



Test Report issued under the responsibility of:



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

Report Number..... : 151100936SHA-001
Date of issue..... : 2016-06-27, Modification 1, 2018-04-08
Modification 2, 2018-12-09
Modification 3, 2019-12-05
Total number of pages 34

Applicant's name GlobTek, Inc.
Address..... : 186 Veterans Dr. Northvale, NJ 07647 USA

Test specification:

Standard IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
Test procedure CB Scheme
Non-standard test method N/A

Test Report Form No. : IEC60950_1F
Test Report Form(s) Originator : SGS Fimko Ltd
Master TRF Dated 2014-02

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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.
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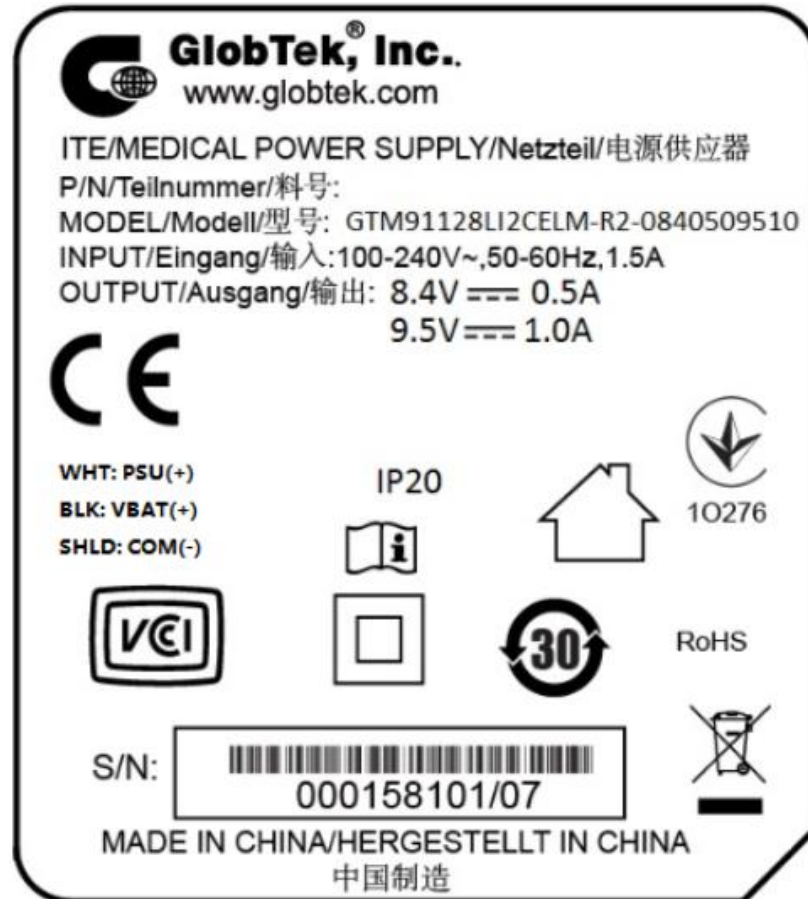
Test item description :	ITE POWER SUPPLY
Trade Mark :	
Manufacturer	Same as applicant
Model/Type reference	GTM91128LI*CEL**-****, GTM91128***-****, GT**-***** (See page 8-11 for details)
Ratings	Input: 100-240V~, 50-60Hz, 0.6A / 1.0A / 1.5A; Output: See pages 8-11 for details

Testing procedure and testing location:		
☒	CB Testing Laboratory:	Intertek Testing Services Shanghai
Testing location/ address.....:		Building No. 86, 1198 Qinzhou Road (North) 200233 Shanghai CHINA
☐	Associated CB Testing Laboratory:	N/A
Testing location/ address.....:		
Tested by (name + signature)		Albert Zhou (Engineer) <i>Albert Zhou</i>
Approved by (name + signature).....:		Will Wang (Mandated Reviewer) <i>Will Wang</i>
☐	Testing procedure: TMP/CTF Stage 1:	N/A
Testing location/ address.....:		
Tested by (name + signature)		
Approved by (name + signature).....:		
☐	Testing procedure: WMT/CTF Stage 2:	N/A
Testing location/ address.....:		
Tested by (name + signature)		
Witnessed by (name + signature).....:		
Approved by (name + signature).....:		
☐	Testing procedure: SMT/CTF Stage 3 or 4:	N/A
Testing location/ address.....:		
Tested by (name + signature)		
Witnessed by (name + signature).....:		
Approved by (name + signature).....:		
Supervised by (name + signature)		

