

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST
CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE
CERTIFICATS D'ESSAIS DES EQUIPEMENTS
ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

Product
Produit

Name and address of the applicant
Nom et adresse du demandeur

Name and address of the manufacturer
Nom et adresse du fabricant

Name and address of the factory
Nom et adresse de l'usine

Note: When more than one factory, please report on page 2
Note: Lorsque il y a plus d'une usine, veuillez utiliser la 2^{ème} page

Ratings and principal characteristics
Valeurs nominales et caractéristiques principales

Trademark (if any)
Marque de fabrique (si elle existe)
Type of Manufacturer's Testing Laboratories used
Type de programme du laboratoire d'essais constructeur

Model / Type Ref.
Ref. De type

Additional information (if necessary may also be reported on page 2)
Les informations complémentaires (si nécessaire,, peuvent être indiqués sur la 2^{ème} page

A sample of the product was tested and found to be in conformity with
Un échantillon de ce produit a été essayé et a été considéré conforme à la

As shown in the Test Report Ref. No. which forms part of this Certificate
Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat

CERTIFICAT D'ESSAI OC

LCD Panel (LED backlight)

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

AU OPTRONICS CORP.
NO. 23, LI- HSIN RD., HSINCHU SCIENCE PARK, HSINCHU,
30078, TAIWAN, R.O.C.

AU OPTRONICS (LONGKE) CORPORATION
NO. 228 LONGKE ST, LONGTAN TOWNSHIP, TAOYUAN
COUNTY 32542
TAIWAN

☒ Additional Information on page 2 and page 3
Optional, 12 Vdc, 4.25 A max

AU Optronics

WMT

G190EANZZZZ, G190EGZZ, G190ETNZZZZ
See Page 2

☒ Additional Information on page 3

IEC 60950-1(ed.2), IEC 60950-1(ed.2);am1

E204356-A248-CB-2 issued on 2014-07-17

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**



- ☐ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA
- ☒ UL (Denko), Borupvang 5A DK-2750 Ballerup, DENMARK
- ☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN
- ☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

Date: 2014-07-17
Original Issue Date: 2012-12-25

Signature:



Jan-Erik Storgaard

For full legal entity names see www.ul.com/ncbnames



Ref. Certif. No.

DK-29999-A2-UL

Model Details:

G190EANZZZZ, G190EGZZ, G190ETNZZZZ (Where Z may be any alphanumeric character or blank)
(For marketing purpose only, and no impact safety related constructions and critical components.)

Factories:

AU OPTRONICS (TAICHUNG) CORPORATION
1, JHONG KE RD., CENTRAL TAIWAN SCIENCE PARK, TAICHUNG 407
TAIWAN

AU OPTRONICS (SUZHOU) CORPORATION
398 SUHONG ZHONG RD. SUZHOU INDUSTRIAL PARK, JIANGSU 215021
P.R. CHINA

AU OPTRONICS (XIAMEN) CORPORATION
NO.1689, NORTH OF XIANG'AN ROAD, XIANG'AN BRANCH TORCH HI-TECH, INDUSTRIAL DEVELOPMENT
ZONE, XIAMEN 361102
P.R. CHINA

AU OPTRONICS MANUFACTURING (SHANGHAI) CORP.
NO. 3, LN 58, SAN-ZHUANG RD., SONGJIANG EXPORT PROCESSING ZONE, SHANGHAI
P.R. CHINA

FORTECH ELECTRONICS(SUZHOU) CO.,LTD
NO.399 JIN HU WEST ROAD ,WUJIANG ECONOMIC DEVELOPMENT JIANGSU PROVINCE 215200
P.R. CHINA

QISDA (SUZHOU) CO., LTD.
NO.169, ZHUJIANG ROAD, NEW DISTRICT, SUZHOU, JIANGSU 215129
P.R. CHINA

FORTECH ELECTRONICS(KUNSHAN) CO.,LTD
NO. 555, TONGFENG EAST RD., ECONOMICAL EXPLOITATION AREA KUNSHAN CITY, JIANGSU PROVINCE
215334
P.R. CHINA

RADIANT OPTO-ELECTRONICS (SUZHOU) CO., LTD
NO.1621, JIANGXING EAST RD, ECONOMIC DEVELOPING AREA, WUJIANG JIANGSU 215011
P.R. CHINA

DARWIN PRECISIONS (XIAMEN) CORP
3089 NORTH OF XIANG'AN RD XIANG'AN BRANCH TORCH HI-TECH INDUSTRIAL DEVELOPMENT ZONE
XIAMEN FUJIAN 361102
P.R. CHINA

DARWIN PRECISIONS (SZ) CORPORATION
NO.11, TINGXIN STREET SUZHOU INDUSTRIAL PARK SUZHOU, 215000
P.R. CHINA

Additional information (if necessary)

Information complémentaire (si nécessaire)



☐ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☒ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/nbcnames

Date: 2014-07-17

Original Issue Date: 2012-12-25

Signature:

Jan-Erik Storgaard



Ref. Certif. No.

DK-29999-A2-UL

Factories:

BRIVIEW (HEFEI) CORP.
176 YUNER RD HEFEI ECONOMIC & TECHNOLOGICAL DEVELOPMENT AREA, HEFEI ANHUI 230601
P.R. CHINA

BRIVIEW (XIAMEN) CORP.
NO. 1998, WEST OF FANG SHAN ROAD, XIANG AN BRANCH, TORCH HI-TECH INDUSTRIAL DEVELOPMENT
ZONE, XIAMEN
P.R. CHINA

Additional Information:

Additionally evaluated to EN 60950-1:2006 /A11:2009 /A1:2010 /A12:2011; National Differences specified in the CB
Test Report.

The original report was modified to include the following changes/additions:

Alternated LED driver board and panel back metal cover construction; Added factories; Modified Engineering
Conditions of Acceptability.

