

NOTES (UNLESS OTHERWISE SPECIFIED):

GENERAL

- 1) PCB IS x-LAYER, .062" THICK.
- 2) CONSTRUCTION IS SOLDER-MASK-OVER-BARE-COPPER (SMOBC).
- 3) ACCEPTABILITY SHALL BE BASED ON IPC-A-600, CLASS 2.
- 4) THE FOLLOWING GERBER RS274X PHOTO TOOL FILES SHALL BE USED TO DEFINE ALL CIRCUIT FEATURES:

*.GTL - TOP LAYER GERBER DATA
*.G1 - MID LAYER 1 GERBER DATA

*.GP1 - INTERNAL PLANE LAYER 1 GERBER DATA
*.GP2 - INTERNAL PLANE LAYER 2 GERBER DATA
*.GP3 - INTERNAL PLANE LAYER 3 GERBER DATA
*.GP4 - INTERNAL PLANE LAYER 4 GERBER DATA
*.GP5 - INTERNAL PLANE LAYER 5 GERBER DATA
*.GBL - BOTTOM LAYER GERBER DATA
*.GTO - TOP OVERLAY GERBER DATA
*.GTS - TOP SOLDER MASK GERBER DATA
*.GTP - TOP-SIDE SOLDER PASTE MASK
*.GBO - BOTTOM OVERLAY GERBER DATA
*.GBS - BOTTOM SOLDER MASK GERBER DATA
*.GBP - BOTTOM-SIDE SOLDER PASTE MASK

- 5) THE PHOTO TOOL SHALL NOT BE COMPENSATED WITHOUT PRIOR ENGINEERING APPROVAL.
PCB DESIGNER: RICH LOBDILL PH (805) 880-1621 FAX (805) 961-1792.

FABRICATION TOLERANCES

- 6) END PRODUCT CONDUCTOR WIDTHS AND PAD DIAMETERS SHALL NOT VARY MORE THAN 0.002" FROM THE 1:1 DIMENSIONS OF THE MASTER ARTWORK.
- 7) THE CONDUCTIVE PATTERN SHALL BE POSITIONED SO THAT THE LOCATION OF ANY PAD OR LAND SHALL BE WITHIN 0.005" DIAMETER TO THE TRUE POSITION OF THE HOLE IT CIRCUMSCRIBES.
- 8) ALL DRILL HOLE SIZES AND TOLERANCES APPLY AFTER PLATING.
- 9) THE MINIMUM ANNULAR RING SHALL BE 0.005".
- 10) BOW AND TWIST SHALL NOT EXCEED 0.010" PER INCH.
- 11) FOR PCB ROUTING DIMENSIONS: .XXX = +/- .005" .XX = +/- .020"

MATERIAL

- 12) BASE MATERIAL IS FR4 EPOXY FIBERGLASS
- 13) SEE STACK-UP LEGEND FOR COPPER CLADDING CALL OUTS

PLATING

- 14) ALL HOLES AND CONDUCTIVE SURFACES SHALL BE PLATED WITH A MINIMUM OF 0.001" COPPER.
- 15) AFTER SOLDERMASK, ALL EXPOSED HOLES AND CONDUCTIVE SURFACES SHALL BE COATED WITH A GOLD IMMERSION PLATING TO PRESERVE SOLDERABILITY.

COATINGS

- 16) THE SOLDERMASK SHALL BE BLACK LIQUID PHOTO-IMAGEABLE PER IPC-SM-840, TYPE-B, CLASS 2.
- 17) THE SOLDERMASK REGISTRATION ALLOWANCE IS 0.003". THERE SHALL BE NO SOLDERMASK ON ANY SOLDER PAD OR LAND.

