

RELIABILITY TEST REPORT

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- 2004 Certified by ISO 9001 and IECQ 17025.
- 2006 Elected as the Distinguished Enterprise by the Industry Development Bureau (IDB).
- 2006 Awarded #32 in the Taiwan Top 50 and #157 in the Asia Top 500 Fastest Growing Companies by Deloitte.
- 2008 Awarded the best performance company of Industrial Excellence Award by the Economy Ministry's Industry Development Bureau (IDB).
- 2009 Listed on the Taiwan OTC market (3587)
- 2012 Awarded #474 in the Asia Top 500 Fastest Growing Companies by Deloitte.
- 2013 A+ companies in Taiwan by Global Views Monthly Magazine.
- 2015 Certified by ISO 27001.



ISO/IEC 27001



IECQ 17025



ISO 9001





MA-tek Core Team

■ CEO - Dr. Yong-Fen Hsieh



More than 20 years of experience in various fields of IC(Si), TFT-LCD, LED(III-V, II-VI), LCOS, GaAs, and Ge/ Metal contacts system.

Specialized in TEM analysis, fault isolation/failure analysis, analytical lab operation, quality management (QE, QA, QS, TQM), and materials-related fundamental research.

■ MA - Dr. J.C. Hu



More than 10 years of experience in various fields of Advanced IC exploratory & processing, LED, PV, industry, international technology collaboration, materials analysis.

Specialized in TEM, HRTEM, EDX, EELS, PFA and SEM related analysis, materials science, applied chemistry.

■ FA - Max Kuo



More than 10 years of experience in IC EFA (EMMI, OBIRCH, LCD, etc.) and PFA (Structure and Process diagnosis) analysis.

Specialized in fault isolation/failure analysis, SEM, chemical analysis, FA total solution consulting and coordination.

■ RA - Woody Chuang



More than 20 years of experience in PCB, CCL, FCCL, FPCB and Server ODM/OEM.

Specialized in PCB/FPCB related reliability test and failure analysis, server component reliability research and material analysis.

■ SA - Ming-Ching Huang



More than 10 years of experience in surface analysis of IC(Si), TFT-LCD, LED, LCOS, GaAs, and solar cells.

Specialized in SIMS, Auger, ESCA/XPS, Scanning Capacitance Microscopy, Atomic Force Microscopy, Magnetic Field Microscopy, and SRP.



Contents

1	Background Information	5
1.1	Client Information	5
1.2	Testing Inquiry	5
1.3	Pass/Fail Criteria	5
2	Testing Summary	6
3	Testing Items, Conditions, and Raw Data	7
3.1	Temperature Cycling Test	7
3.1.1	Test System	7
3.1.2	Test Method and Condition	7
3.1.3	Test Results	8
3.1.4	Pictures of Temperature Cycling Test	8

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1 Background Information

1.1 Client Information

TOCALO & HAN TAI TW CO., LTD

User Name : Lily Lin

TEL : +886-3-758-0791 Ext.1075

1.2 Testing Inquiry

Model Name	Test Item	Quantity
碳複合熱輻射漆(油性)	Temperature Cycling Test	5 pcs

1.3 Pass/Fail Criteria

N/A

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2 Testing Summary

Test	Condition	Model Name	Judgment
Temperature Cycling Test	Temperature : -40°C ~+150°C Dwell time :1 Hours Change Rate: ≤5 min Cycle:100 Cycle Duration : 217 Hours	碳複合熱輻射漆 (油性)	N/A

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3 Testing Items, Conditions, and Raw Data

3.1 Temperature Cycling Test

3.1.1 Test System

Brand/Model No.	Calibration Date
ESPEC/ TSA-73EH-W-2	2019/05/29~2020/05/28

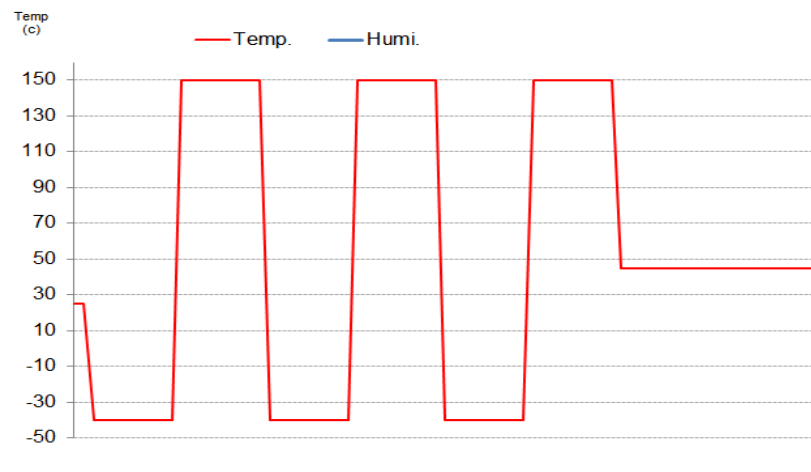
3.1.2 Test Method and Condition

Specification : The test based on Customer's specification.

