

300

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友達光電股份有限公司

JOAN CHEN



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AU OPTRONICS CORP
1 LI-HSIN RD 2
HSINCHU SCIENCE PARK
HSINCHU 300
HSINCHU
300 TAIWAN TAIWAN

Date: 2020/03/31
Subscriber: 331388003
PartySite: 119984
File No: E204356
Project No: 4789251207
PD No: 20016066
Type: R
PO Number: GD-3

Subject: **Procedure And/Or Report Material**

The following material resulting from the investigation under the above numbers is enclosed.

Issue

<u>Date</u>	<u>Vol</u>	<u>Sec</u>	<u>Pages</u>	<u>Revised Date</u>
	X4		Index Page(s)	
2020/03/25	X4	A6111	Cert of Compliance	
2020/03/25	X4	A6111	Add New Proc/Report Sect	

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Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to UL's Customer Service Professionals. Contact information for all of UL's global offices can be found at <http://ul.com/aboutul/locations>.

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TPI File

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<u>Product Type</u>	<u>Model/Type Reference</u>	<u>Report Reference #</u>	<u>Status</u>
LCD Panel (LED backlight)	B139KANZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6022-UL	
LCD Panel (LED backlight)	P320HVNZZZZ (where Z may be any alphanumeric character or blank)	E204356-A6023-UL	
LCD Panel (LED backlight)	G101EANZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6029-UL	
LCD Panel (LED Backlight)	M270HWZZ, M270HVNZZZZ, M270DANZZZZ, M270HTNZZZZ, M270HANZZZZ (where Z may be 0-9, A-Z, or a dot, or blank)	E204356-A6030-UL	
LCD Panel (LED Backlight)	G270ZANZZZZ, G270HANZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6031-UL	
LCD Panel (LED backlight)	M250HTNZZZZ, M250HANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6034-UL	
LCD Panel (LED backlight)	B101UANZZZZ, B101UATZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6038-UL	
LCD Panel (LED backlight)	M170ETNYYZZ (Y, Z may be any alphanumeric character or dot or blank), P170ETNZZZZ (Z may be any alphanumeric character or dot or blank)	E204356-A6040-UL	
LCD Panel (LED backlight)	G270QANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6042-UL	
Touch Module	I156FGBZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6044-UL	
LCD Panel (LED backlight)	M190EGZZ, M190ETNZZZZ (Z may be 0-9, A-Z or blank)	E204356-A6046-UL	
LCD Panel (LED backlight)	G101QANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6048-UL	
LCD Panel (LED backlight)	B133HANZZZZ, B133HTNZZZZ, B133HABZZZZ, B133HAKZZZZ (where Z may be any alphanumeric character or a dot or blank) (for marketing	E204356-A6049-UL	

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	purpose only, and no impact safety related constructions and critical components)		
21.5" LCD Panel (LED backlight)	T215HVNZZZZ, P215HVNZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6050-UL	
LCD Panel (LED backlight)	M195RTNZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6051-UL	
LCD Panel (LED backlight)	M238HANZZZZ, M238HVNZZZZ, P238HANZZZZ, G238HANZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6053-UL	
LCD Panel (LED backlight)	B140QANZZZZ (where Z may be any alphanumeric character or a dot or blank) (For marketing purpose only, and no impact safety related constructions and critical components.)	E204356-A6054-UL	
LCD Panel (LED backlight)	P750QVNZZZZ, T750QVNZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6056-UL	
LCD Panel (LED backlight)	G116HANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6058-UL	
LCD Panel (LED backlight)	P850QVNZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6060-UL	
35" LCD Panel (LED backlight)	M350DVRZZZZ (Z = any alphanumeric character or a dot or blank)	E204356-A6061-UL	
LCD Panel (LED backlight)	P353KVNZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6063-UL	
LCD Panel (LED backlight)	P370IVNZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6064-UL	
LCD Panel (LED Backlight)	M238DANZZZZ (Where Z may be any alphanumeric character or blank or a dot)	E204356-A6065-UL	
LCD Panel (LED backlight)	M270DTNZZZZ (Where Z may be any alphanumeric character or blank or dot)	E204356-A6066-UL	
LCD Panel (LED backlight)	B150HANZZZZ, B150HATZZZZ, B150HAVZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6069-UL	
19.5" LCD Panel (LED backlight)	M195XTNZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6070-UL	

