTES CRITICAL FEATURE		SIZE B NUMBER D0001.9007 REV. D
			SCALE 1:1	WEIGHT	SHEET 1 OF 3

NOTES:

1.  THIS PAGE IS DESIGNED TO DEFINE THE MASKING DIMENSIONS AND TOLERANCES IF MASKING IS USED TO FULFILL THE REQUIREMENTS OF "NO INK SPLATTER" INDICATED ON SHEET 1



SHADED AREA IS MASKING (SEE NOTE ON THIS PAGE)

NOTES:

1. (Q) THIS SHEET IS DESIGNED TO DEFINE THE PARAMETERS REQUIRED OF THE BLACK INK BORDER (WHICH IS USED IN THE ASSEMBLY TO CREATE A SPACE BETWEEN A BACKLIT LCD AND THIS PROTECTIVE GLASS FOR THE PURPOSE OF ELIMINATING NEWTON RINGS)
2. MASKING (IF USED TO CATCH INK SPLATTERS) IS NOT PICTURED HERE FOR SAKE OF CLARITY
3. (Q) OVERLAY THE 831 LCD POLARIZER TO MAKE SURE THE PRINTED BORDER OVERLAPS THE POLARIZER EDGES.