Additional information (if necessary)

Information complémentaire (si nécessaire)



☐ UL (US), 333 Pfingsten Rd IL 60062, Northbrook, USA

☒ UL (Demko), Borupvang 5A DK-2750 Ballerup, DENMARK

☐ UL (JP), Marunouchi Trust Tower Main Building 6F, 1-8-3 Marunouchi, Chiyoda-ku, Tokyo 100-0005, JAPAN

☐ UL (CA), 7 Underwriters Road, Toronto, M1R 3B4 Ontario, CANADA

For full legal entity names see www.ul.com/names

Date: 2014-07-17

Original Issue Date: 2012-12-25

Signature:

Jan-Erik Storgaard



Test Report issued under
the responsibility of:



TEST REPORT
IEC 60950-1
Information technology equipment - Safety -
Part 1: General requirements

Report Reference No : E204356-A248-CB-2

Date of issue : 2012-12-21

Total number of pages : 13

CB Testing Laboratory : Underwriters Laboratories Taiwan Co., Ltd.

Address : 260 Da-Yeh Road, 112 Peitou Taipei City, Chinese Taipei

Applicant's name : AU OPTRONICS CORP

Address : 1 LI-HSIN RD 2
HSINCHU SCIENCE PARK
HSINCHU
300 TAIWAN

Test specification:

Standard : IEC 60950-1:2005 (2nd Edition); Am 1:2009

Test procedure : CB Scheme

Non-standard test method : N/A

Test Report Form No. : IEC60950_1C

Test Report Form originator : SGS Fimko Ltd

Master TRF : 2012-08

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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description	LCD Panel (LED backlight)
Trade Mark	AU Optronics
Manufacturer	AU OPTRONICS CORP. NO. 23, LI- HSIN RD., HSINCHU SCIENCE PARK, HSINCHU, 30078, TAIWAN, R.O.C.
Model/Type reference	G190EGZZ, G190ETNZZZZ, G190EANZZZZ (Where Z may be any alphanumeric character or a dot or a blank) (For marketing purpose only, and no impact safety related constructions and critical components.)
Ratings	Optional, 12 Vdc, 4.25 A max.

Testing procedure and testing location:	
☐ CB Testing Laboratory	Testing location / address..... :
☐ Associated CB Test Laboratory	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (name + signature) ... :
☐ Testing Procedure: TMP/CTF Stage 1	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Testing location / address..... :
☒ Testing Procedure: WMT/CTF Stage 2	
Tested by (name + signature) :	Joan Chen
Witnessed by (+ signature)..... :	Ben Chang
Approved by (+ signature) :	Katy Chen
Testing location / address..... :	AU OPTRONICS CORP, NO. 23, LI- HSIN RD., HSINCHU SCIENCE PARK, HSINCHU, 30078, TAIWAN, R.O.C.
☐ Testing Procedure: SMT/CTF Stage 3 or 4	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :
	Testing location / address..... :
☐ Testing Procedure: RMT	Testing location / address..... :
	Tested by (name + signature) :
	Approved by (+ signature) :
	Supervised by (+ signature) :
	Testing location / address..... :

List of Attachments

National Differences (2 pages)

Enclosures (10 pages)

Summary Of Testing

Unless otherwise indicated, all tests were conducted at AU OPTRONICS CORP, NO. 23, LI- HSIN RD., HSINCHU SCIENCE PARK, HSINCHU, 30078, TAIWAN, R.O.C..

Tests performed (name of test and test clause)	Testing location / Comments
Input: Single-Phase (1.6.2) SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1) Heating (4.5.1, 1.4.12, 1.4.13) Component Failure (5.3.1, 5.3.4, 5.3.7) Summary of Compliance with National Differences: Countries outside the CB Scheme membership may also accept this report. List of countries addressed: AT, BE, BG, BY, CA, CH, CN, CZ, DE, DK, ES, EU, FI, FR, GB, GR, HU, IE, IL, IT, JP, KR, NL, NO, PL, PT, RO, SE, SG, SI, SK, UA, US The product fulfills the requirements of: --This equipment is intended to be operated at altitude up to 5000m and evaluated under IEC 60664-1, Edition2.0: 2007.	

Copy of Marking Plate - Refer to Enclosure titled Marking Plate for copy.

Test item particulars :	
Equipment mobility	for building-in
Connection to the mains	No direct connection
Operating condition	continuous
Access location	Determined in end use
Over voltage category (OVC)	OVC II
Mains supply tolerance (%) or absolute mains supply values	No direct connection
Tested for IT power systems	No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	Class III (supplied by SELV)
Considered current rating of protective device as part of the building installation (A)	N/A
Pollution degree (PD)	PD 2
IP protection class	IP X0
Altitude of operation (m)	Up to 5000
Altitude of test laboratory (m)	Below 2000
Mass of equipment (kg)	Max. 2.1
Possible test case verdicts:	
- test case does not apply to the test object	N / A
- test object does meet the requirement	P(Pass)
- test object does not meet the requirement	F(Fail)
Testing:	
Date(s) of receipt of test item	2014-07-04
Date(s) of Performance of tests	2014-07-04
General remarks:	
"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report. Throughout this report a point is used as the decimal separator.	
Manufacturer's Declaration per Sub Clause 4.2.5 of IEC 60950-1:	
The application for obtaining a CB Test Certificate includes more than one factory and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided When differences exist, they shall be identified in the General Product Information section.	
Name and address of Factory(ies):	1. AU OPTRONICS (LONGKE) CORPORATION NO. 228 LONGKE ST, LONGTAN TOWNSHIP, TAOYUAN COUNTY 32542, TAIWAN

