

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	Shenzhen Dicolor Optoelectronics Co., Ltd	Manufacturer:	Shenzhen Dicolor Optoelectronics Co., Ltd
Address:	Dicolor Industrial Park, No. 18 Zhongtai Road, Gongming Town, Guangming New District, SHENZHEN Guangdong 518015	Address:	Dicolor Industrial Park, No. 18 Zhongtai Road, Gongming Town, Guangming New District, SHENZHEN Guangdong 518015
Country:	CHINA	Country:	CHINA
Contact:	Qunba Wang	Contact:	Qunba Wang
Phone:	+86-755-29604770	Phone:	+86-755-29604770
FAX:	+86-755-29604042	FAX:	+86-755-29604042
Email:	305006149@qq.com	Email:	305006149@qq.com
Party Authorized To Apply Mark:	Same as Manufacturer		
Report Issuing Office:	Intertek Testing Services Shenzhen Ltd. Longhua Branch		

Control Number: 4008509

Authorized by: _____

for Dean Davidson, Certification Manager




This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

Intertek Testing Services NA Inc.
545 East Algonquin Road, Arlington Heights, IL 60005
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

Standard(s):	Information Technology Equipment Safety Part 1: General Requirements >Valid without technical revision: 01Jan2022< [UL 60950-1:2007 Ed.2 +R:14Oct2014]
Product:	Full Color LED Display
Brand Name:	
Models:	A-261, A-291, A-391

1.0 Reference and Address			
Report Number	171113013SZN-001	Original Issued: 15-Dec-2017	Revised: None
Standard(s)	Information Technology Equipment Safety Part 1: General Requirements >Valid without technical revision: 01Jan2022< [UL 60950-1:2007 Ed.2 +R:14Oct2014] Information Technology Equipment Safety Part 1: General Requirements (R2016) >Valid without technical revision: 01Jan2022< [CSA C22.2#60950-1:2007 Ed.2+A1;A2]		
Applicant	Shenzhen Dicolor Optoelectronics Co., Ltd	Manufacturer	Shenzhen Dicolor Optoelectronics Co., Ltd
Address	Dicolor Industrial Park, No. 18 Zhongtai Road, Gongming Town, Guangming New District, SHENZHEN Guangdong 518015	Address	Dicolor Industrial Park, No. 18 Zhongtai Road, Gongming Town, Guangming New District, SHENZHEN Guangdong 518015
Country	CHINA	Country	CHINA
Contact	Qunba Wang	Contact	Qunba Wang
Phone	+86-755-29604770	Phone	+86-755-29604770
FAX	+86-755-29604042	FAX	+86-755-29604042
Email	305006149@qq.com	Email	305006149@qq.com

2.0 Product Description	
Product	Full Color LED Display
Brand name	
Description	<p>The product covered by this report is LED display for indoor use, it is considered as component which is not final product before the connection with multiple LED displays, the final system shall be additional evaluation, see the details in below conditions of acceptability. Specifically, the back enclosure that contains primary circuit CANNOT be considered as the final enclosure in final system. Therefore the product shall be installed in a prepared recess in final system, such as in a wall, or similar situation. Or, the product shall be installed with additional frame of back enclosure or similar structure in final system, so that qualified person can open the back enclosure of product only when using special tools.</p> <p>The LED lamp of this equipment is classified as exempt group according to IEC 62471 (test for the whole LED module).</p> <p>Relevant technical consideration: Equipment mobility: stationary Connection to the mains: detachable power supply cord, AC inlet Operating condition: continuous Access location: restricted access location Over voltage category (OVC): OVC II Mains supply tolerance (%) or absolute mains supply values: -10%, +10% Tested for IT power systems: No Class of equipment: Class I Considered current rating of protective device as part of the building installation (A): 20 Pollution degree (PD): PD 2 IP protection class: IPX0 Altitude during operation (m): < 2000 m Altitude of test laboratory (m): < 2000 m Mass of equipment (kg): Approx. 9.5 kg Maximum ambient temperature (Tma): 40 degree C</p> <p>Types of disconnect devices: an appliance coupler Dimension: Approx. 500mm (H) x 500mm (W) x 80.6mm (D) Main test models: A-261 (with the minimum point spacing of LED)</p>
Models	A-261, A-291, A-391
Model Similarity	<p>All models are identical to each other except for point spacing of LED and model number.</p> <p>Point spacing of LED of model A-261: 2.604mm Point spacing of LED of model A-291: 2.976mm Point spacing of LED of model A-391: 3.906mm</p>
Ratings	<p>Input: 100-240V~, 50/60Hz, 10A Output: 100-240V~, 50/60Hz, 9A</p>
Other Ratings	NA

2.0 Product Description

Conditions of Acceptability

The products covered in this Report are incomplete in construction features or limited in performance capabilities and are intended for use and evaluation in other products. Consideration should be given to the following when the component is used in or with another product.

No operator access area, the device is intended for service person access only.

Clause 2.1.1.1 Access to energized parts

Clause 2.1.1.7 Stored discharge on capacitors test

Clause 2.6.3.4 Resistance of earthing conductors and their terminations test

Clause 3.3 Wiring terminals for connection of external conductors

Clause 3.4 Disconnection from the mains supply

Clause 4.1 Stability test

Clause 4.2.10 Mechanical strength - mounting means test

Clause 4.3.13.5.2 Light emitting diodes (LEDs)

Clause 5.1 Touch current test

3.0 Product Photographs

Photo 1 - External view of EUT (model A-261)

