CAMtasticDXP (TM):

# 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

- \*.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
- \*GBO BOTTOM OVERLAY GERBER DATA
- \*.GTP TOP-SIDE SOLDER PASTE MASK
- \*.GBP BOTTOM-SIDE SOLDER PASTE MASK
- \*.GBS BOTTOM SOLDER MASK GERBER DATA
- 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.
- 8.1) DRILL TOLFRANCES +/- 0.003" 8.2) 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) 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.

- 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

Layer Stack Up Deta	il for: 175-00013 rev2.PcbDoc
Layer Name	Copper cladding
Top Layer (*GTL)	1/2 oz. (1 oz. Finished)
+24V (*.GP1)	1/2 oz
GND (*.GP2)	1/2 oz
+12U (*.GP3)	1/2 oz
+3.3V (*.GP4)	1/2 oz
-12V (*.GP5)	1/2 oz
Bottom Layer (*.GBL)	1/2 oz. (1 oz. Finished)

PRIMARY PCB SPECIFICATIONS

FINISHED THICKNESS -

BASE MATERIAL FR4 GOLD IMMERSION PLATING TYPE **BLACK** 

(REFER TO COMPLETE SPEC LISTING AT LEFT FOR FURTHER DETAILS) NUMBER OF LAYERS -7 .062"

SOLDER MASK COLOR -

Las Cumbres Observatory 6740 Cortona Dr. Goleta, CA 93117 Global Telescope Network Rîch Lobdill | SOALE | 1 : 1 1/2/2011 Rich Lobdill 175-00013. 1m Mirror Cover Controller 2 See 1 of 20 - GPT

Las Cumbres Observatory, Inc.

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