

NOTES (UNLESS OTHERWISE SPECIFIED):

GENERAL

- 1) PCB IS 7-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 -- MD 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
- *GBL -- BOTTOM LAYER GERBER DATA
- *G10 -- TOP OVERLAY GERBER DATA
- *G1S -- TOP SOLDER MASK GERBER DATA
- *G1P -- TOP-SIDE SOLDER PASTE MASK
- *G30 -- BOTTOM OVERLAY GERBER DATA
- *G3S -- BOTTOM SOLDER MASK GERBER DATA
- *G3P -- BOTTOM-SIDE SOLDER PASTE MASK

- 5) THE PHOTO TOOL SHALL NOT BE COMPENSATED WITHOUT PRIOR ENGINEERING APPROVAL.
- PCB DESIGNER: RICH LOEBL 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 WORK.
 - 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 IF 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.
 - 16) COPPER THICKENING ON LAYERS AS NEEDED

COATINGS

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

MARKING

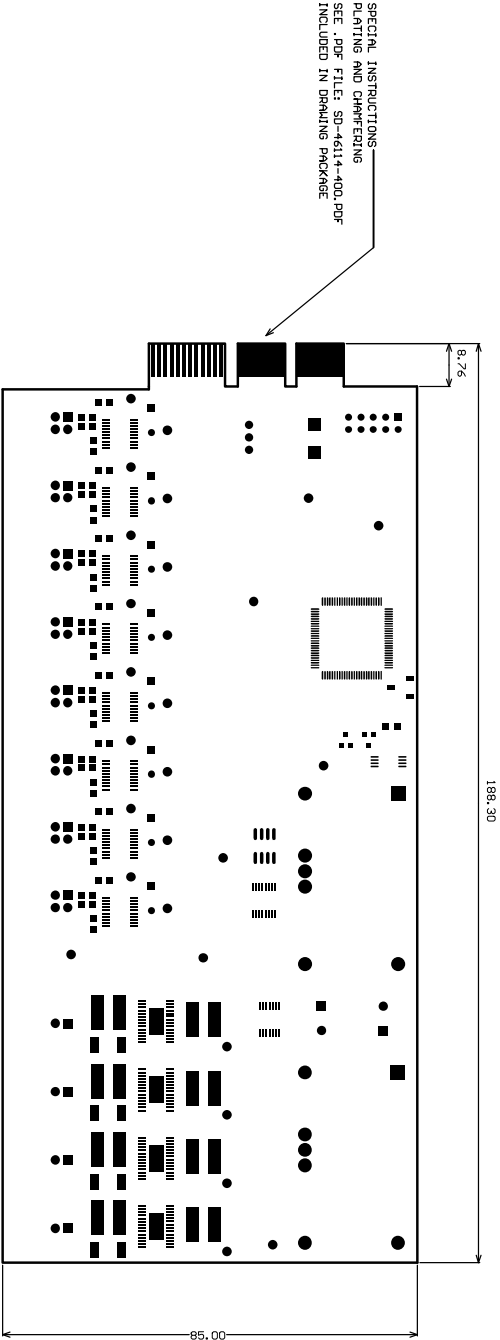
- 19) THE LEGEND SHALL BE SCREEN-PRINTED USING PERMANENT YELLOW EPOXY INK.
- 20) THE SCREEN PRINTING REGISTRATION ALLOWANCE IS 0.007". THERE SHALL BE NO INK ON ANY SOLDER PAD OR LAND.
- 21) THE VENDOR CODE AND UL FLAMMABILITY RATING MAY BE ETCHED IN THE FOL OR MARKED IN PERMANENT EPOXY INK (VENDORS OPTION).

ELECTRICAL TESTING

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

Layer Stack Up Detail for: 175-00060, rev1, PCB, NRES RTD_TEC Board.d pcbdoc

COPPER THICKNESS	
Layer Name	
Top Layer (*.GTL)	1/2 oz, 1 oz finished
Middle Layer 1 (*.G1)	1 oz
InternalPlane1 (*.GP1)	1 oz
InternalPlane2 (*.GP2)	1 oz
InternalPlane3 (*.GP3)	1 oz
InternalPlane4 (*.GP4)	1 oz
Bottom Layer (*.GBL)	1/2 oz, 1 oz finished



PRIMARY PCB SPECIFICATIONS

- (REFER TO COMPLETE SPEC LISTING AT LEFT FOR FURTHER DETAILS)
- NUMBER OF LAYERS -- 7
 - FINISHED THICKNESS -- .062"
 - BASE MATERIAL -- FR4
 - PLATING TYPE -- GOLD IMMERSION
 - SOLDER MASK COLOR -- RED

Las Cumbres Observatory
Global Telescope Network

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