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LCD Panel (LED backlight)	G240HWZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6071-UL	
LCD Panel (LED backlight)	1. G140XTNZZZZ 2. G140HANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6073-UL	
LCD Panel (LED Backlight)	M215HWZZ, M215HTNZZZZ, M215XTNZZZZ, M215HANZZZZ, P215HANZZZZ (Z may be 0-9, A-Z, a dot or blank)	E204356-A6074-UL	
LCD Panel (LED backlight)	G150XTNZZZZ, G150XVNZZZZ, G150XANZZZZ, G150XTTZZZZ (Where Z may be any alphanumeric character, symbol or dot or blank) (For marketing purpose only, and no impact safety related constructions and critical components)	E204356-A6076-UL	
24 inch LCD Panel (LED backlight)	M240UANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6077-UL	
LCD Panel (with Backlight)	B080EABZZZZ (Where Z may be any alphanumeric character, symbol or dot or blank)	E204356-A6078-UL	
LCD Panel (LED backlight)	G190EGZZ, G190ETNZZZZ, G190EANZZZZ (Where Z may be any alphanumeric character or a dot or a blank)	E204356-A6081-UL	
LCD Panel (LED Backlight)	B079XATZZZZ, B079XANZZZZ, B080XATZZZZ, B080XANZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6082-UL	
LCD Panel (LED backlight)	P650QVNZZZZ, P650QVFZZZZ (Where Z may be any alphanumeric character or blank)	E204356-A6083-UL	
LCD Panel (LED Backlight)	B101EVBZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6084-UL	
LCD Panel (LED Backlight)	B130KANZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6088-UL	
LCD Panel (LED backlight)	B080EANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6091-UL	
32.0" LCD Panel (LED backlight)	M320DVNZZZZ, M320DANZZZZ (where Z may be any alphanumeric character	E204356-A6094-UL	

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	or a dot or blank)		
LCD Panel (LED Backlight)	G070VTNZZZZ, G070VVTZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6097-UL	
LCD Panel (LED backlight)	B133ZAN##### (Where # may be any alphanumeric character or a dot or blank)	E204356-A6098-UL	
LCD Panel (LED Backlight)	B080UANZZZZ (Where Z may be any alphanumeric character or blank)	E204356-A6099-UL	
LCD Panel (LED Backlight)	M240HWZZ, M240HTNZZZZ, M240HTDZZZZ and M240HVNZZZZ (where Z may be any alphanumeric character or blank)	E204356-A6101-UL	
LCD Panel (LED Backlight)	M185XWZZ, M185XTNZZZZ (where Z may be any alphanumeric character or blank)	E204356-A6102-UL	
LCD Panel (LED backlight)	B101AWZZ, B101XTNZZZZ, B101XANZZZZ (where Z may be any alphanumeric character or a dot or blank)	E204356-A6103-UL	
27" LCD Panel (LED backlight)	M270DTRZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6104-UL	
LCD Panel (LED backlight)	B173HTNZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6108-UL	
LCD Panel	G070VWZZ (where Z may be any alphanumeric character or blank)	E204356-A6111-UL	
LCD Panel (LED backlight)	B173QTNZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6114-UL	
LCD Panel (LED backlight)	B173RTNZZZZ (Where Z may be any alphanumeric character or a dot or blank)	E204356-A6115-UL	

CERTIFICATE OF COMPLIANCE

Certificate Number E204356
Report Reference E204356-A6111-UL
Issue Date 2020-MARCH-31

Issued to: AU OPTRONICS CORP
1 LI-HSIN RD 2
HSINCHU SCIENCE PARK
HSINCHU 300 TAIWAN

This certificate confirms that
representative samples of

COMPONENT - AUDIO/VIDEO, INFORMATION AND
COMMUNICATION TECHNOLOGY EQUIPMENT

LCD Panel

G070VWZZ (where Z may be any alphanumeric character
or blank)

Have been investigated by UL in accordance with the
component requirements in the Standard(s) indicated on
this Certificate. UL Recognized components are incomplete
in certain constructional features or restricted in
performance capabilities and are intended for installation in
complete equipment submitted for investigation to UL LLC.