2.
AU OPTRONICS (TAICHUNG) CORPORATION
1, JHONG KE RD., CENTRAL TAIWAN SCIENCE PARK,
TAICHUNG 407, TAIWAN
3.
AU OPTRONICS (SUZHOU) CORPORATION
398 SUHONG ZHONG RD. SUZHOU INDUSTRIAL PARK,
JIANGSU 215021, P.R. CHINA
4.
AU OPTRONICS (XIAMEN) CORPORATION
NO.1689, NORTH OF XIANG'AN ROAD, XIANG'AN BRANCH
TORCH HI-TECH, INDUSTRIAL DEVELOPMENT ZONE, XIAMEN
361102, P.R. CHINA
5.
AU OPTRONICS MANUFACTURING (SHANGHAI) CORP.
NO. 3, LN 58, SAN-ZHUANG RD., SONGJIANG EXPORT
PROCESSING ZONE, SHANGHAI, P.R. CHINA
6.
FORTECH ELECTRONICS(SUZHOU) CO.,LTD
NO.399 JIN HU WEST ROAD ,WUJIANG ECONOMIC
DEVELOPMENT JIANGSU PROVINCE 215200, P.R. CHINA
7.
QISDA (SUZHOU) CO., LTD.
NO.169, ZHUJIANG ROAD, NEW DISTRICT, SUZHOU, JIANGSU
215129, P.R. CHINA
8.
FORTECH ELECTRONICS(KUNSHAN) CO.,LTD
NO. 555, TONGFENG EAST RD., ECONOMICAL EXPLOITATION
AREA KUNSHAN CITY, JIANGSU PROVINCE 215334, P.R.
CHINA
9.
RADIANT OPTO-ELECTRONICS (SUZHOU) CO., LTD
NO.1621, JIANGXING EAST RD, ECONOMIC DEVELOPING
AREA, WUJIANG JIANGSU 215011, P.R. CHINA
10.
DARWIN PRECISIONS (XIAMEN) CORP
3089 NORTH OF XIANG'AN RD XIANG'AN BRANCH TORCH HI-
TECH INDUSTRIAL DEVELOPMENT ZONE XIAMEN FUJIAN
361102, P.R. CHINA
11.
DARWIN PRECISIONS (SZ) CORPORATION
NO.11, TINGXIN STREET SUZHOU INDUSTRIAL PARK
SUZHOU, 215000, P.R. CHINA

12.
BRIVIEW (HEFEI) CORP.
176 YUNER RD HEFEI ECONOMIC & TECHNOLOGICAL
DEVELOPMENT AREA, HEFEI ANHUI 230601, P.R. CHINA

13.
BRIVIEW (XIAMEN) CORP.
NO. 1998, WEST OF FANG SHAN ROAD, XIANG AN BRANCH,
TORCH HI-TECH INDUSTRIAL DEVELOPMENT ZONE, XIAMEN
P.R. CHINA

GENERAL PRODUCT INFORMATION:

Report Summary

The original report was modified on 2014-07-17 to include the following changes/additions:

-This test Report should be read in conjunction with the original
report No.:

E204356-A248-CB-2 issued 2012-12-21, With CB Certificate (DK-29999-UL), Issued 2012-12-25.

E204356-A248-CB-2 Amendment1 issued 2013-10-23, With CB Certificate (DK-29999-A1-UL), Issued 2013-10-23.

-This Report were deemed to amend, due to:

- (1) Alternate one LED driver board, model 19G04-DXX (X = 0-9, A-Z or blank);
- (2) Alternate one panel back metal cover construction (See enclosure ID 3-13 to 3-15 for detail);
- (3) Revise Manufacturer Declaration Letter and factories address.
- (4) Modify Engineering Conditions of Acceptability regarding maximum temperature for panel surface from 80 degree C to 95 degree C.

Product Description

(TFT)LCD Panel secured on metal chassis, and supplied by SELV. Boost with LED driver board.

Model Differences

- Model G190EGZZ and G190EANZZZZ are identical to G190ETNZZZZ except panel back constrction.

Additional Information

--The label is a draft of an artwork for marking plate pending approval by National Certification Bodies and it shall not be affixed to products prior to such an approval.

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 50°C
- The product was investigated to the following additional standards: The product was investigated to the following additional standards: The unit was evaluated to be operated up to 5,000 m above sea level per Annex G and the multiplication factor (1.48), linear, interpolation used) of table A.2 of IEC 60664-1, edition 2:2007 was applied to determine the minimum required clearance.
- LEDs provided in the product are considered low power devices: Yes

Engineering Conditions of Acceptability

When installed in an end-product, consideration must be given to the following:

- The following secondary output circuits are SELV: After LED drive board connector
- The power supply terminals and/or connectors are: Suitable for factory wiring only
- The investigated Pollution Degree is: 2
- The following end-product enclosures are required: Mechanical, Fire
- The component is evaluated for use in SELV circuits and LCC circuits. --
- Safety Instruction should be considered in end-product evaluation --
- To be determined in end product. The Maximum temperature (Tmax) for Panel Surface should not exceed 95 degree C. --
- To be determined in end product. The opening in the rear side covered by plastic part should keep 13mm of air space or separate by a solid barrier of V-1 material from electrical parts under fault are likely to produce temperature that could cause ignition. --

Abbreviations used in the report:

- normal condition	N.C.	- single fault condition	S.F.C
- operational insulation	OP	- basic insulation	BI
- basic insulation between parts of opposite polarity:	BOP	- supplementary insulation	SI
- double insulation	DI	- reinforced insulation	RI

Indicate used abbreviations (if any)

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.1.1	Rated current (mA or A):	Optional, 12 Vdc, 4.25 A max or; 12Vdc, 1.2Amax (with LED driving circuit).	Pass

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict

1.6.2	TABLE: electrical data (in normal conditions)					Pass
U (V)	I (A)	I rated (A)	P (W)	Fuse #	I fuse (A)	condition/status
--	--	--	--	--	--	Following test was conducted for LED driver board, P/N: 19G01-DXX(G190EG01)
12 Vdc	1.02	4.25	12.24	--	--	Maximum normal load.
--	--	--	--	--	--	For project 4786083800
--	--	--	--	--	--	Add one LED driving board, model G190EAN% (% may be any alphanumeric character or blank)
12Vdc	1.31	1.3	15.72	--	--	With screen full raster, maximum brightness and contrast and operated continuously
--	--	--	--	--	--	For project 4786486647
--	--	--	--	--	--	Add one LED driving board, model 19G04-DXX (X = 0-9, A-Z or blank)
12Vdc	0.68	1.2	8.16	--	--	With screen full raster, maximum brightness and contrast and operated continuously
supplementary information:						

2.2	TABLE: Evaluation of voltage limiting components in SELV circuits			Pass
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components	
	V Peak	V d.c.		