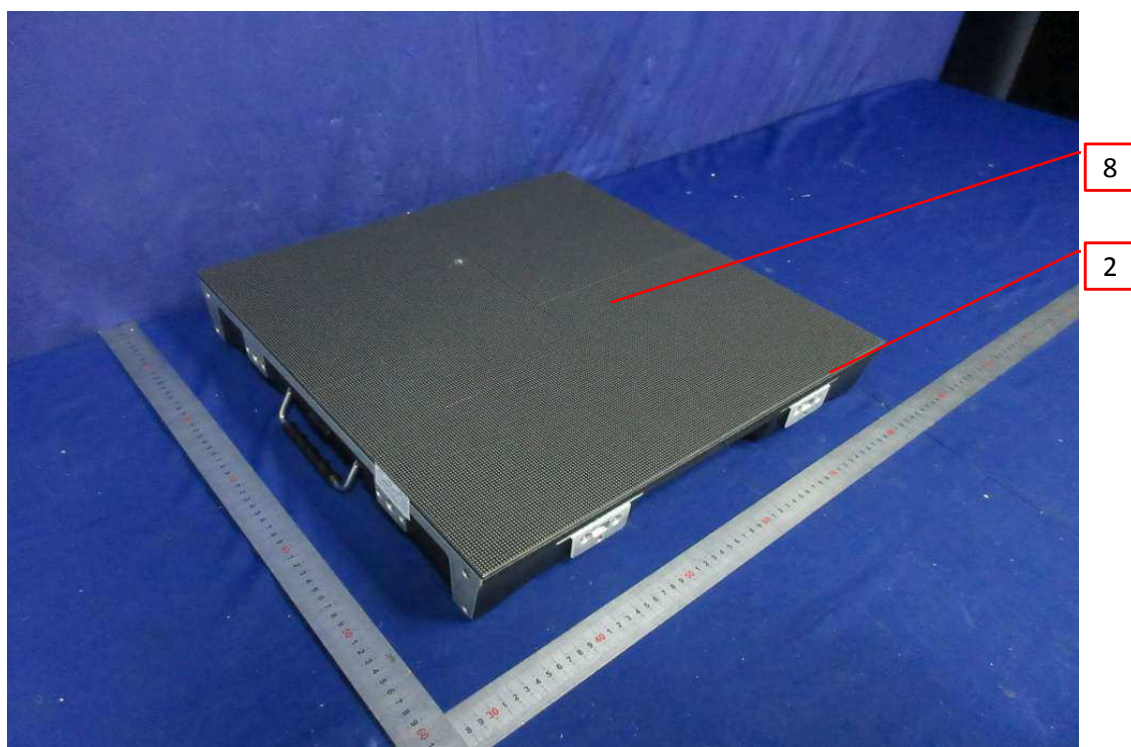


Photo 2 - External view of EUT (model A-261)



3.0 Product Photographs

Photo 3 - External view of EUT (model A-261)



Photo 4 - External view of EUT (model A-261)



3.0 Product Photographs

Photo 5 - Internal view of EUT (model A-261)



Photo 6 - Internal view of EUT (model A-261)

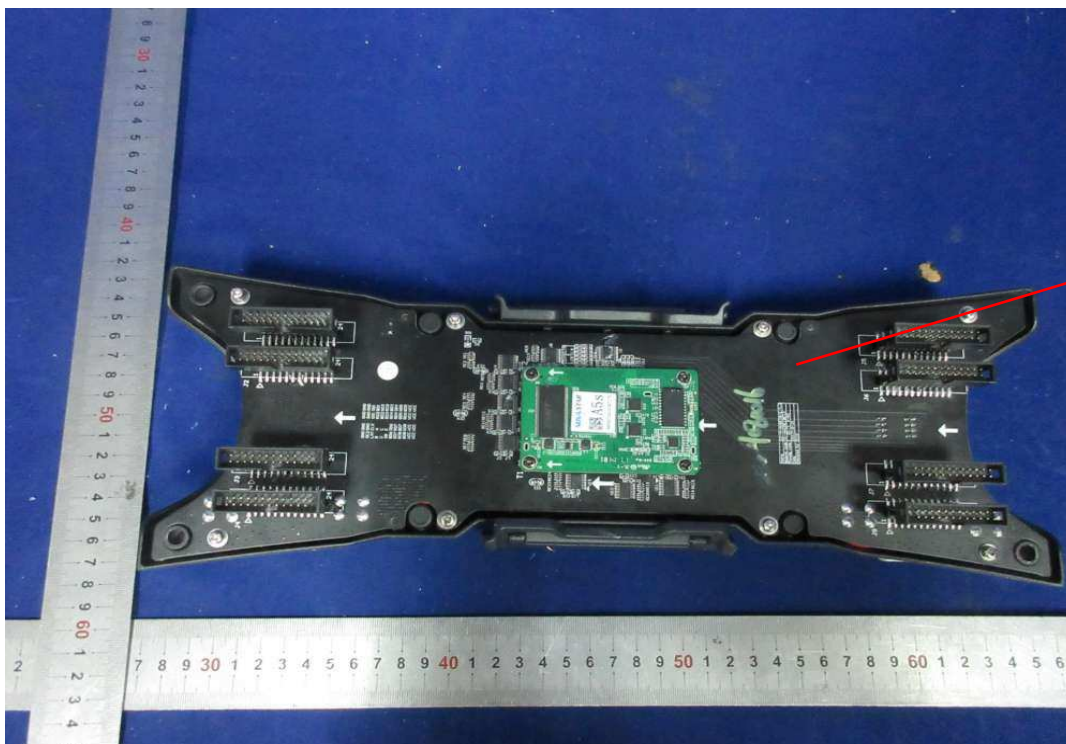


3.0 Product Photographs

Photo 7 - Internal view of EUT (model A-261)



Photo 8 - Internal view of EUT (model A-261)



3.0 Product Photographs

Photo 9 - Internal view of EUT (model A-261)