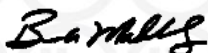
Standard(s) for Safety: UL 62368-1 and CAN/CSA C22.2 No. 62368-1-14 standard
for Audio/video, information and communication technology
equipment Part 1: Safety requirements

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark. Only
the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified
and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 2nd Ed, 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1-14, 2nd Ed-(Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Component Recognition
CCN:	AZOT2, AZOT8 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	LCD Panel
Model:	G070VWZZ (where Z may be any alphanumeric character or blank)
Rating:	(Optional) 12Vdc, 0.28A
Applicant Name and Address:	AU OPTRONICS CORP 1 LI-HSIN RD 2 HSINCHU SCIENCE PARK HSINCHU 300 TAIWAN

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Rally Chen / Project Handler

Reviewed By: Scott Chen / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

The unit is a (TFT) LCD Panel module secured on metal chassis, with control board and supplied by SELV, intended to use in information technology equipment. Boost with LED driver circuit.

Model Differences

All models are identical except for model designation for marketing purpose, no technical differences.

Test Item Particulars

Classification of use by	To be determined in end product
Supply Connection	External Circuit - not Mains connected ES1
Supply % Tolerance	None
Supply Connection – Type	To be determine in end product
Considered current rating of protective device as part of building or equipment installation	N/A
Equipment mobility	for building-in
Over voltage category (OVC)	other: No mains connection
Class of equipment	Not classified
Access location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified maximum operating ambient (°C)	85
IP protection class	IPX0
Power Systems	N/A
Altitude during operation (m)	5000 m
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	0.165

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 85°C
- The product is intended for use on the following power systems : No direct connection
- Mains supply tolerance (%) or absolute mains supply values : No direct connection
- The following are available from the Applicant upon request : Product specification
- The product was investigated to the following additional standard : CSA CAN/CSA-C22.2 NO. 62368-1 2nd Ed, Issued December 1, 2014

Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The investigated Pollution Degree is : 2
- The following end-product enclosures are required : Fire, Mechanical, Electrical
- The supply source shall be ES1.
- Classification of PIS has not been conducted. Therefore, all electrical components were assumed to be resistive PIS.
- This component has been evaluated in "control of fire spread" method assuming appropriate fire enclosure is provided in end product.
- The touch temperature for Panel Surface shall be evaluated in end product.

Additional Information

N/A

Additional Standards

The product fulfills the requirements of: CSA CAN/CSA-C22.2 No. 62368-1 2nd Edition, Issued December 1, 2014

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listees or Recognized companys name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number

