Appendix A

Drawings

5 prototype Pixel Scintillation Counters were fabricated at Panjab University, Chandigarh. The total set of drawings was designed and developed in the department itself and got approved from Fermilab, USA before fabricating the counters. The mechanical fabrication work was done at the department as well as in the Central Tool Room, Ludhiana (CTRL).

Figures A.1 - A.14 show the drawings having the complete design of the fabricated counters.
Figure A.1: Design showing a pixel assembly counter.
Figure A.2: Drawing of a pixel scintillation counter showing special 8 grooves with dimensions (1mm wide × 6 mm wide).
Figure A.3: Bottom cover of pixel scintillation counter.
Figure A.4: Top cover of pixel scintillation counter.
Figure A.5: Design of aluminium channel used to provide support to pixel counters.
NOTES:
1. GENERAL TOLERANCE ±0.1
2. ALL DIMENSIONS IN MM
Figure A.7: Design of cookie.
Figure A.8: Design of cookie embedded with 12 WLS fibers.
NOTES:
1. GENERAL TOLERANCE ±0.1
2. ALL DIMENSIONS IN MM

Figure A.9: Design of a coupling used for PMT.
NOTES:
1. GENERAL TOLERANCE ±0.1
2. ALL DIMENSIONS IN MM

Figure A.10: Design of a connector.
NOTES:
1. GENERAL TOLERANCE ±0.1
2. ALL DIMENSIONS IN MM

Figure A.11: Design of a clamp with diameter 42.0 mm.
Figure A.12: Design of a clamp with diameter 48.0 mm.
NOTES:
1. GENERAL TOLERANCE ±0.1
2. ALL DIMENSIONS IN MM

Figure A.13: Design of a rectangular spacer used to fix cookie cover on the top cover of pixel scintillation counter.
Figure A.14: Design of a cylindrical spacer.

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NOTES:
1. GENERAL TOLERANCE ± 0.1
2. ALL DIMENSIONS IN MM

Design: CYLINDRICAL SPACER

HEP GROUP
DEPARTMENT OF PHYSICS
PANJAB UNIVERSITY, CHANDIGARH

PPD/MECHANICAL SUPPORT