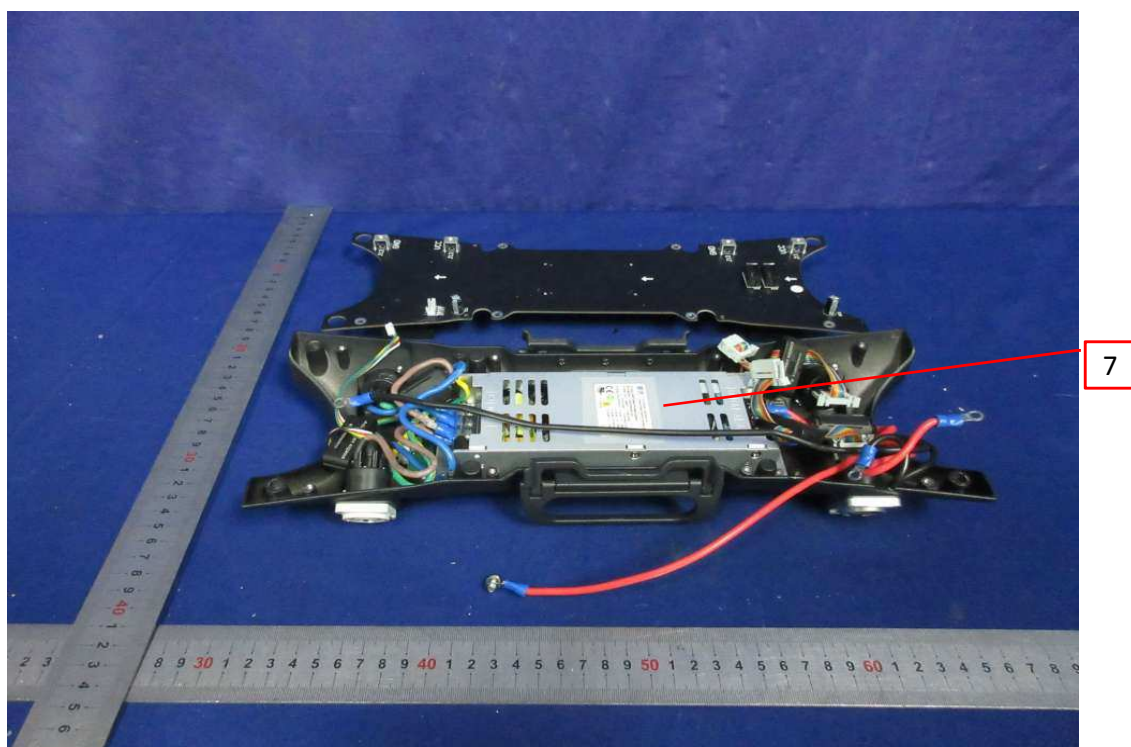
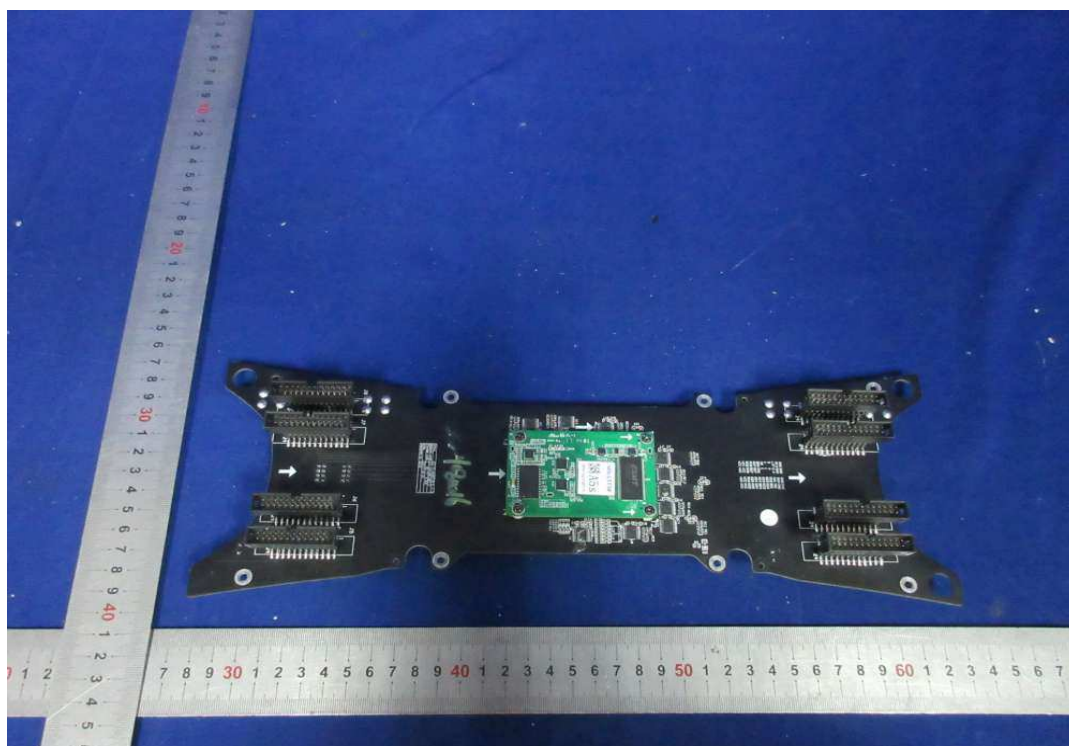


Photo 10 - Overall view of PCB (model A-261)



3.0 Product Photographs

Photo 11 - Overall view of PCB (model A-261)