List of Attachments (including a total number of pages in each attachment): Photos of product: from page 33 to page 34, total 2 pages.	
Summary of testing: From the result of our examination and tests in the submitted samples, conclude they comply with the requirements of the standard IEC 60950-1:2005 (Second Edition) + Am 1:2009 +Am 2:2013	
Tests performed (name of test and test clause): 2.1.1.7 Discharge of capacitors 4.5.2 Temperature test	Testing location: Intertek Testing Services Shanghai Building No. 86, 1198 Qinzhou Road (North) 200233 Shanghai CHINA
Summary of compliance with National Differences: The test report covers group- and national differences for the CENELEC countries. The national differences for Singapore have been checked according to IEC 60950-1 1st ed. The national differences for Japan have been checked according to IEC 60950-1 2nd ed.+ Am1 + Am2. The national differences for China have been checked according to IEC 60950-1 2nd ed. The national differences for Australia/New Zealand have been checked according to IEC 60950-1 2nd ed.+ Am1 + Am2. The national difference for Korea has been checked according to IEC 60950-1 2nd ed. + Am1. The national differences for USA and Canada have been checked according to IEC 60950-1 2nd ed. + Am1 + Am2. ☒ The product fulfils the requirements of IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 and EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2:2013.	

Copy of marking plate(representative):

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Note: 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. Other models are with similar label as corresponding above models except different model name and output ratings.

Test item particulars.....:	
Equipment mobility.....:	☐ movable ☐ hand-held ☒ transportable ☐ stationary ☒ for building-in ☒ direct plug-in
Connection to the mains.....:	☒ pluggable equipment ☒ type A ☐ type B ☐ permanent connection ☒ detachable power supply cord ☐ non-detachable power supply cord ☐ not directly connected to the mains
Operating condition.....:	☒ continuous ☐ rated operating / resting time:
Access location	☒ operator accessible ☐ restricted access location
Over voltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Mains supply tolerance (%) or absolute mains supply values	+10%/-10%
Tested for IT power systems	☒ Yes ☐ No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	☒ Class I ☒ Class II ☐ Class III ☐ Not classified
Considered current rating of protective device as part of the building installation (A)	16A (20A for North America)
Pollution degree (PD)	☐ PD 1 ☒ PD 2 ☐ PD 3
IP protection class	IPX0
Altitude during operation (m)	Max. 5000m
Altitude of test laboratory (m)	<100m
Mass of equipment (kg)	0.058
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 of receipt of test item	2019-11-11
Date (s) of performance of tests	2019-11-11 to 2019-11-27

General remarks:

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 testing laboratory.
“(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 ☐ comma / ☒ point is used as the decimal separator.
Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.
This report is for the exclusive use of Intertek’s Client and is provided pursuant to the 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 report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.

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 location 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	☒ Yes ☐ Not applicable
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When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies).....:

1. GlobTek (Suzhou) Co., Ltd
Building 4, No. 76 JinLing East Road, Suzhou
Industrial Park, Suzhou, JiangSu, 215021, China
2. GlobTek, Inc.
186 Veterans Dr. Northvale, NJ 07647 USA

General product information:

Product covered by this report is ITE power supply module.

Desktop / direct plug-in power supply are provided with suitable external enclosure. The top and bottom parts of the enclosure are ultrasonic welded.

Open frame and encapsulated power supplies are without external enclosure. The external enclosure will be provided within the end product.

The products were tested to be suitable for connection to ≤ 16 A (IEC) and ≤ 20 A (USA) branch circuit in series. The unit is approved for TN mains star connections. The unit provides internally two fuses.

