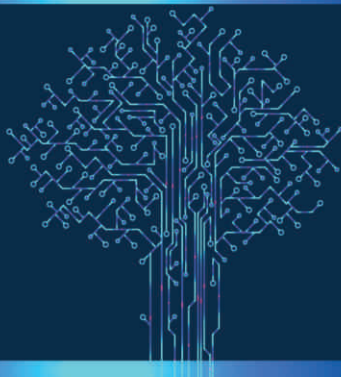




DHAN LAMINATES PVT LTD

A Leader in Laminates & PCB's



UNIT- II, PCB DIVISION

ABOUT US :

Dhan Laminates entered in Bare PCB Manufacturing and established a State of the Art manufacturing facility in Kolkata (West Bengal) using most modern equipment's and technologies. We are committed to achieve the same level which we achieved in Laminate manufacturing using our knowledge, dedication & focus towards Quality & Customer Service.

The plant is incorporated with ISO 9001:2015 certified Quality Management System and using most stable and modern processes and process control techniques and reliable raw material. We are committed to provide the best Electrical Insulation and Electronics Interconnection to fulfill the customer requirements.

PRODUCTION CAPACITY & TECHNICAL CAPABILITIES

* Production Capacity	: Single Side - 20000 Sq. Mt. / Month : Metal Core - 10000 Sq. Mt. / Month
* Type Of Laminates	: CEM-1 / CEM-3 / FR4 & Metal Core
* Laminate Thickness	: 0.4 – 3.20 mm
* Copper Foil Thickness	: 15 micron – 70 micron
* Minimum Track Width	: 0.15mm (Single Side)
* Minimum Spacing	: 0.15mm (Single Side)
* Min. Hole Size (CNC)	: 0.60 mm (Finish)
* Min. Hole Size (Punching)	: 0.80 mm
* Maximum PCB Size (S/S)	: 1180 mm x 500 mm
* Maximum PCB Size (MC)	: 1180 mm x 500 mm
* Mechanical Tolerances	: +/- 0.10 mm
* Surface Finishes	: Lacquer / Tinning/ Carbon / OSP
* Acceptable Data Formats	: Gerber 274X / Protel Files / Coral Draw Files / Autocad Files



List of Machinery For Single Sided & Metal Core PCB's

Cutting Area

Hydraulic Shearing Machines
Paddle Shearing Machines
Roller Cutting Machines

Printing Area

Fully Automatic Printing Machines
Semi-Automatic Printing Machines
Manual Printing Stations
Semi-Automatic Optical Guide Hole Drilling Machines
UV Curing Machines
OVEN for Solder-masking Curing

Chemical Area

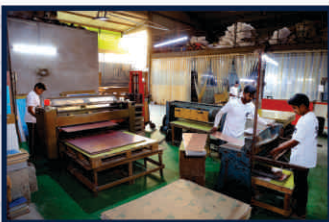
Fully Automatic Etching & Stripping Line
Fully Automatic Chemical Cleaning & Scrubbing Lines

Final Finish Area

CNC Routing Machine 4 Spindle
CNC Routing Machine 2 Spindle
Power Press for Punching & Different Outer Profile
CNC V-Grooving Machine with Jump Score
Fully Automatic V-Grooving Machine with Jump Score
Manual V-Grooving Machine

Surface Finish Area

Automatic Lacquer Coating Machine
Solder Tinning Machine
Automatic OSP Line



Manufacturing a Single Side PCB is not a ROCKET SCIENCE. At DLPL we firmly believe our commitment to Quality and Workmanship will ultimately be the deciding factor. Our PCB's are inspected during all the 18 processes shown below in our manufacturing facility. Quality and Consistency is more than a word and is the HALLMARK of our services.

WET PROCESS AREA



CIRCUIT PRINTING PROCESS :
We have Semi- Automatic Printing Machines and well experienced high-skill operators.



CIRCUIT INSPECTION PROCESS :
We check each and every panels for Shorts / Track Cuts / Pin Holes etc. before etching.



ETCHING & INK STRIPPING PROCESS :
We have fully automatic etching & stripping line which can produce approx 1500 sq.mtr/day.



SOLDER MASK PRINTING PROCESS :
We have Semi-Automatic Printing Machines and well experienced high skill operators



PRE MASK INSPECTION PROCESS :
Before Solder Masking Process we check again each & every panels for Shorts / Track Cuts / Pin Holes etc, to reduce rejections & improvement of quality

CNC AREA



CNC DRILLING PROCESS :

We have fully automatic high speed (166000 RPM) CNC drilling machine with 6 spindle which can drill 3500 holes/ minute.



SEMI-AUTOMATIC OPTICAL GUIDE HOLE DRILLING PROCESS :

We have camera based Guide Hole Drilling Machine which can drill manually as we require.



CNC ROUTING PROCESS :

We have fully automatic CNC routing machine (60000 RPM) with 14 nos of total spindle to fulfil fast & committed delivery.



CNC V-GROOVING PROCESS:

We have fully automatic CNC V-Grooving machine with Jump Score.