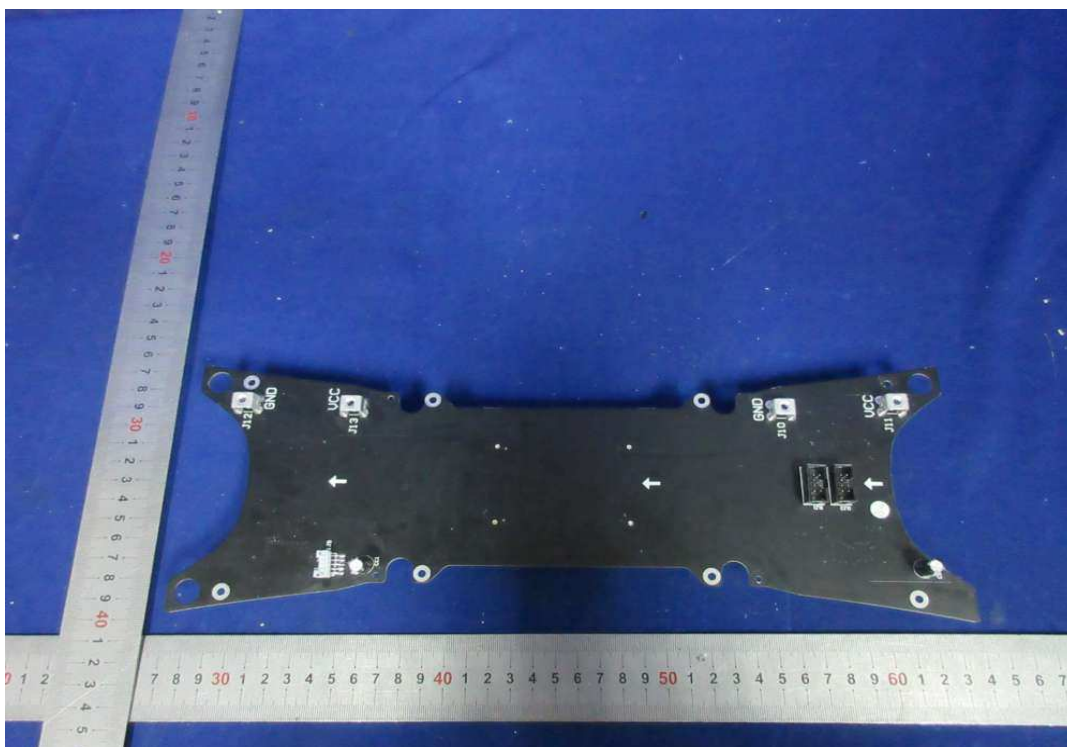
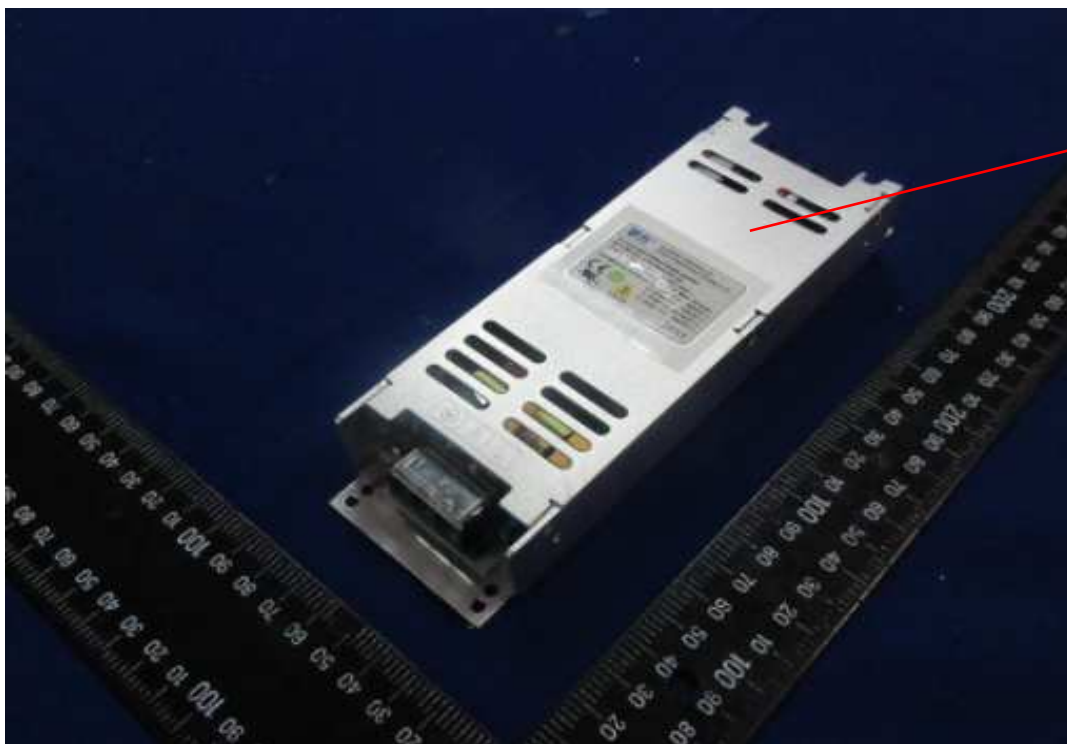


Photo 12 - Overall view of power supply module (model A-261)



3.0 Product Photographs

Photo 13 - Overall view of power supply module (model A-261)