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
	For project 4786083800	--	--
	Alternate one LED driving board, model G190EAN% (% may be any alphanumeric character or blank)	--	--
	After L2 to GND	28.2	L2
	U3 to GND	--	28.2 U3
	VOUT1 to GND	--	28.2 --
	For project 4786486647	--	--
	Alternate one LED driving board, model 19G04-DXX (X = 0-9, A-Z or blank).	--	--
	Before L202 to GND	--	12.1 --
	After L202 to GND	46.8	--
	After D202 to GND	--	39.6 D202
	Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)	
	For project 4786083800	--	--
	Alternate one LED driving board, model G190EAN% (% may be any alphanumeric character or blank)	--	--
	L2	#1, VOUT1 to GND: 28.2Vdc	
	U3	#2, VOUT1 to GND: 13.3Vdc	
	R29	#0, VOUT1 to GND: 18.8Vdc	
	U9 Pin D-G	#0, VOUT1 to GND: 0Vdc	
	U9 Pin S-G	#0, VOUT1 to GND: 12.4Vdc	
	U9 Pin D-S	#0, VOUT1 to GND: 0Vdc	
	For project 4786486647	--	--
	Alternate one LED driving board, model 19G04-DXX (X = 0-9, A-Z or blank)	--	--
	D202 Short	D202 to GND: 14.8Vdc max./ (0.38A)	
	supplementary information:		

4.5	TABLE: Thermal requirements					Pass
	Supply voltage (V)	12 Vdc	--	--	--	--
	Ambient Tmin (°C)	See below	--	--	--	--
	Ambient Tmax (°C)	--	--	--	--	--
	Maximum measured temperature T of part/at:	T (°C)				allowed Tmax (°C)
	Following test was conducted for LED driver board, P/N: 19G01-DXX(G190EG01)	--	--	--	--	--
	CH1: L1	32.3	58.6	--	--	105
	CH2: L2	32.8	59.1	--	--	105
	CH3: L3	33.6	59.9	--	--	105
	CH4: U3	36.5	62.8	--	--	105
	CH5: U11	35.2	61.5	--	--	105

IEC 60950-1							
Clause	Requirement + Test			Result - Remark			Verdict
CH6: Panel internal metal part	29.5	55.8	--	--	--	--	--
CH7: Panel external side	29.1	55.4	--	--	--	--	80
CH8: Ambient	23.7	Shift to 50.0	--	--	--	--	--
For project 4786083800	--	--	--	--	--	--	--
Alternate one LED driving board, model G190EAN% (% may be any alphanumeric character or blank)	--	--	--	--	--	--	--
CH1, L2	36.2	63.8	--	--	--	--	105
CH2, U9	40.0	67.6	--	--	--	--	105
CH3, U3	39.6	67.2	--	--	--	--	105
CH4, PCB near U3	37.0	64.6	--	--	--	--	105
CH5, U5	34.5	62.1	--	--	--	--	85
CH6, Internal Metal Part	38.3	65.9	--	--	--	--	70
CH7, External Panel Surface (Right)	30.9	58.5	--	--	--	--	95
CH8, External Panel Surface (Left)	32.2	59.8	--	--	--	--	95
CH9, Ambient	22.4	Shift to 50	--	--	--	--	--
For project 4786486647	--	--	--	--	--	--	--
Alternate one LED driving board, model 19G04-DXX (X = 0-9, A-Z or blank)	--	--	--	--	--	--	--
CH1, L202	35.5	62.1	--	--	--	--	105
CH2, U201	33.5	60.1	--	--	--	--	105
CH3, PCB near U201	33.0	59.6	--	--	--	--	105
CH4, D202	34.1	60.7	--	--	--	--	105
CH5, Q201	32.9	59.5	--	--	--	--	105
CH6, Internal Metal Part	29.9	56.5	--	--	--	--	--
CH7, External Panel Surface	28.7	55.3	--	--	--	--	95
CH8, Ambient	23.4	Shift to 50.0	--	--	--	--	--
temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	allowed T _{max} (°C)	insulation class
supplementary information:							

5.3	TABLE: fault condition tests					N/A
	ambient temperature (° C)				See below	—
	Power source for EUT: Manufacturer, model/type, output rating				12Vdc	—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
--	--	--	--	--	--	For project 4786486647 with alternate LED driver board model: 19G04-DXX (X = 0-9, A-Z or blank)
L202	Short	12 Vdc	10 min.	F201	3	D202 (V _{out}) to GND: 34.8Vdc max./0.41A, NC, NT.

IEC 60950-1						
Clause	Requirement + Test			Result - Remark		Verdict
D202	Short	12 Vdc	10 min.	F201	3	One half of Backlight unit shutdown, D202 (V _{out}) to GND: 14.8Vdc max./0.38A, NC, NT.
Q201 pinD-pinG	Short	12 Vdc	10 min.	F201	3	Backlight unit shutdown, D202 (V _{out}) to GND: 14.8Vdc max./0.01A, Component damaged (R308 & R309) test 3 times , NC, NT.
Q201 pinD-pinS	Short	12 Vdc	10 min.	F201	3	Backlight unit shutdown, D202 (V _{out}) to GND: 3.6Vdc max./6.35A, Component damaged , NC, NT.
R302	Short	12 Vdc	10 min.	F201	3	Normal operation, D202 (V _{out}) to GND: 39.6Vdc max. / 0.68A, NC, NT.
R305	Short	12 Vdc	10 min.	F201	3	Backlight unit shutdown, D202 (V _{out}) to GND: 14.8Vdc max./0A, NC, NT.
supplementary information:						

Enclosure

National Differences

Austria**
Belarus*
Belgium**
Bulgaria**
China*
Czech Republic**
Denmark
Finland
France**
Germany
Greece**
Group
Hungary**
Ireland
Israel
Italy**
Japan*
Korea
Netherlands**
Norway
Poland**
Portugal**
Romania**
Singapore*
Slovakia**
Slovenia**
Spain
Sweden
Switzerland
USA / Canada
Ukraine*
United Kingdom