Special Instructions to UL Representative

N/A

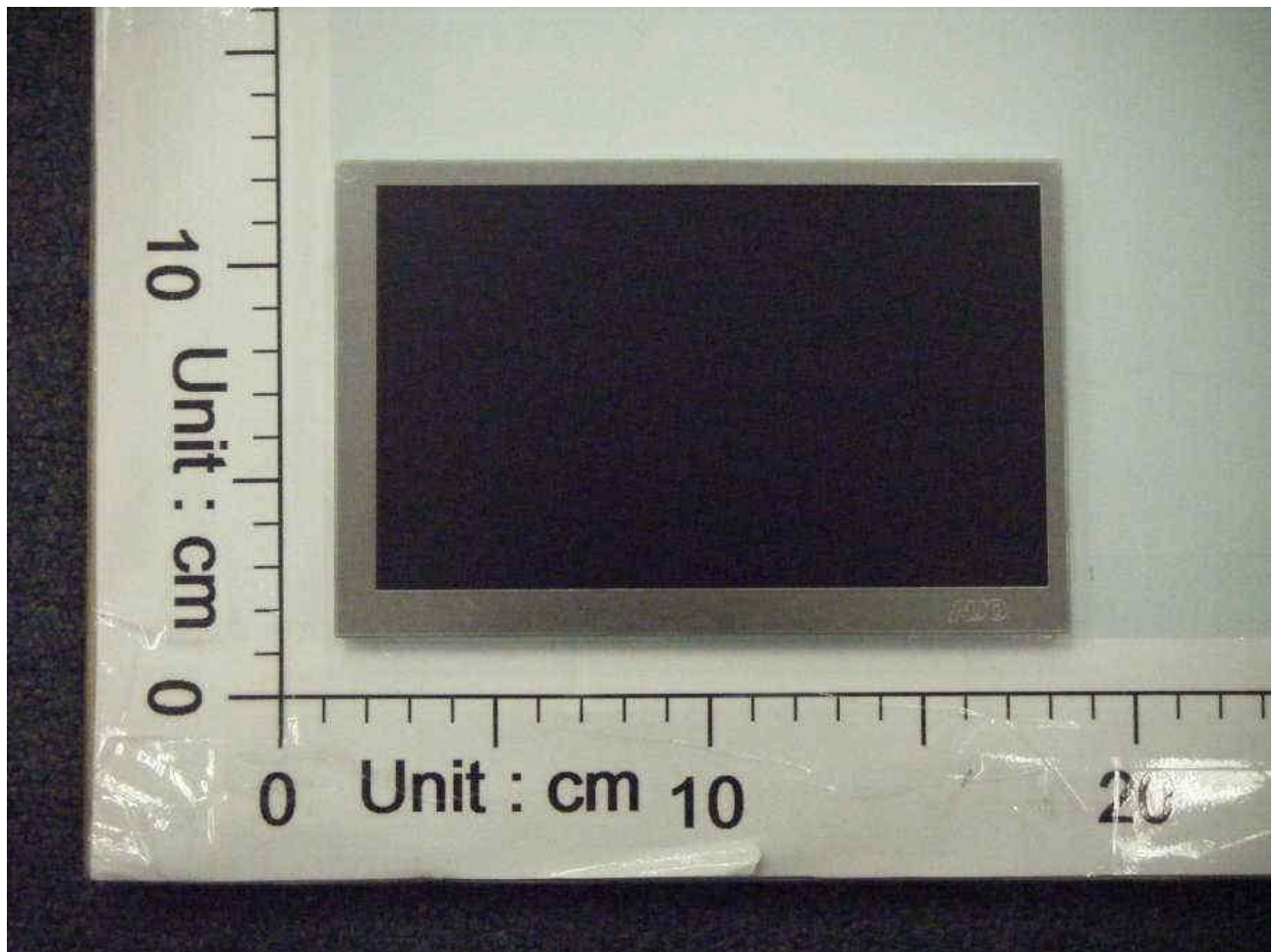
BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
N/A	--	--	--	--	--	--
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All models					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All models					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.					
	N/A					