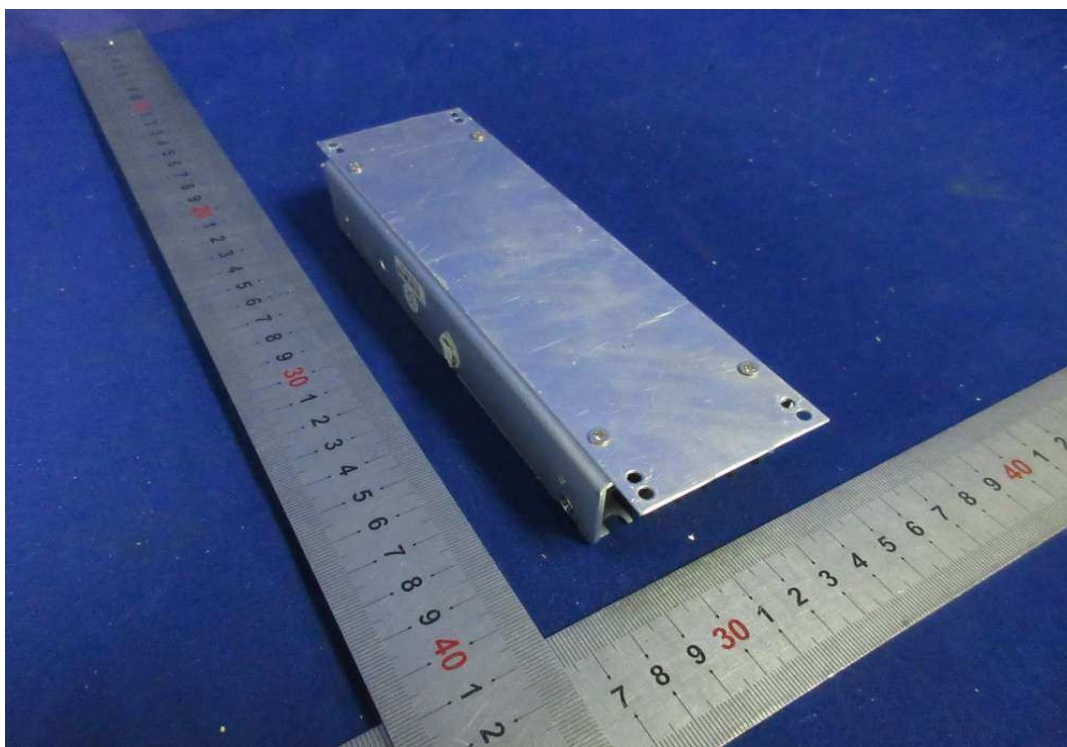
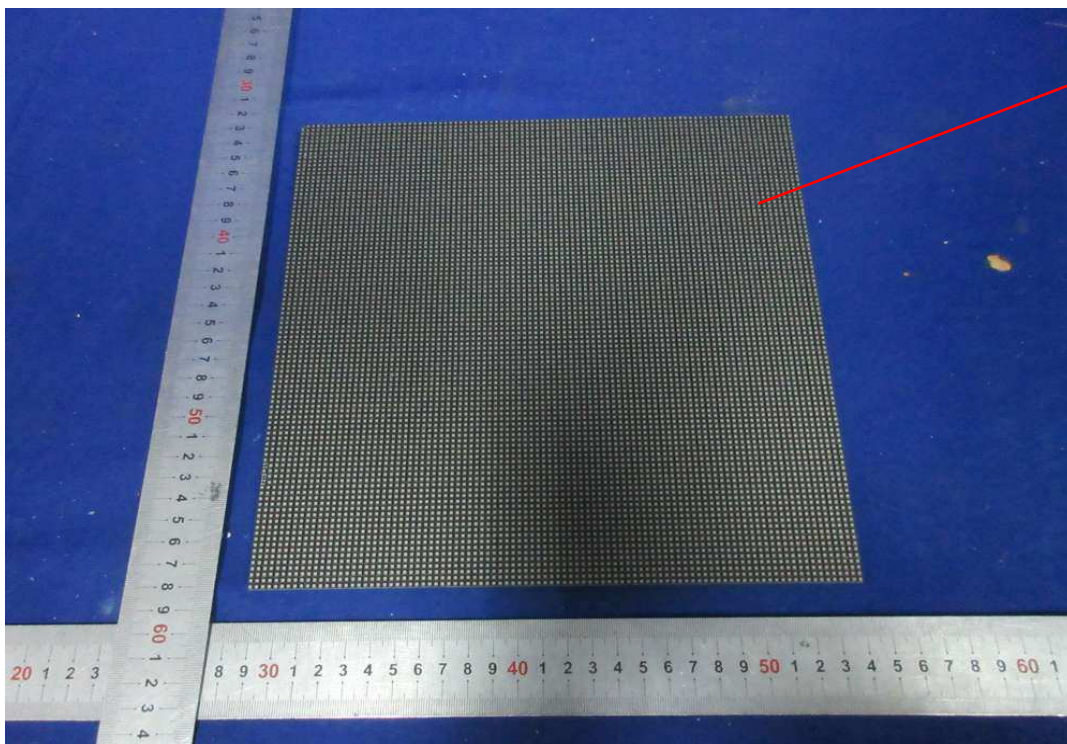
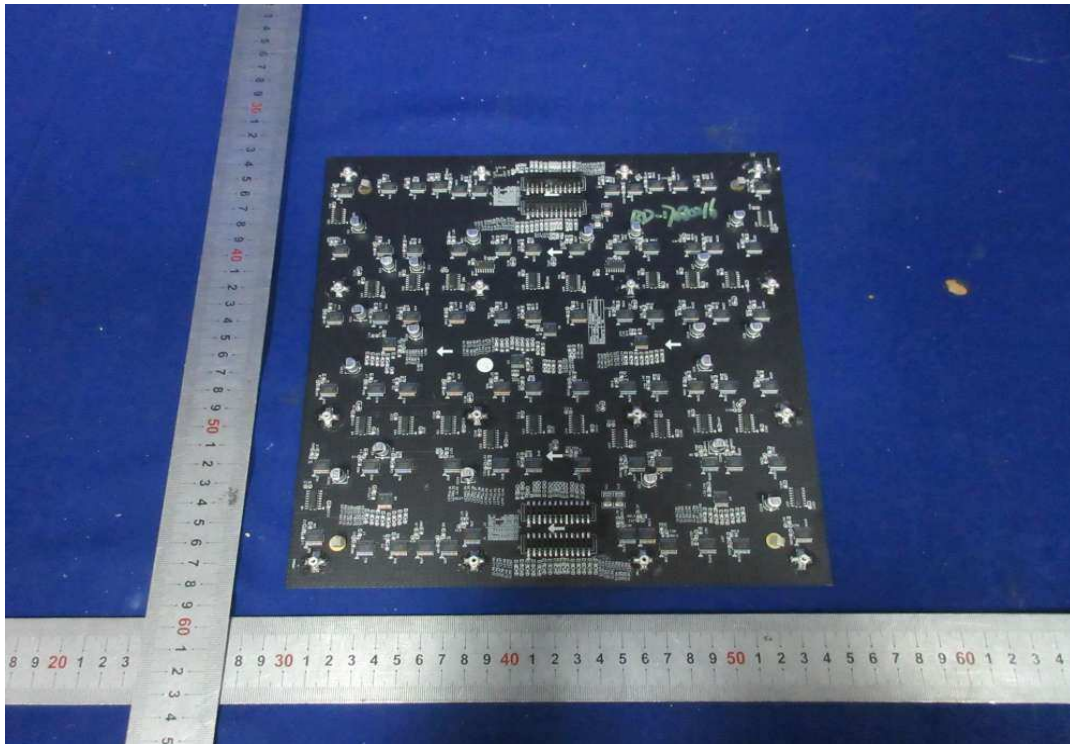