Environmental Temperature / Humidity : 25°C±5°C / 55%R.H±10%

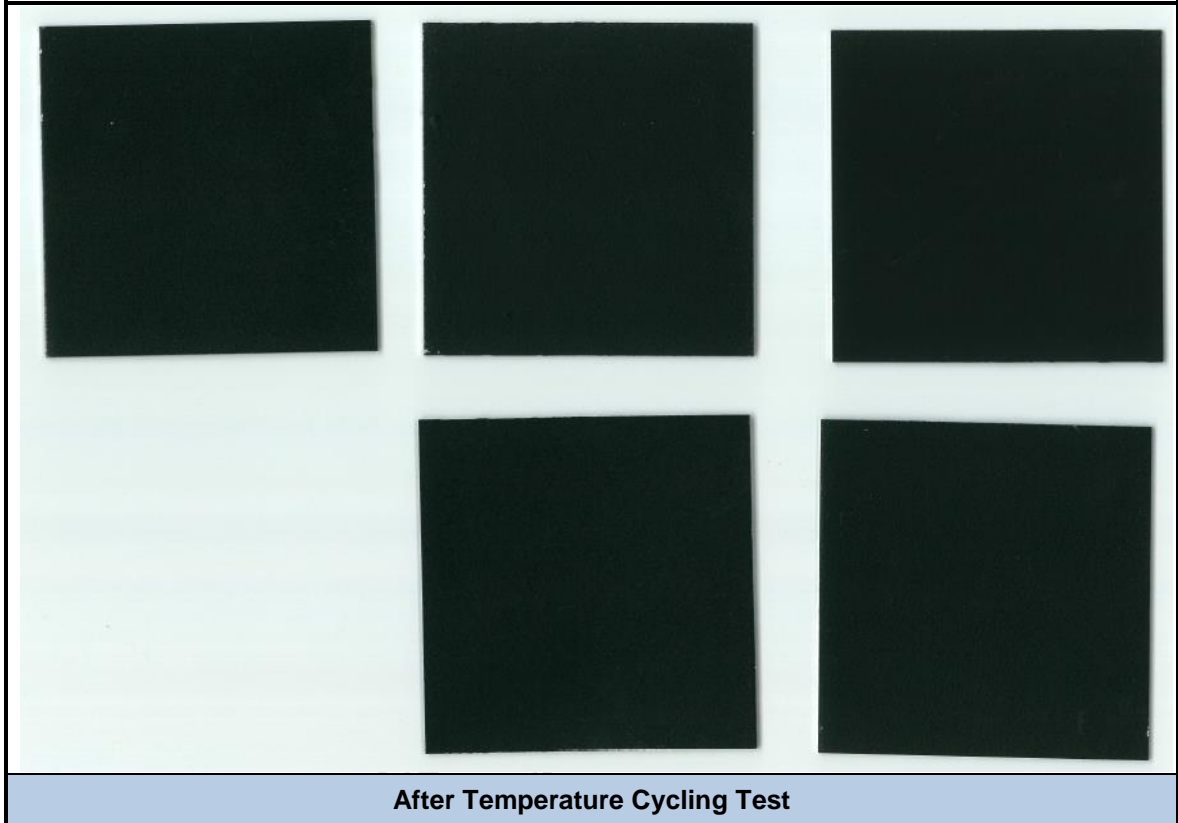
Test Condition :

Test	Sample Name	Condition	
		Parameter	Value
Temperature Cycling Test	碳複合熱輻射漆 (油性)	Temperature	-40°C ~ +150°C
		Dwell	1 Hours
		Change Rate	≤5 min
		Cycle	100 Cycle
		Total Time	217 Hours



3.1.3 Test Results

After test, there is no abnormal finding during visual inspection.



3.1.4 Pictures of Temperature Cycling Test