* No National Differences Declared

** Only Group Differences

IEC 60950-1:2005			
SubClause	Difference + Test	Result - Remark	Verdict

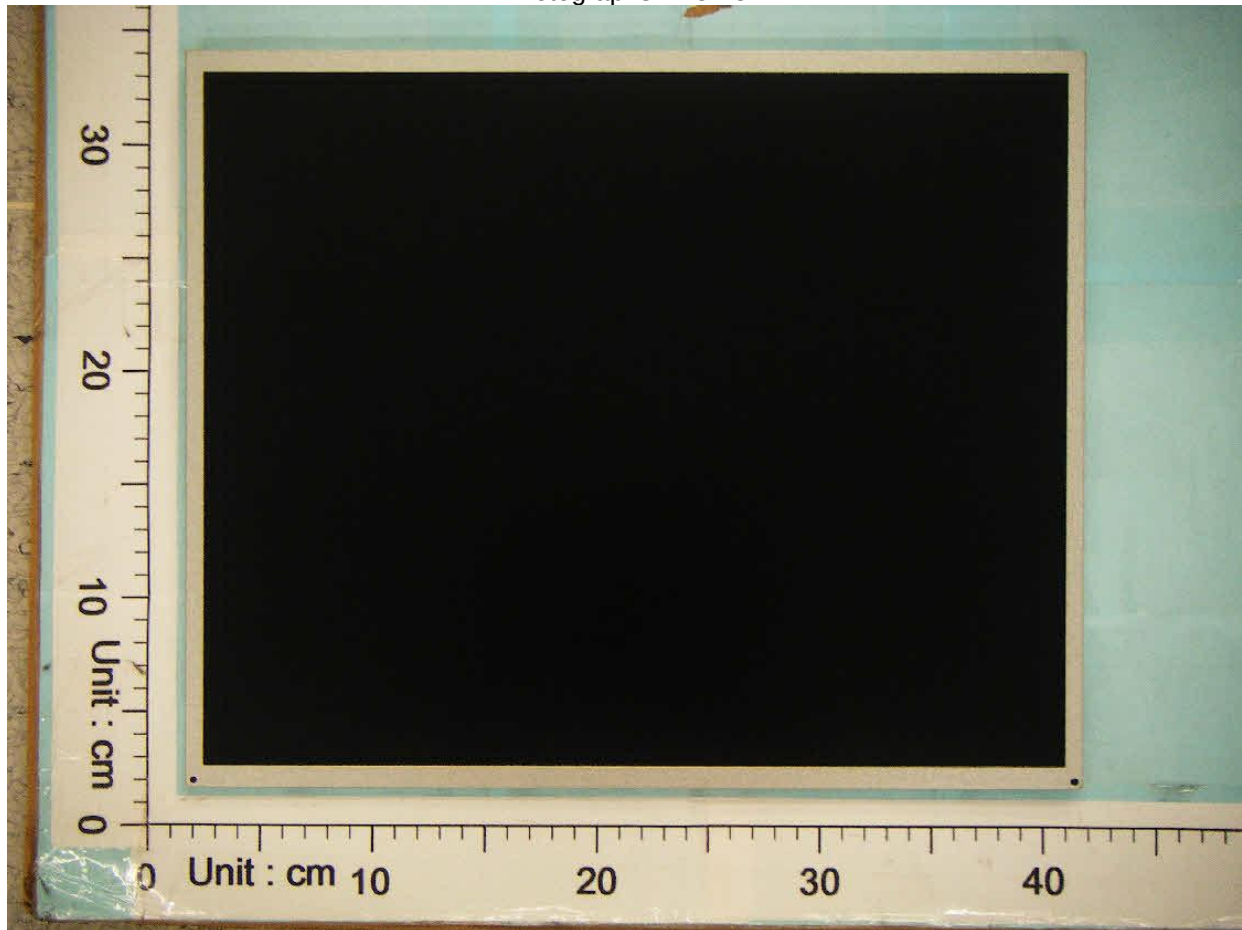
Ireland - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
4.3.6	DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.		N/A

Spain - Differences to IEC 60950-1:2005 (2nd Edition); Am 1:2009			
3.2.1.1	Supply cords of single-phase equipment having a rated current not exceeding 10A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2.5A shall be provided with a plug according to UNE-EN 50075:1993. CLASS 1 EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules, shall be provided with a plug in accordance with standard UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.		N/A