Photo 14 - Overall view of LED module (model A-261)



3.0 Product Photographs

Photo 15 - Overall view of LED module (model A-261)



4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
2	1	Metal enclosure	Various	Various	Iron enclosure, min. thickness 2.0mm	NR
1	2	Plastic enclosure	HUIZHOU WOTE ADVANCED MATERIALS CO LTD	3001	5VA, 80°C, min. thickness 2.0mm	cURus
3	3	AC inlet	NINGBO HAISHU DISTRICT SEETRONIC ELECTRONIC CO LTD	SAC3MPA-N-W	250V, 20A, 80°C	cURus
			SHENZHEN LINKO ELECTRIC CO LTD	YF-24-C03PE-02	250V, 20A, 80°C	cURus
2	4	AC input connector plug (Not shown)	NINGBO HAISHU DISTRICT SEETRONIC ELECTRONIC CO LTD	SAC3FCA	250V, 20A, 80°C	cURus
			SHENZHEN LINKO ELECTRIC CO LTD	YF-24-J03SX-02	250V, 20A, 80°C	cURus
4	5	AC outlet	NINGBO HAISHU DISTRICT SEETRONIC ELECTRONIC CO LTD	SAC3MPB-N-W	250V, 20A, 80°C	cURus
2	6	AC output connector plug (Not shown)	NINGBO HAISHU DISTRICT SEETRONIC ELECTRONIC CO LTD	SAC3FCB	250V, 20A, 80°C	cURus
9,12	7	Power supply module	CHANGSHA HANGTE ELECTRONIC TECHNOLOGY CO LTD	LPU200S5R6-DC	Input: 100-109Vac, 50/60Hz, 3.5A, Class I Output: 5.0VDC, 30A (50°C)/ 26.3A (65°C) or Input: 110-240Vac, 50/60Hz, 3.5A, Class I Output: 5.0VDC, 40A (50°C)/ 35A (65°C) Altitude of operation: up to 2000 m, maximum ambient temperature: 50°C/ 65°C 1 pcs used	cURus
1,14	8	LED lamp	FOSHAN NATIONSTAR OPTOELECTRONICS CO., LTD	FM-B2020RGBA-HG	Emitted color: Red, Green, Blue Forward current: 20mA Forward voltage: 3.4V max.	NR
			SHENZHEN KINGLIGHT CO., LTD.	JT-KF0707QBZGS URW-BB-A1	Emitted color: Red, Green, Blue Forward current: 20mA(R), 20mA(G), 20mA(B) Forward voltage: 3.2V max.	NR
8	9	PCB	Various	Various	V-1 or better, min. 130°C	UR
9	10	Internal primary wire (Not shown)	Various	Various	VW-1, min.16 AWG, min. 105°C, min. 600V, double insulation	UR

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
9	11	Output wire (used for power supply module) (Not shown)	Various	Various	VW-1, min.16 AWG, min. 105°C, min. 300V	UR
9	12	Protective earthing / bonding wire (Not shown)	Various	Various	VW-1, min.14 AWG, min. 105°C, min. 600V, green-and-yellow	UR
9	13	Screw for protective earthing / bonding conductor (Not shown)	Various	Various	Stainless steel or Zinc plated iron, nominal thread diameter: min. 3.5mm	NR
9	14	Heat shrinkable tube (Not shown)	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR-H	VW-1, 600V, 125°C, min. thickness 0.4mm	cURus
			Various	Various	VW-1, min. 600V, min. 125°C, min. thickness 0.4mm	cURus
NOTES:						
1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.						
2) “Various“ means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.						
3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.						

5.0 Critical Unlisted CEC Components

No Unlisted CEC components are used in this report.

6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.

1. **Spacing** - In primary circuits, minimum spacing are maintained through air and over surfaces of insulating material between current-carrying parts of opposite polarity and minimum between such current-carrying parts and dead-metal parts or low voltage isolated circuits.
(Without considering approved power supply module inside)
Limits between Line and Neutral before Fuse: Cl = 1.5 mm; Cr = 2.5 mm.
Limits between Line/Neutral and protective earthing: Cl = 2.0 mm; Cr = 2.5 mm.
Limits between live parts and secondary parts: Cl = 4.0 mm; Cr = 5.0 mm.
2. **Mechanical Assembly** - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
3. **Corrosion Protection** - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. **Accessibility of Live Parts** - All uninsulated live parts in primary circuitry are housed within a metal and non-metallic enclosure constructed with no openings other than those specifically described in Sections 4 and 5.
5. **Grounding** - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed are connected to the grounding lead of the power supply cord or the equipment grounding terminal.
6. **Polarized Connection** - This product is provided with a polarized power supply connection. All single pole switches and fuses are connected only to the ungrounded supply circuit conductor.
7. **Internal Wiring** - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets.
8. **Schematics** - NA
9. **Markings** - The product is marked as follows:
 - manufacturer's name or brand name
 - model number
 - electrical ratings (input voltage, frequency, current)
 - ETL certification marking
 Refer to Illustration No.1 for details.
10. **Cautionary Markings** - The following are required: Caution and warning markings shall be in both French and English when selling in Canada. Refer to Illustration No.2 for details.
11. **Installation, Operating and Safety Instructions** - Instructions for installation and use of this product are provided by the manufacturer. Caution and warning shall be in both French and English when selling in Canada. Refer to Illustration No.3, 4 for details.

7.0 Illustrations

Illustration 1 - Marking



Marking Label 1



The completed ETL logo with standard description

Wiring terminal intended for connection of protective earthing conductor indicated by the symbol



Remark: for other models (refer to section 2.0), the marking is same as above except the model number, which would be changed accordingly.