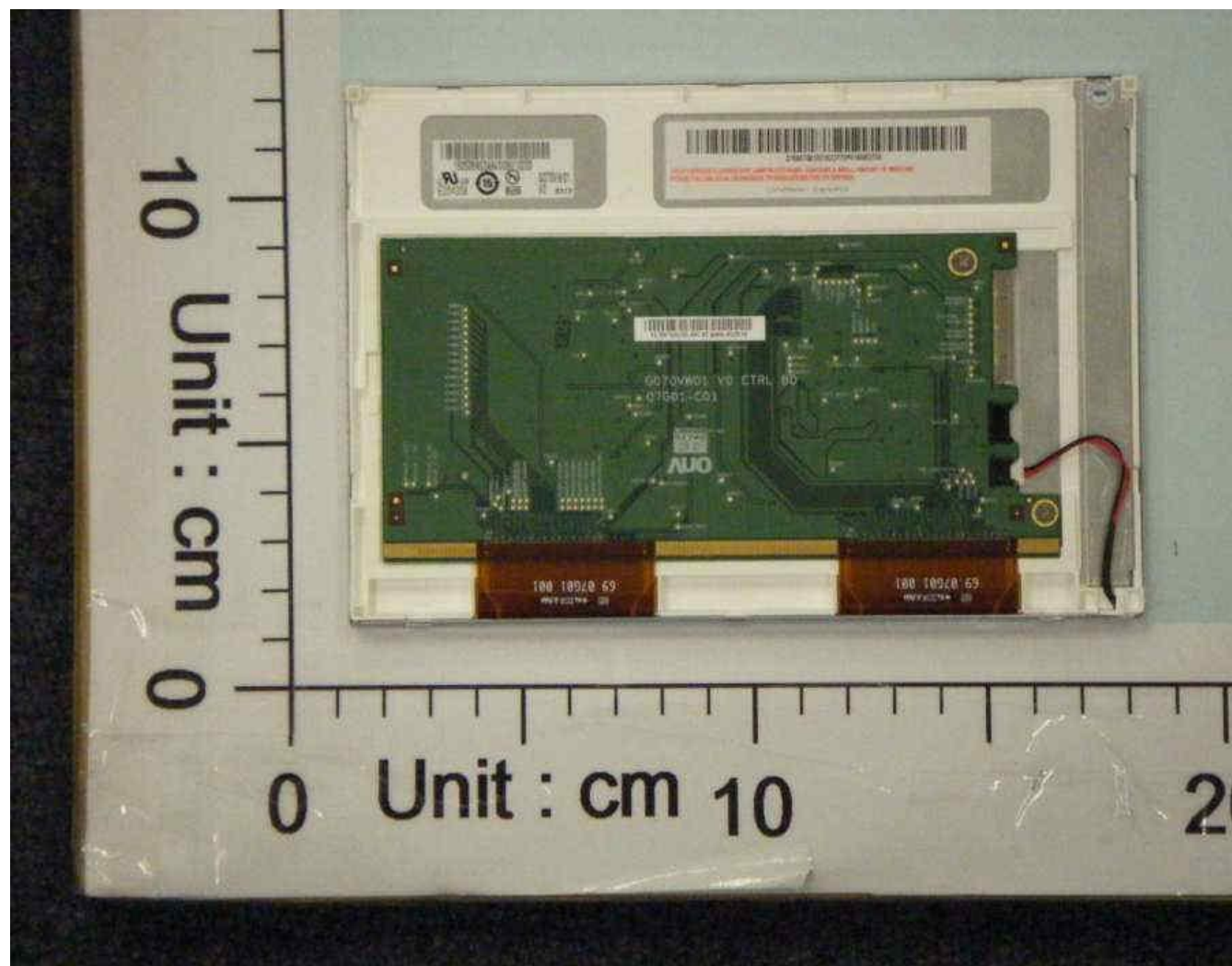
BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
N/A	--	--	--	--	--