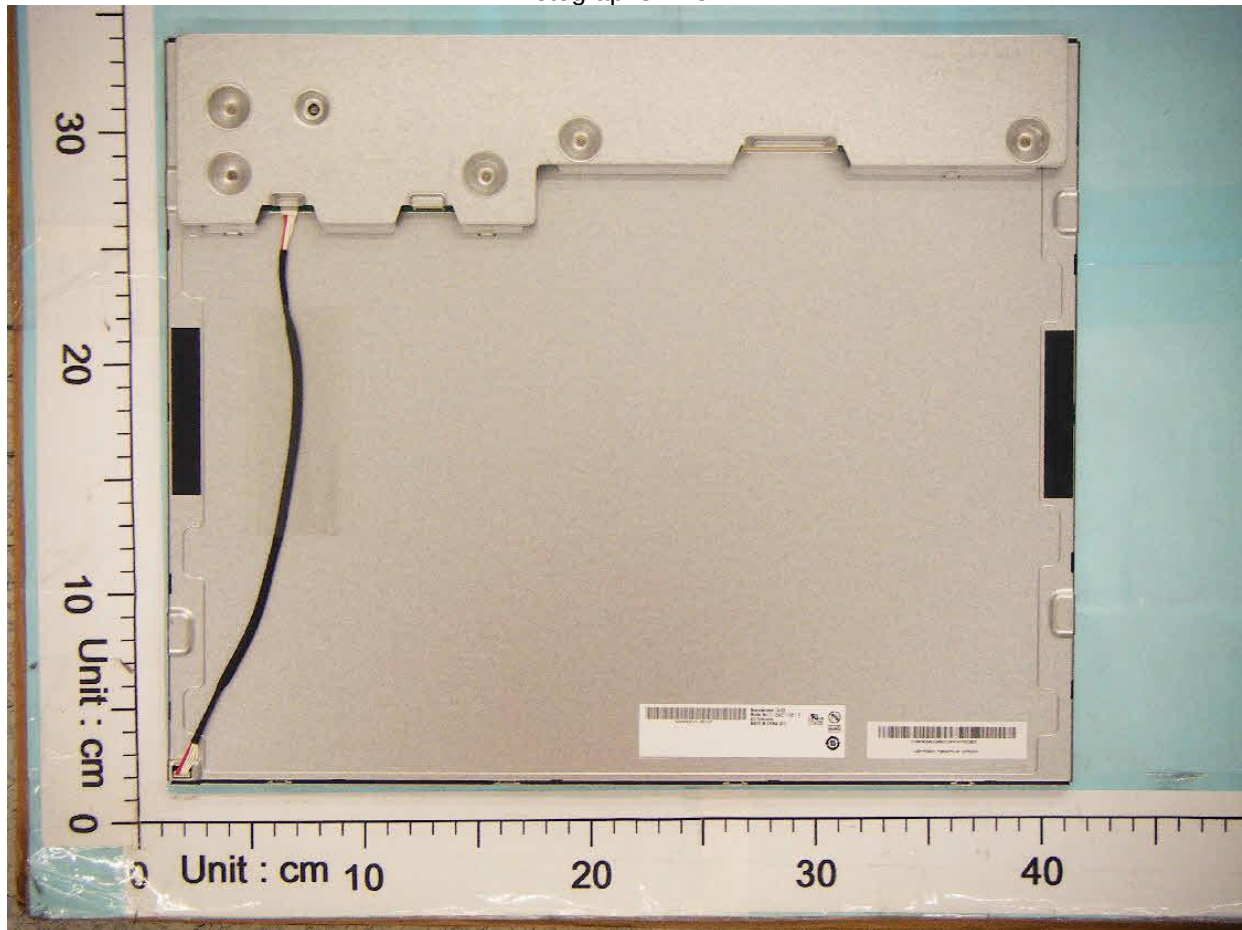
Enclosures

<u>Type</u>	<u>Supplement Id</u>	<u>Description</u>
Photographs	3-01	Front view
Photographs	3-02	Rear view 1 of 2
Photographs	3-03	Rear view 2 of 2
Photographs	3-04	LED driver board, component side (19G01-DXX)
Photographs	3-05	LED driver board, solder side (19G01-DXX)
Photographs	3-10	Alternate back construction without drive board, Rear View 1 of 2
Photographs	3-11	Alternate back construction without drive board, Rear View 2 of 2
Photographs	3-12	Alternate LED driver board (G190EAN%%%%%%%%)
Photographs	3-13	Alternate construction front view
Photographs	3-14	Alternate construction rear view 1 of 2
Photographs	3-15	Alternate construction rear view 2 of 2
Photographs	3-16	Alternate LED driver board (19G04-DXX (X = 0-9, A-Z or blank)
Diagrams		
Schematics + PWB	5-01	LED drive board Layout (P/N.: 19G01-DXX)
Schematics + PWB	5-03	Alternate LED drive board Layout (P/N.: 19G04-DXX)
Manuals		
Miscellaneous	7-02	Manufacturer Declaration Letter
Miscellaneous	7-03	Equipment List
Miscellaneous	7-04	Equipment list-2
Miscellaneous	7-05	Equipment list-3
Licenses		
Marking Plate	13-01	Marking plate
Marking Plate	13-02	Marking plate