Note 1: The ETL logo shall not be less than 8 mm in width and in height, the "Intertek" shall not be less than 3 mm in height, the "C", "US" and the control No. "4008509" shall not be less than 2 mm in height, the "CONFORMS TO UL STD. 60950-1" and "CERTIFIED TO CSA STD.C22.2 NO. 60950-1" shall not be less than 1.5 mm in height, the "CM" shall not be less than 1 mm in height.

Note 2: Caution and warning markings shall be in both French and English when selling in Canada.

Note 3: The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.

7.0 Illustrations

Illustration 2 - Marking



Note 1: Caution and warning markings shall be in both French and English when selling in Canada.

7.0 Illustrations

Illustration 3 - Safety instructions

Before the installation, power, operation or maintenance of this product, please read the chapter safety precautions warning seriously.

1.1 Safety specifications

If used improperly, will cause harm to persons, property will suffer.

When installing a job, you must wear a helmet to reduce the risk of injuries.

When hanging the Netherlands, we need to be careful.

When the heavy work, should pay attention to not hurt your fingers.

1.2 Installation and maintenance personnel

Display installation and maintenance personnel must go through the necessary technical training and safe operation, strictly in accordance with the installation specifications and safety procedures for assembly, connection, usage, dismantling and transporting. Also make reasonable suggestions which are in unnormal circumstances.

7.0 Illustrations

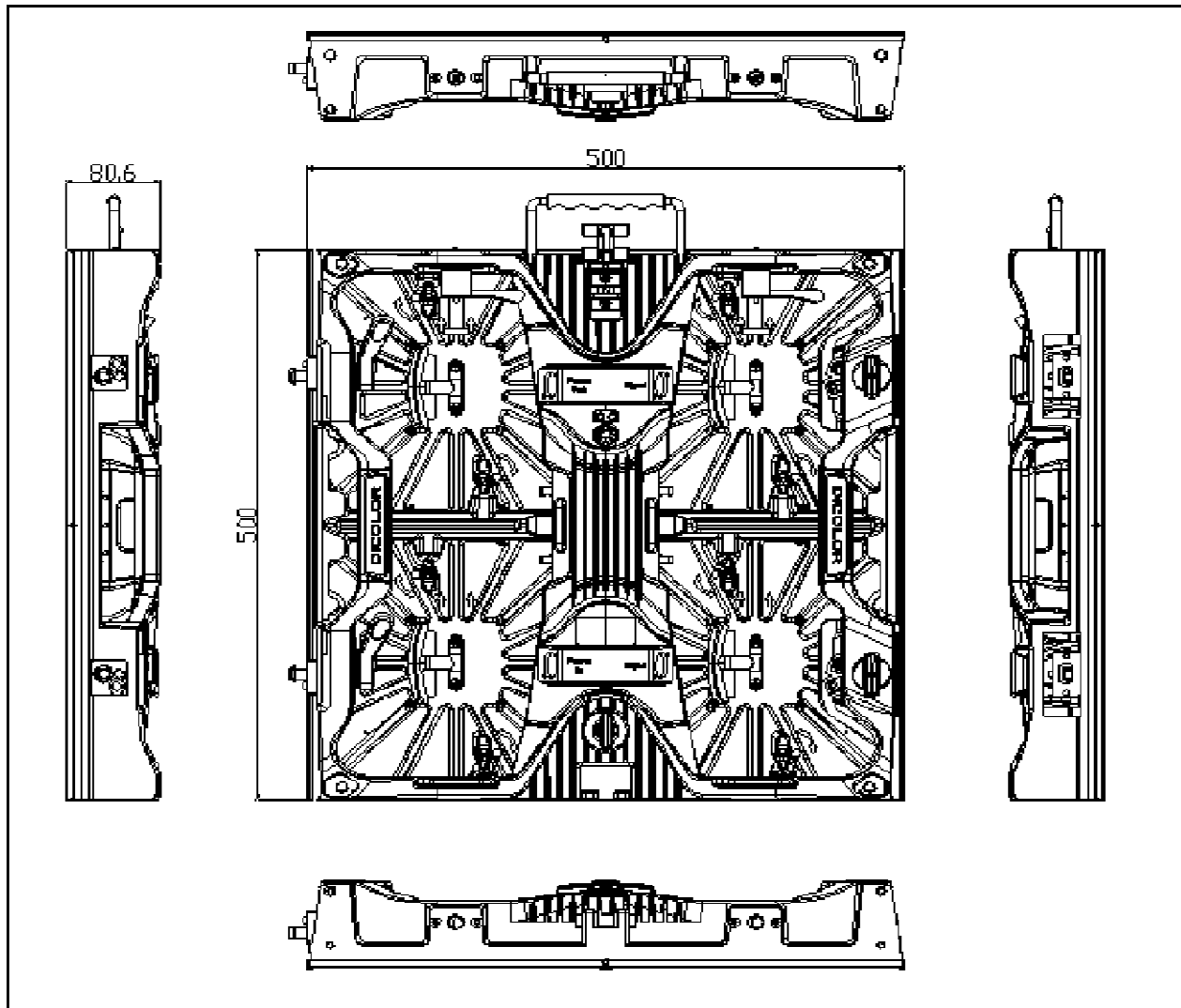
Illustration 4 - Installation instructions (main content, representative)

2.3.1 Straight cabinet stacking installation operation

1. To connect the straight side patand, and use the locating pin to locate between the patands:
2. To connect the patands to the frame and fasten the connecting hasp:
3. To connect the frame with the back lever and fasten the hasp, as blow:
4. To install the first cabinet of the first layer, then fasten patand and up-down fast lock:
5. To install the cabinet in first layer in turn, fasten the bilateral fast lock between the cabinets, and fasten the up-down fast lock between cabinets:
6. The cabinet installation in the second layers is similar, fasten the up-down fast lock between up-down cabinets. fasten the bilateral fast lock between bilateral cabinets. Then connect the cabinet and the back frame with the connecting rod:
7. And so on, install the remaining cabinets and back frame, complete the screen installation, as follows:

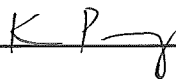

7.0 Illustrations

Illustration 5 - Dimensions of construction



8.0 Test Summary					
Evaluation Period	13-Nov-2017 to 30-Nov-2017			Project No.	171113013SZN
Sample Rec. Date	13-Nov-2017	Condition	Prototype	Sample ID.	Z171113013-001
Test Location	Intertek Testing Services Shenzhen Ltd. Longhua Branch 1F/2F, Building B, QiaoAn Scientific Technology Park, Shangkeng Community, Guanhu Subdistrict, Longhua District, Shenzhen, P.R. China				
Test Procedure	Testing Lab				
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.					
The following tests were performed:					
Test Description			UL 60950-1, 2nd Edition, Dated March 27, 2007, Revision October 14, 2014 & CSA-C22.2 No. 60950-1, 2nd Edition, Dated March 27, 2007, Revision October 14, 2014 / Clause		
Input Test			1.6.2		
Marking Durability Test			1.7.11		
Finger Test			2.1.1.1 b		
Pin Test			2.1.1.1 c		
Stored Discharge on Capacitors Test			2.1.1.7		
Resistance of Earthing Conductors and Their Terminals Test			2.6.3.4		
Humidity Conditions Test			2.9.2		
Clearances and Creepage Distances Measurement			2.10.3 & 2.10.4		
Solid Insulation Measurement			2.10.5		
Mechanical Strength – Steady force test, 10 N			4.2.2		
Mechanical Strength – Steady force test, 250 N			4.2.4		
Mechanical Strength – Impact Test			4.2.5		
Mechanical Strength – Stress Relief Test			4.2.7		
Handles and Knobs Fixing Test			4.3.2		
Normal Operating Test			4.5.2		
Touch Current Test			5.1		
Electric Strength Test			5.2		
Abnormal Operations and Fault Conditions Test			5.3		

8.0 Test Summary			
Evaluation Period	13-Nov-2017 to 30-Nov-2017		Project No. 171113013SZN
Sample Rec. Date	13-Nov-2017	Condition	Prototype
			Sample ID. Z171113013-001
Test Location	EMTEK (Dongguan) Co., Ltd. No.281, Guantai Road, Nancheng District, Dongguan City, Guangdong, China		
Test Procedure	Witnessed Manufacturer Testing (WMT) - Level 2		
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.			
The following tests were performed:			
Test Description	UL 60950-1, 2nd Edition, Dated March 27, 2007, Revision October 14, 2014 & CSA-C22.2 No. 60950-1, 2nd Edition, Dated March 27, 2007, Revision October 14, 2014 / Clause		
Light emitting diodes (LEDs)	4.3.13.5.2		

8.1 Signatures			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	Ken Pang	Reviewed by:	Tony Tong
Title:	Engineer	Title:	Technical Supervisor
Signature:		Signature:	

9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

BASIC LISTEE	Shenzhen Dicolor Optoelectronics Co., Ltd
Address	Dicolor Industrial Park, No. 18 Zhongtai Road, Gongming Town, Guangming New District, SHENZHEN Guangdong 518015
Country	CHINA
Product	Full Color LED Display

MULTIPLE LISTEE 1	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 2	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 3	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issue by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

Note to Intertek Follow Up Inspector: The Component Evaluation Center, CEC, will notify you in writing when these components must be selected and sent to the CEC for re-evaluation

Ship the samples to:

Intertek Testing Services Shenzhen Limited Longhua Branch

ETL Component Evaluation Center

1F/2F, Building B, QiaoAn Scientific Technology Park, Shangheng Community, Guanhu Subdistrict, Longhua District

Shenzhen, China

Attn: Joey Kuang

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

Required Tests

Dielectric Voltage Withstand Test
Grounding Continuity Test

11.1 Dielectric Voltage Withstand Test

Method

One hundred percent of production of the products covered by this Report shall be subjected to a routine production line dielectric withstand test.

The test shall be conducted on products, which are fully assembled. Prior to applying the test potential, all switches, contactors, relays, etc., should be closed so that all primary circuits are energized by the test potential. If all primary circuits cannot be tested at one time, then separate applications of the test potential shall be made.

The test voltage specified below shall be applied between primary circuits and accessible dead-metal parts. The test voltage may be gradually increased to the specified value but must be maintained at the specified value for one second or one minute as required.

Test Equipment

The test equipment shall incorporate a transformer with an essentially sinusoidal output, a means to indicate the applied test potential, and an audible and/or visual indicator of dielectric breakdown.

The test equipment shall incorporate a voltmeter in the output circuit to indicate directly the applied test potential if the rated output of the test equipment is less than 500VA.

If the rated output of the test equipment is 500VA or more, the applied test potential may be indicated by either:

- 1 - a voltmeter in the primary circuit;
- 2 - a selector switch marked to indicate the test potential; or
- 3 - a marking in a readily visible location to indicate the test potential for test equipment having a single test potential output.

In cases 2 and 3, the test equipment shall include a lamp or other visual means to indicate that the test potential is present at the test equipment output. All test equipment shall be maintained in current calibration.

Products Requiring Dielectric Voltage Withstand Test:

Product	Test Voltage	Test Time
All products covered by this Report.		
Between Line/Neutral and Ethernet port	3600VDC	1 s
Between Line/Neutral and accessible plastic enclosure with metal foil	3600VDC	1 s
Between Line/Neutral and accessible metal enclosure	2250VDC	1 s

11.2 Grounding Continuity Test

Method

Each product listed below shall be subjected to a test to determine that there is continuity between accessible dead-metal parts of the product and the grounding pin or blade of the attachment plug.

If all accessible dead metal is connected, only a single test need be performed. A visual or audible device (ohmmeter, buzzer, etc.) may be used to indicate grounding continuity.

Products Requiring Grounding Continuity Test:

Product	Test Current	Test Time
All products covered by this Report.		
Between Protective Earth of AC input connector and accessible metal enclosure	10A	1 s
Between Protective Earth of AC input connector and Protective Earth of AC output connector	10A	1 s

The following changes are in compliance with the declaration of Section 8.1:

ED 16.3.15 (20-Apr-17) Mandatory