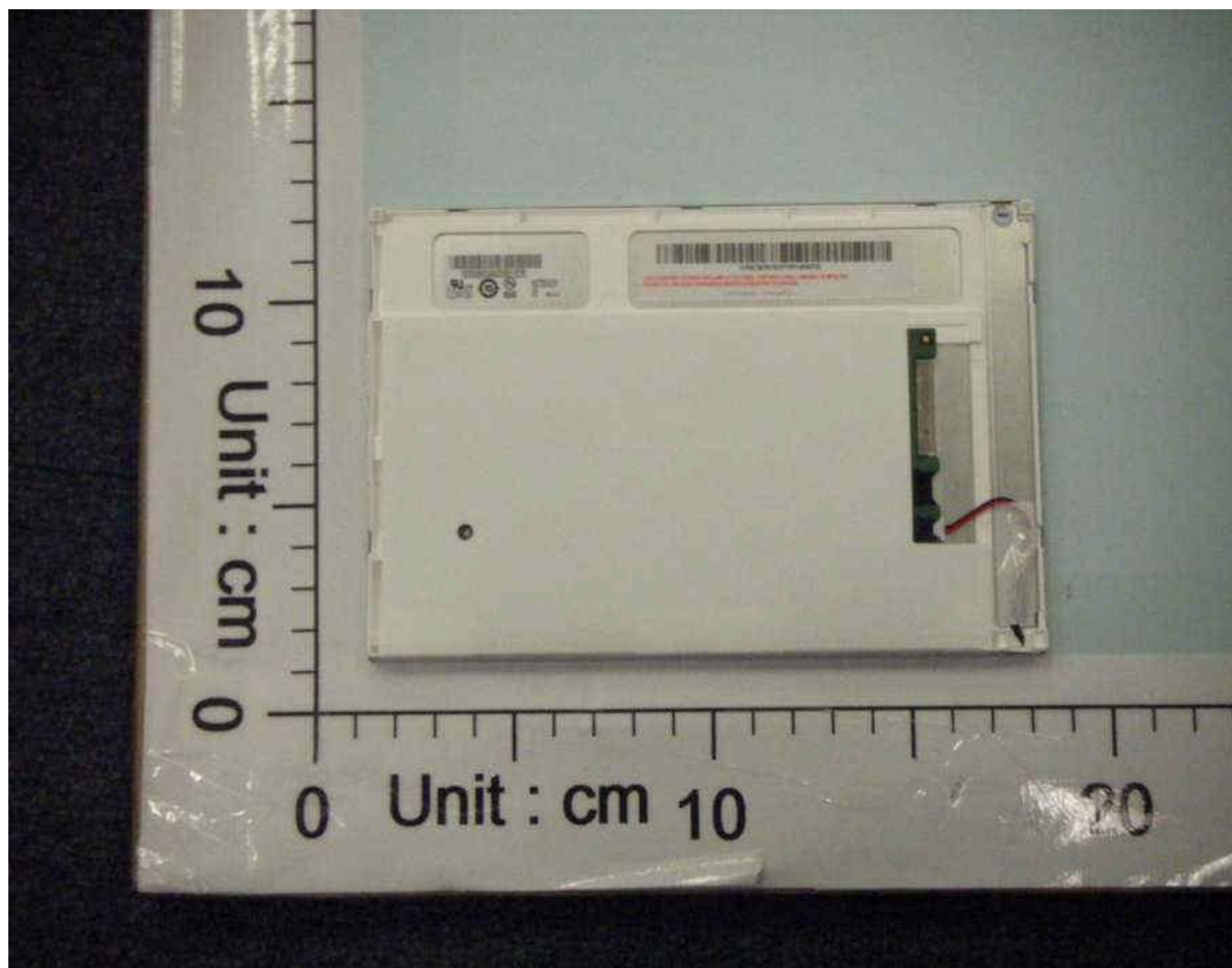
4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
01. Panel	Interchangeable	Interchangeable	TFT Type, 7.0"	--	--	
02. Chassis/ Enclosure	Interchangeable	Interchangeable	Steel Metal or Aluminum.	--	--	
03. PWB	Interchangeable	Interchangeable	Minimum V-0 or better, 105 degree C.	ZPMV2	UL	
04. Label	Interchangeable	Interchangeable	Min. 90 degree C, suitable for applied surface	PGDQ2 or PGJI2	UL	
05. Connectors and Receptacles (ES1 circuits)	Interchangeable	Interchangeable	--	ECBT2, RTRT2	UL	
05a. Connectors and Receptacles (ES1 circuits)(alternate)	--	Metal/Plastic	Copper alloy pins housed in bodies of plastic rated V-2 min.	QMFZ2	UL	
06. Flexible PWB (Optional)	Interchangeable	Interchangeable	Rated V-2 minimum or VTM-2 minimum, when no components mounted on surface; If components mounted on surface, it should be minimum V-1 or VTM- 1, 80 degree C	ZPKX2, ZPMV2	UL	
06a. Flexible PWB (Optional)	Interchangeable	Interchangeable	Rated V-2 minimum or VTM-2 minimum, when no components mounted on surface, 80 degree C	QMFZ2, QMTS2	UL	
07. LED driver board	AU Optonics Corp.	07G01-CXX (X=0-9, A-Z)	12Vdc/0.24A typ.	--	--	

