















LAYERS LAMINATION & IMPEDANCE CONTROL

LAYERS STACKUP	LAYER	MATERIAL	THICKNESS	LAYER TYPE	IMPEDANCE		
					SINGLE 50ohm $\pm 10\%$ Line width(mil)	DIFFERENCE 80ohm $\pm 10\%$ Line width/Space(mil)	DIFFERENCE 100ohm $\pm 10\%$ Line width/Space(mil)
TOP	TOP	COPPER	1 OZ	ROUTING	5 mil	W4.9/S:8.1	
PREPREG	PREPREG	FR4	3 mil				
L2 INNER	L2 INNER	COPPER	1 OZ	PLANE			
PREPREG	PREPREG	FR4	3,937 mil				
L3 INNER	L3 INNER	COPPER	1 OZ	ROUTING	5 mil	W6.1/S:7.9	
PREPREG	PREPREG	FR4	39.3 mil				
L4 INNER	L4 INNER	COPPER	1 OZ	ROUTING	5 mil		
PREPREG	PREPREG	FR4	3,937 mil				
L5 INNER	L5 INNER	COPPER	1 OZ	PLANE			
PREPREG	PREPREG	FR4	3 mil				
BOTTOM	BOTTOM	COPPER	1 OZ	ROUTING	5 mil		

THE TOTAL THICKNESS: 1.6MM $\pm 10\%$

REVISIONS

REV	ACTION	DATE	AUTH
REV2.0		2017/05/17	Jessie.Yan
REV2.0	Updated silkscreen and added CE logo	2017/07/26	Jessie.Yan

NOTE

- ACCEPTABILITY:
PRINTED WIRING BOARD SHALL MEET THE REQUIREMENTS OF IPC- 6012C CLASS 2.
- MATERIAL:
GLASS EPOXY FR-4 FIRE RETARDANT AND UL 94V-0 RATING MATERIAL SHOULD MEET IPC-4101C
- FABRICATION REQUIREMENTS:
A). FAB TO MEET THE REQUIREMENTS PER IPC-A-600, CLASS 2
B). ALL MOUNTING OR ELECTRONIC DATA MAY BE ADJUSTED BY THE BOARD MANUFACTURER TO COMPENSATE FOR MANUFACTURING PROCESS TOLERANCES, ADDITION OF FILLETS TEARDROPS AT LINE / PAD INTERFACE IS PREFERRED, THEEING IS ALLOWED TO COMPENSATE FOR HIGH COPPER DENSITY AREAS
C). FABRICATE ACCORDING TO THE FILES PART NO: 1001001000019-20, LAUNCHXL-F28379_GERBER_Rev2.0 FILE FOR MANUFACTURING
D). SOLDER MASK COLOR RED ,SILKSCREEN COLOR WHITE
E). FINISH ENIG
- FABRICATION TOLERANCE:
A). WIRE WIDTH TOLERANCE INTERNAL CONTROL STANDARD $\pm 20\%$
B). PTH DIAMETER TOLERANCE $\pm 0.075mm$,PTH DIAMETER TOLERANCE $\pm 0.05mm$
C). ALL OUTER LAYER PADS REQUIRE $\pm 0.05mm$ TOLERANCE.
D). LAYER REGISTRATION BETWEEN ADJACENT LAYER MAXIMUM 150um, THE INTERLAYER DIELECTRIC THICKNESS TOLERANCE $\pm 15\%$
E). THICKNESS IS LESS THAN 1mm PCB TO A TOLERANCE OF $\pm 0.1mm$,THICKNESS IS GREATER THAN OR EQUAL TO 1mm PCB TO A TOLERANCE OF $\pm 10\%$
- SOLDER MASK:
A). MATERIALS IN ACCORDANCE WITH IPC-SM-840E CLASS T STANDARDS AND ROHS REQUIREMENTS
B). SOLDER MASK BOTH PRIMARY AND SECONDARY SIDES, THE ADHESION OF SOLDER MASK MEET THE REQUIREMENTS OF IPC-A-600F LEVEL 2
C). SOLDER MASK COVERAGE ON THE MIDDLE OF THE COPPER WIRE MINIMUM 10um,EDGE COVERAGE OF THE COPPER WIRE MINIMUM 4um, SOLDER MASK MISREGISTRATION MAXIM 2.5mil
D). ALL HOLES WITH SOLDER MASK COVERED IN THE GERBER SHOULD BE PULGED
E). SOLDER MASK BRIDGE BETWEEN PADS SHOULD BE MINIMUM 0.10mm
- FINISH:
A). ENIG, GOLD THICKNESS IS 0.05 um $\sim 0.23um$,NICKEL THICKNESS IS 3 um ~ 6 um.
- SILKSCREEN:
A). PRIMARY AND SECONDARY SIDES USING A GLOSSY , NON-CONDUCTIVE, ROHS COMPLIANT, EPOXY BASED INK
B). NO SILKSCREEN ALLOWED ON PADS OR IN HOLES
C). MANUFACTURERS CAN ADD SYMBOL IN SILKSCREEN LAYER OR SOLDER MASK LAYER, ALLOW TO INCREASE SYMBOL ASSEMBLY REF , DATE CODE, LEAD-FREE SYMBOL, UL FILE NUMBER,UL TYPE, UL SYMBOL AND FIRE RATINGS,NO LIST DOES NOT ALLOW TO INCREASE.
- BOW AND TWIST:
MAX BOW & TWIST OF PCB SHALL NOT EXCEED 0.75% OF MAXIMUM DIMENSION, MEASUREMENT METHOD IN 2.4.22 OF IPC-TM-650 IS FOR REFERENCE
- MEASUREMENTS:
INTERPRET ALL DIMENSIONS AND TOLERANCES PER IPC-D-3000, CLASS B AND ALL DIMENSIONS ARE METRIC, DIMENSIONS ARE AFTER ETCHING AND PLATING.
- ENVIRONMENTAL:
THE PCB SUPPLIER SHALL PROVIDE A SIGNED CERTIFICATE OF COMPLIANCE BY AUTHORIZED OR REPRESENTATIVE. THE BASE MATERIAL OF PCB SHALL NOT CONTAIN THE BANNED SUBSTANCES LISTED IN THE CERTIFICATE OF COMPLIANCE.

Embest Technology co.,Ltd.

TITLE: LAUNCHXL-F28379	
PART NUMBER: 1001001000019-20	ELEC ENGR: Jack. Lei
ADD: www.embest-tech.com	REV: REV2.0
	DATE: 2017/05/17