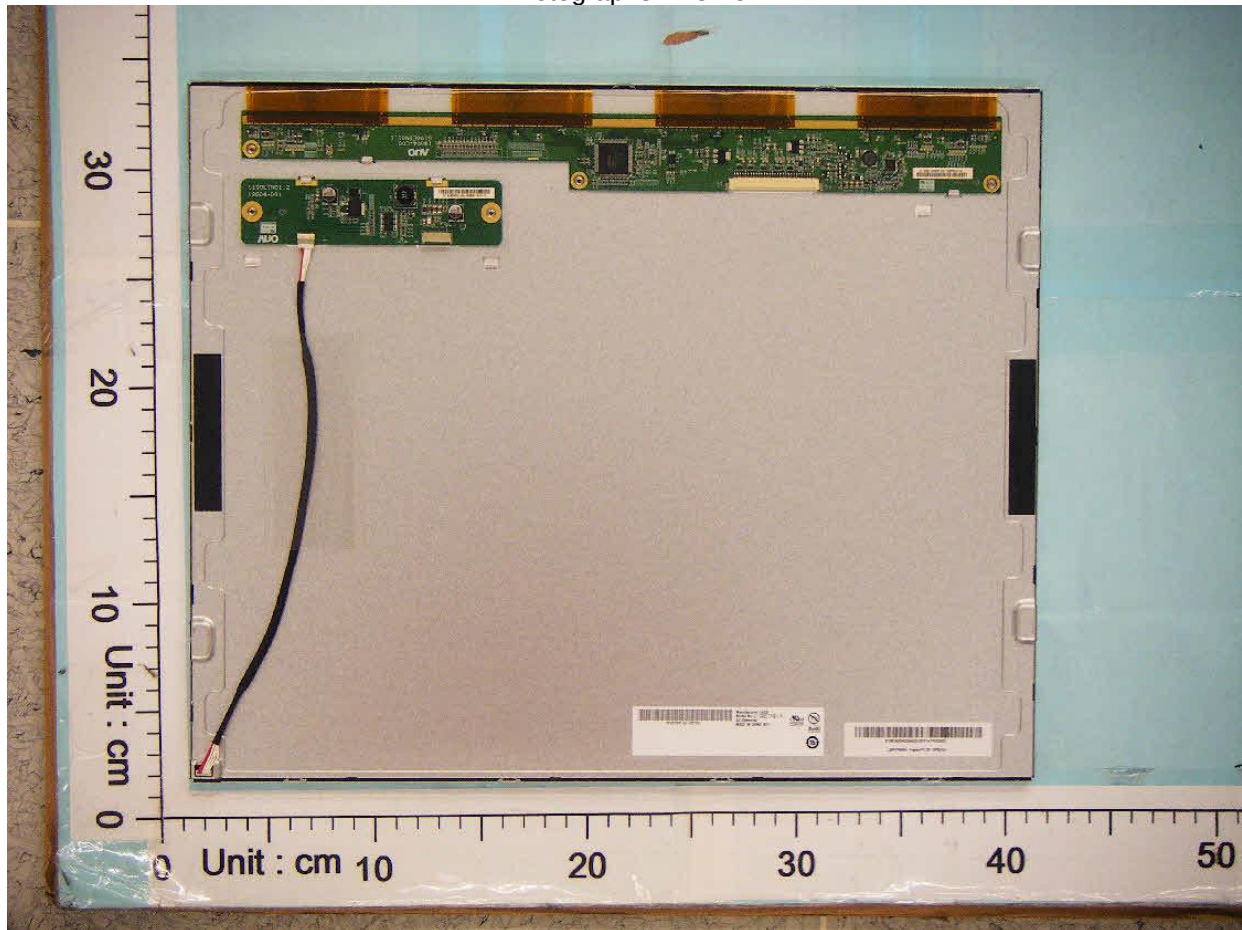
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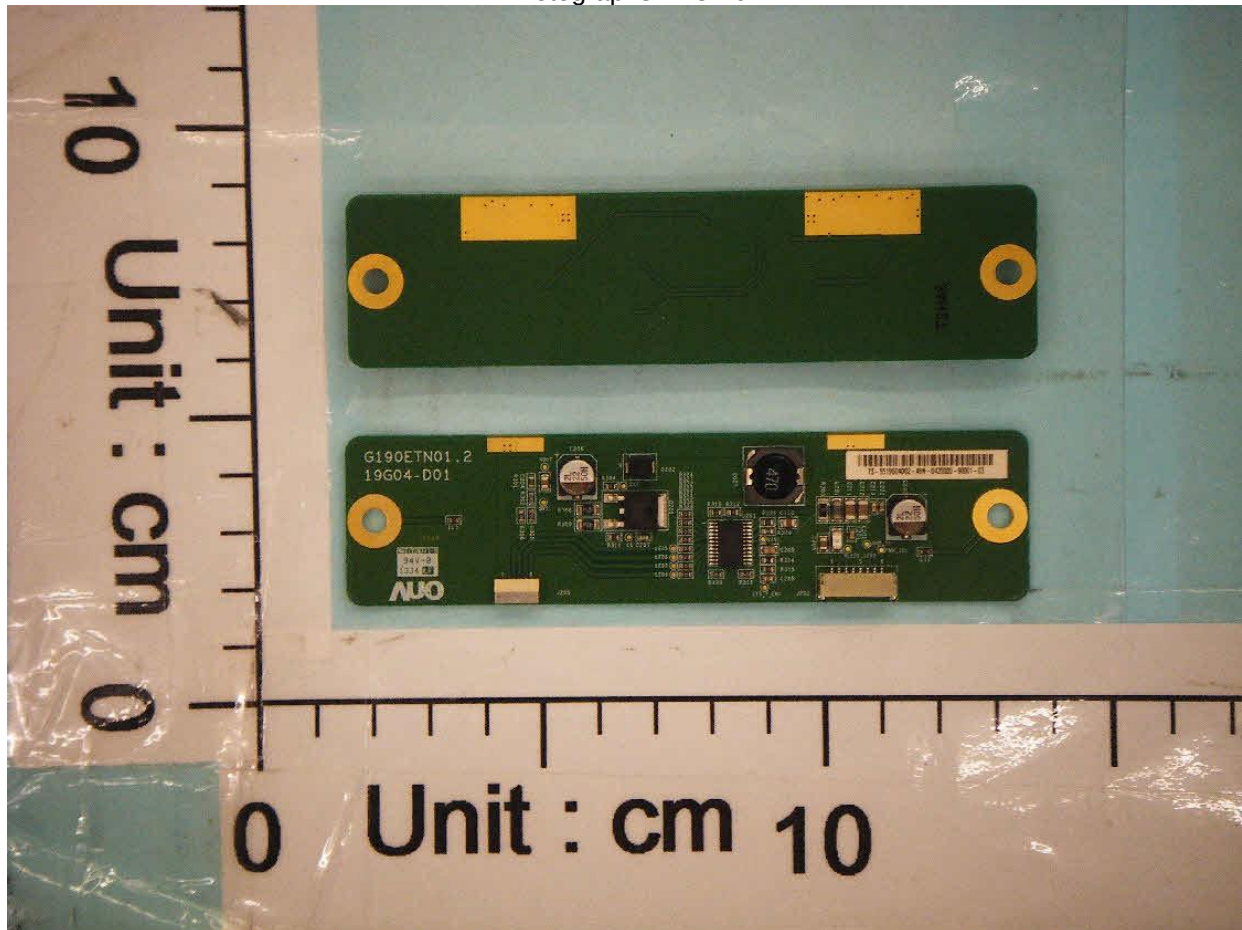
Photographs ID 3-14