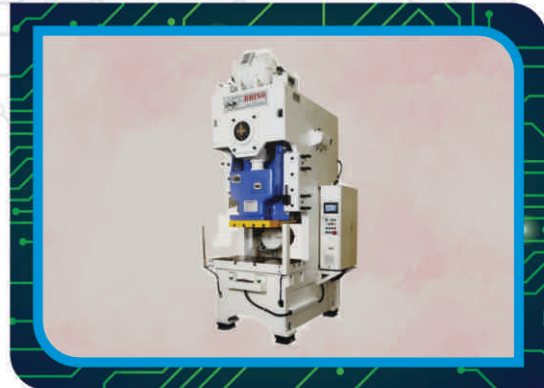
CNC V-GROOVING & CNC ROUTING PROCESS FOR 4 FEET PANELS :

We have fully automatic CNC V-Grooving machine with Jump Score and fully automatic high speed (60000 RPM) 2 spindle CNC routing machine dedicated for 4feet panels.





GZ-63T
GAP FRAME MECHANICAL PRESS



GZ-160T
GAP FRAME MECHANICAL PRESS
UNDER COMMISSIONING

Power Presses for Punching & Different Outer Profile:

We have Power Press facility for Punching & Different Outer Profile for high volumetric jobs.

Final Finish Area



BARE BOARD TESTING (BBT) PROCESS :

We have high voltage dedicated BBT tester machine and in-house Jig making facility which is used for high volumetric and critical jobs.



AUTOMATIC LACQUER/OSP COATING PROCESS :

We have fully automatic Lacquer and OSP coating line with final surface cleaning machine.



FINAL INSPECTION PROCESS :

We check 100% boards visually for any type of cosmetic defects like Circuit Definition & Registration, Solder Mask Finish and Registration, Legend Printing Legibility & Registration with well experienced and high skill QC operators.



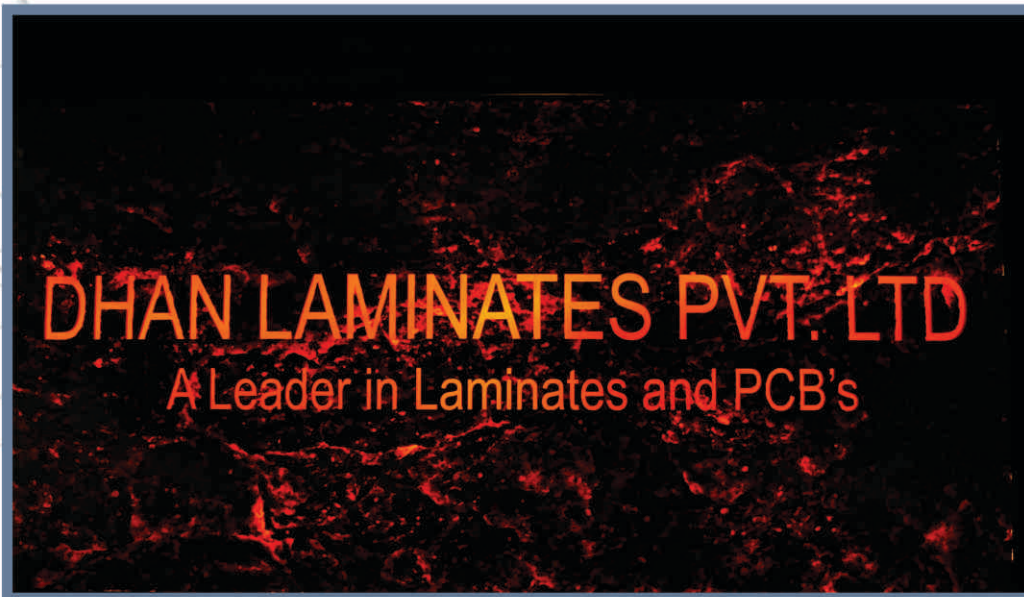
VACCUM PACKING PROSCCESS:

We have fully automatic Vaccum Packing machine to reduce packaging time and this process also protect the PCBs from oxidization for long time.

DHAN LAMINATES PVT. LTD. UNIT-II PCB DIV.

Details of Quality Control Inspections & Equipments Used

S. No.	Process / Inspection Stage	Check Points	Instrument Used	Checked By	Approved By
1.	CNC Drilling Inspection	Missing Hole / Extra Hole / Registration	Master Film	CNC Operator	QC Incharge
2.	Circuit Printing 1st Article / Online Checking	Shorts / Cuts / Nicks / Registration	Visual / Master Film	Circuit Check Insp.	QC Incharge
3.	Pre Mask Inspection (100%)	Shorts / Cuts / Nicks / Registration	Visual with 10X Magnification	Pre Mask Inspector	QC Incharge
4.	Solder Masking Inspection	Dust / Registration / Coverage / Thickness	Visual / Master Film	SM Inspector	QC Incharge
5.	Legend Printing Inspection	Legibility / Registration / Batch No.	Visual / Master Film	SM Inspector	QC Incharge
6.	Routing First Article / Online Check	Size / Shape / Registration	Vernier / Visual / Scale	Routing Operator	QC Incharge
7.	V-Grooving 1st Article / Online Check	Size / Line Position / Track Cut / Depth	Vernier / V- Groove Depth Checker	V-Groove Operator	QC Incharge
8.	Lacquer / OSP Coating	Finish / Cleanliness / Coverage	Visual Inspection 100%	Final QC Inspector	QC Incharge
9.	BBT Testing	Short / Open Electrical Testing	BBT Machine / Test Fixture	BBT Operator	QC incharge
10.	Final Inspection	Finish / Size / Appearance / Mechanical	Visual with 10X Magnification	Final QC Inspector	QC incharge



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