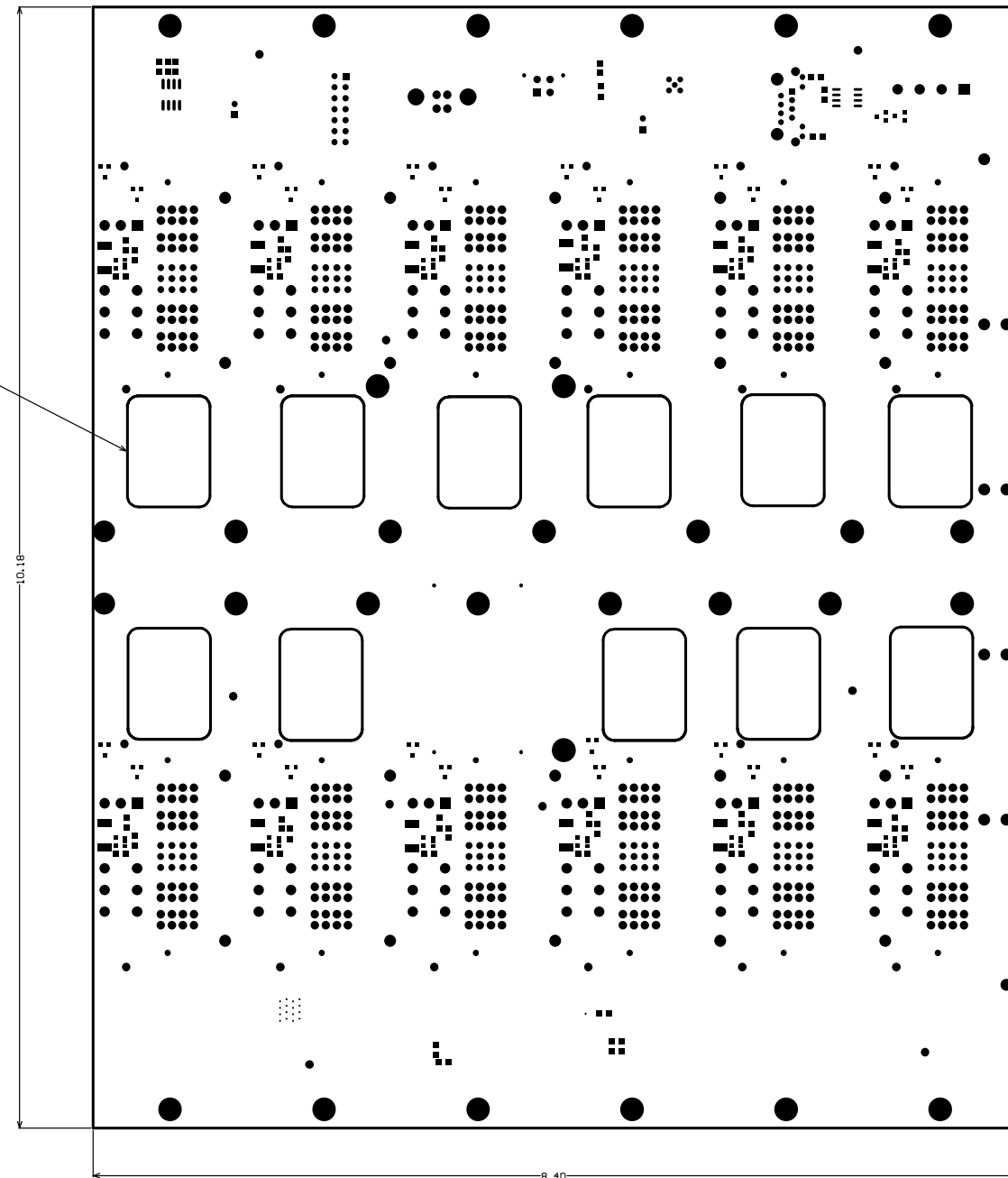
MARKING

- 18) THE LEGEND SHALL BE SCREEN-PRINTED USING PERMANENT YELLOW EPOXY INK.
- 19) THE SCREEN PRINTING REGISTRATION ALLOWANCE IS 0.007". THERE SHALL BE NO INK ON ANY SOLDER PAD OR LAND.
- 20) THE VENDOR CODE AND UL FLAMMABILITY RATING MAY BE ETCHED IN THE FOIL OR MARKED IN PERMANENT EPOXY INK (VENDOR'S OPTION).

ELECTRICAL TESTING

- 21) ALL BOARDS SHALL BE ELECTRICALLY TESTED TO THE SUPPLIED IPC-D-356A NET LIST FOR CONTINUITY, OPENS AND SHORTS.

NOTE: BOARD CUTOUTS (11 PLCS)



Layer Stack Up Detail for: 175-00024_rev2, Backplane, Instrument Crate,PcbDoc

Layer Name	COPPER THICKNESS
Top Layer (*.GTL)	1/2 oz, 1 oz Finished
Mid-Layer 1 (*.G1)	1/2 oz
+3.3U (*.GP1)	1/2 oz
+24U (*.GP2)	2 oz
RTN (*.GP3)	2 oz
+12U (*.GP4)	1/2 oz
Signal GND (*.GP5)	1/2 oz
Bottom Layer (*.GBL)	1/2 oz, 1 oz Finished

NOTE: 2 OZ COPPER FOR CERTAIN LAYERS

PRIMARY PCB SPECIFICATIONS	
(REFER TO COMPLETE SPEC LISTING AT LEFT FOR FURTHER DETAILS)	
NUMBER OF LAYERS	8
FINISHED THICKNESS	.062"
BASE MATERIAL	FR4
PLATING TYPE	GOLD IMMERSION
SOLDER MASK COLOR	BLACK

Las Cumbres Observatory Global Telescope Network		Las Cumbres Observatory, Inc. 6740 Cortona Dr. Goleta, CA 93117 www.lcogt.net	
DATE 11/2/2011	DESIGNED Rich Lobdill	DRAWN Rich Lobdill	SCALE 1 : 1
CHECKED DATE	APPROVED DATE		
FILE 175-00024, BACKPLANE, INSTRUMENT CRATE			
REV C	DOC NO. - GPT	REV 2A	SHEET 1 OF X