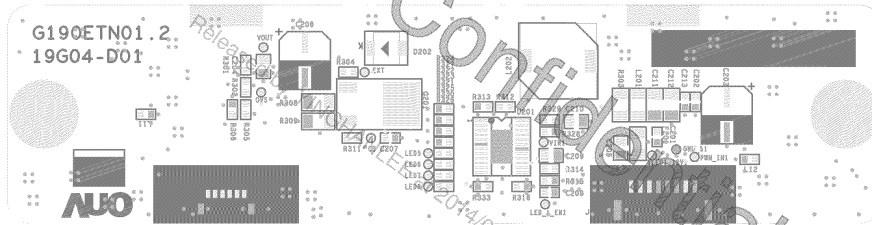
Photographs ID 3-15



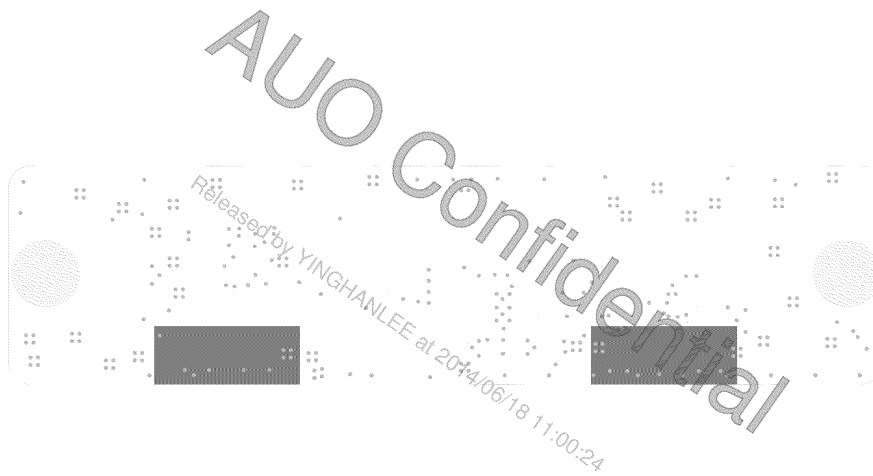
Photographs ID 3-16



Schematics ID 5-03



Schematics ID 5-03



Issue Date: 2012-12-21
Amendment 2 2014-07-17

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Enclosures

Report Reference #

E204356-A248-CB-2

Misc ID 7-02

CB TEST CERTIFICATE INFORMATION

Product	LCD Panel (LED backlight)
Name and address of the Applicant	AU OPTRONICS CORP 1 LI-HSIN RD 2 HSINCHU SCIENCE PARK HSINCHU 300 TAIWAN
Name and address of the Manufacturer	AU OPTRONICS CORP. NO. 23, LI- HSIN RD., HSINCHU SCIENCE PARK, HSINCHU, 30078, TAIWAN, R.O.C.
Name and address of the Factory(ies)	1) AU Optronics (Longke) Corporation No. 228, Longke St, Longtan Township, Taoyuan County 32542, Taiwan 2) AU Optronics (Taichung) Corporation 1, Jhong Ke Rd., Central Taiwan Science Park Taichung 407, Taiwan 3) AU Optronics (Suzhou) Corporation 398 Suhong Zhong Rd. Suzhou Industrial Park, Jiangsu 215021, P.R. China 4) AU Optronics (Xiamen) Corporation No.1689, North of Xiang'An Road, Xiang'An Branch Torch Hi-Tech Industrial Development Zone, Xiamen 361102, P.R. China 5) AU Optronics Manufacturing (Shanghai) Corp. No. 3, Ln 58, San-Zhuang Rd., Songjiang Export Processing Zone, Shanghai, P.R. China 6) Darwin Precisions (SZ) Corporation No. 11, Tingxin Street, Suzhou Industrial Park Suzhou 215021 P.R. China 7) FORTECH ELECTRONICS(SUZHOU) CO.,LTD No.399 jin Hu West Road ,WuJiang Economic Development JiangSu Province 215200, P.R. China 8) Qisda (Suzhou) Co., Ltd. No.169 Zhujiang Road, New District, Suzhou, Jiangsu 215129, P.R. China 9) FORTECH ELECTRONICS(KUNSHAN) CO.,LTD NO. 555, TongFeng East Rd., Economical exploitation area Kunshan City, Jiangsu Province 215334, P.R. China 10) Radiant Opto-Electronics (Suzhou) Co., Ltd No.1621, JiangXing East RD, Economic Developing Area, Wujiang Jiangsu 215011, P.R. China 11) DARWIN PRECISIONS (XIAMEN) CORP 3089 NORTH OF XIANG'AN RD XIANG'AN BRANCH TORCH HI-TECH INDUSTRIAL DEVELOPMENT ZONE XIAMEN FUJIAN 361102, P.R. China

Misc ID 7-02

	12) Briview (Hefei) Corp. 176 YUNER RD HEFEI ECONOMIC & TECHNOLOGICAL DEVELOPMENT AREA, HEFEI ANHUI 230601, P.R. China 13) BriView (Xiamen) Corp. No. 1998, West of Fang Shan Road, Xiang An Branch, Torch Hi-tech Industrial Development Zone, XIAMEN P.R. China
Rating and principal characteristics	Optional, 12 Vdc, 4.25 A max or; 12Vdc, 1.2Amax (with LED driving circuit).
Trademarks (if any)	AU Optronics
Model / Type ref.	G190EGZZ, G190ETNZZZZ, G190EANZZZZ (Where Z may be any alphanumeric character or a dot or a blank) (For marketing purpose only, and no impact safety related constructions and critical components.)
Additional information (if necessary)	--
A sample of the product was tested and found to be in conformity with	--
As shown in the Test Report Ref. No. which forms part of this Certificate	

Client Representative	Joan Chen
Client email (or fax)	Joan.Chen@auo.com

This form is to acknowledge that the above information has been reviewed and the material has been found to be accurate as stated. This is also to record client's confirmation that above factories manufacture product(s) that are equal to those submitted for testing and certification. (Refer to IEC EE 02, Sub-clause 6.2.5: "When the application covers more than one factory, the address of each factory shall be stated in the CB Test Certificate and the NCB shall take steps to ensure that the products from all the factories are equal. That shall be confirmed in the Test Report.")

Signed:

Joan Chen

Dated: 2014/07/04

*Definitions per IEC EE 02 (<http://www.iecee.com/cbscheme/pdf/IECEE02.pdf>):

Applicant: A firm or a person who applies to an NCB for obtaining a CB Test Certificate.

Manufacturer: An organization, situated at a stated location or locations, that carries out or controls such stages in the manufacture, assessment, handling and storage of a product that enables it to accept responsibility for continued compliance of the product with the relevant requirements and undertakes all obligations in that connection.

Factory: The location(s) at which the product is produced or assembled and follow-up service is established by the NCB.

Misc ID 7-05

[illegible]