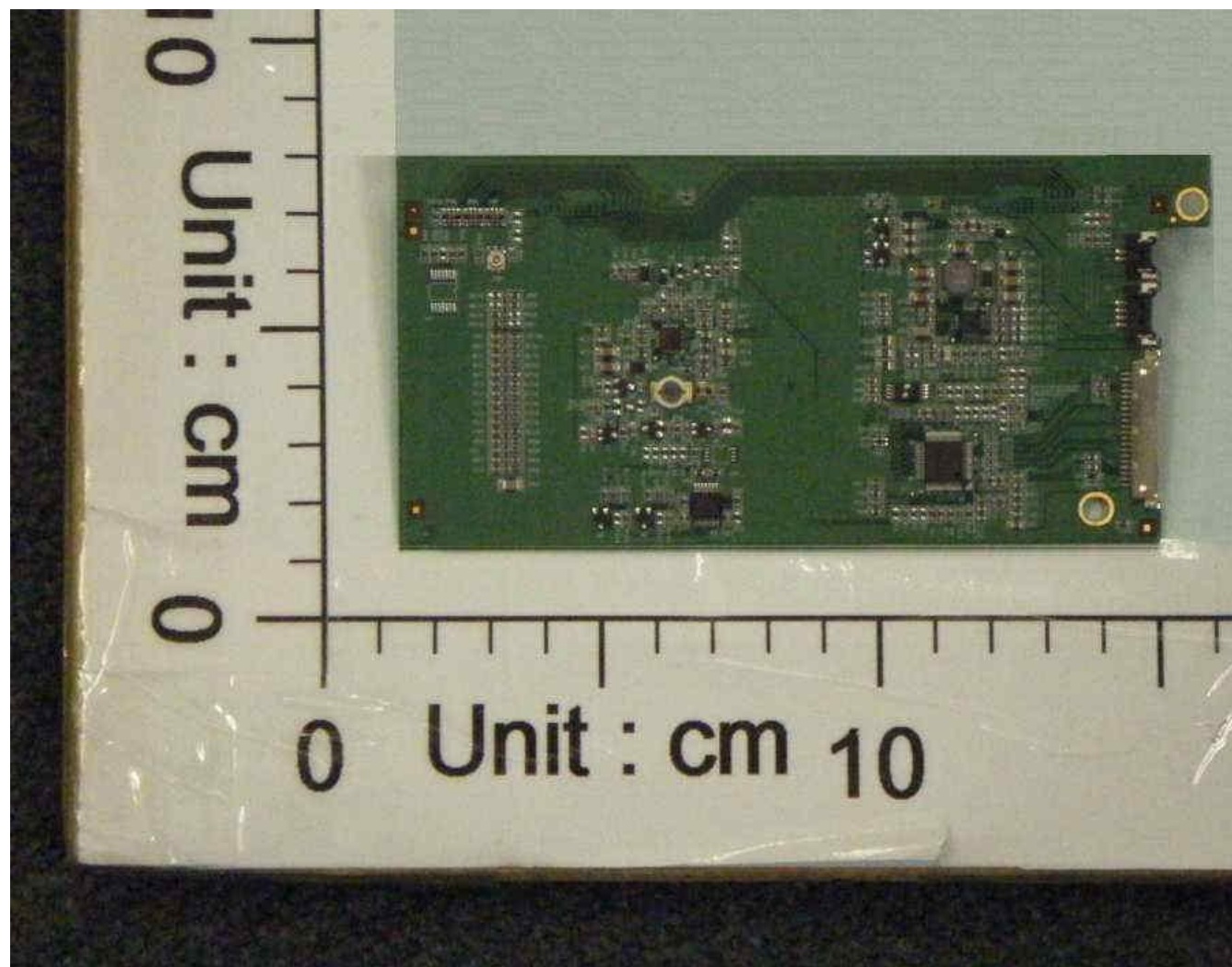
Enclosures

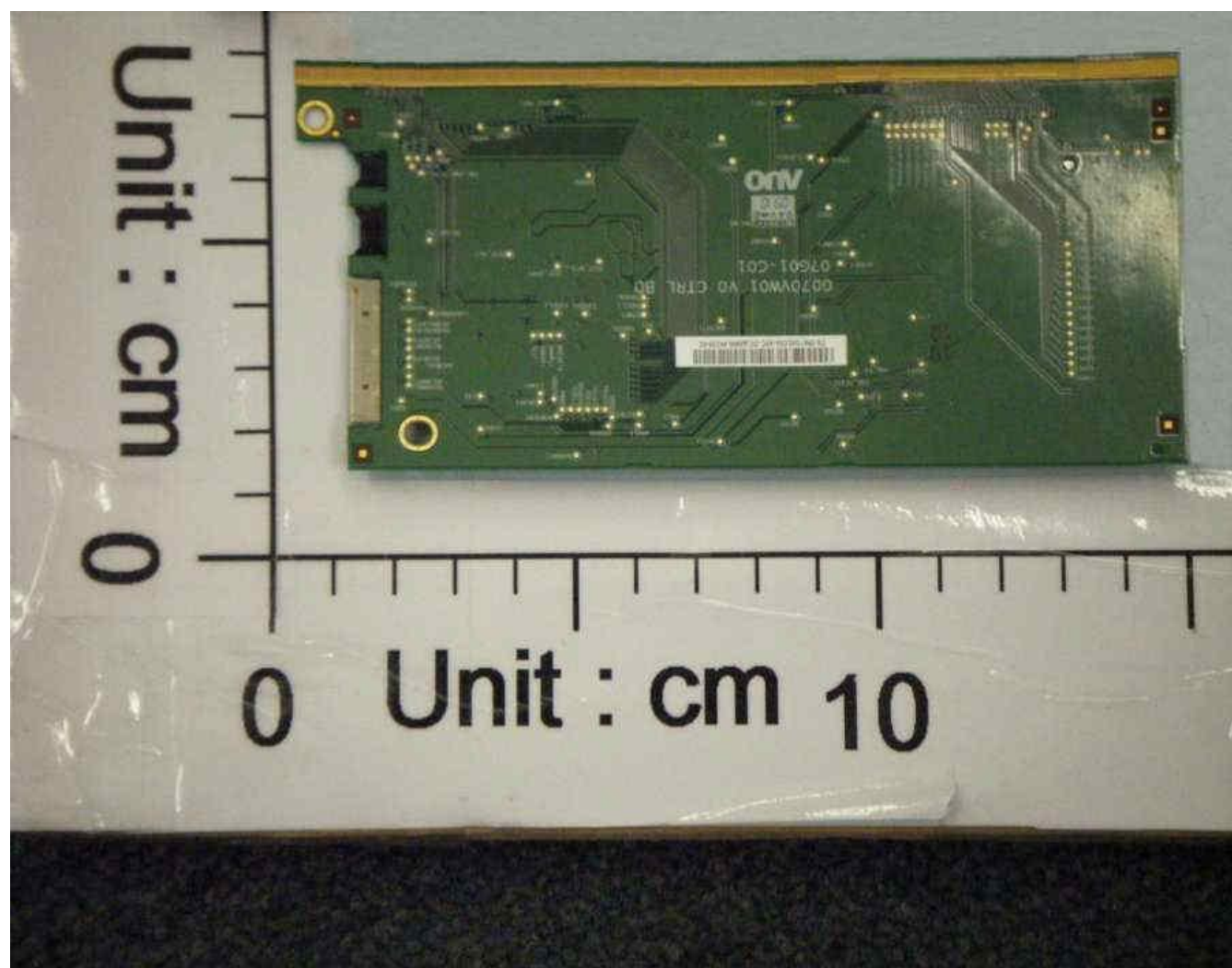
Type	Supplement Id	Description
Photographs	03-01	Front View of LCD Panel (Model: G070VWZZ)
Photographs	03-02	Rear View of LCD Panel (Model: G070VWZZ), 1 of 2
Photographs	03-03	Rear View of LCD Panel (Model: G070VWZZ), 2 of 2
Photographs	03-04	Front View of PWB
Photographs	03-05	Rear View of PWB











Test Record No. 1

Testing of the LCD Panel, Model G070VWZZ (where Z may be any alphanumeric character or blank) was not considered necessary based upon previous evaluation under the CB scheme. The CB Scheme Test Certificate Ref. No. DK-94898-UL dated 2020-03-25 and Report Ref. No. E204356-4789251207.1-1 Original, dated 2020-03-24 was prepared by UL International Demko A/S, Denmark (NCB).

The following tests were conducted:

Tests performed (name of test and test clause):	Testing location: Underwriters Laboratories Taiwan Co., Ltd., 260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei
The following tests were waived:	Rationale for Waiving
CLASSIFICATION OF ELECTRICAL ENERGY SOURCES (5.2, 5.7)	refer to CB report
MAXIMUM OPERATING TEMPERATURE FOR MATERIALS, COMPONENTS AND SYSTEMS (5.4.1.4, 6.2, 9.2.5 ANNEX B.2)	refer to CB report
INPUT TEST: SINGLE PHASE (B.2.5)	refer to CB report

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.

The following supplements are provided as part of this Test Record. NOTE: These supplements are only available to the Applicant via the myUL™ Client Portal.

Type	Supplement Id	Description
Attachment	02-01	CRD_4789251207-1