The power supplies are rated class I or class II. Open frame and encapsulated class I power supplies shall be properly bonded to the main protective bonding termination in the end product.

All the types are designed for continuous operation.

Model similarity:

GTM91128LI*CEL **-* series:

The 1st "*" part denotes the number of charging cells, which can be "1" or "2" or "3".

The 2nd "*" denotes product type, which can be M or blank. M means dual output and blank means Charger only.

The 3rd "*" = blank or -R2 means hybrid desktop housing class II with C8 AC inlet

= -T2 means desktop class II with C8 AC inlet

= -T2A means desktop class II with C18 AC inlet

The 4th "*" part is a 3-digit number code, which can be "042", "084" or "126". It represents the Charger output voltage of 4.2V, 8.4V or 12.6V.

The 5th "*" part is a 2-digit number code, which can be from "01" to "20". It represents the Charger output current from 0.1A to 2.0A with interval of 0.1A.

The 6th "*" part is a 3-digit number code, which can be from "050" to "140". It represents the Power Supply output voltage from 5.0Vdc to 14.0Vdc with interval of 0.1V.

The 7th "*" part is a 2-digit number code, which can be from "01" to "36". It represents the Power Supply output current from 0.1A to 3.6A with interval of 0.1A.

When 2nd "*" is blank, the 6th and the 7th "*" is blank too.

There are two alternative PCB layout for this product, with 1 LED or with 2 LEDs. Only the number of LED indicator are different and other part of PCB are identical.

Ratings:

Input: 100-240V~, 50-60Hz, 0.6A / 1.0A / 1.5A

Output:

Model	Charger Output Voltage (Vdc)	Max. Charger Output Current (A)	Max. Charger Output Power (W)	Power Supply Output Voltage (Vdc)	Max. Power Supply Output Current (A)	Max. Power Supply Output Power (W)	Max. Combined Output Power (W)
GTM91128LI*CEL *-**	4.2	2	8.4	N/A	N/A	N/A	N/A
	8.4	1.6	13.44	N/A	N/A	N/A	N/A
	12.6	1.4	17.64	N/A	N/A	N/A	N/A
GTM91128LI*CEL M*-*	4.2	1.8	7.56	5-7.5	3.6	18	20
	8.4	1.4	1.76	9.5-12	2.3	21.85	25
	12.6	1.2	15.12	14	1.9	26.6	30

GTM91128***-* series:

The 1st “*” denotes any two characters for marketing purposes.
The 2nd “*” denotes product type, which can be CHARGE or DUALC. CHARGE means charger only. DUALC means dual output.
The 3rd “*” = blank or -R2 means hybrid desktop housing class II with C8 AC inlet
= -T2 means desktop class II with C8 AC inlet
= -T2A means desktop class II with C18 AC inlet
The 4th “*” part is a 3-digit number code from “032” to “126”. It represents the Charger output voltage from 3.2V to 12.6V with interval of 0.1V.
The 5th “*” part is a 2-digit number code from “01” to “20”. It represents the Charger output current from 0.1A to 2.0A with interval of 0.1A.
The 6th “*” part is a 3-digit number code, which can be from “050” to “140”. It represents the Power Supply output voltage from 5.0Vdc to 14.0Vdc with interval of 0.1V.
The 7th “*” part is a 2-digit number code, which can be from “01” to “36”. It represents the Power Supply output current from 0.1A to 3.6A with interval of 0.1A.
When 2nd “*” is CHARGE, the 6th and the 7th “*” is blank too.
There are two alternative PCB layout for this product, with 1 LED or with 2 LEDs. Only the number of LED indicator are different and other part of PCB are identical.

Ratings:

Input: 100-240V~, 50-60Hz, 0.6A / 1.0A / 1.5A

Output:

Model	Charger Output Voltage (Vdc)	Max. Charger Output Current (A)	Max. Charger Output Power (W)	Power Supply Output Voltage (Vdc)	Max. Power Supply Output Current (A)	Max. Power Supply Output Power (W)	Max. Combined Output Power (W)
GTM91128* CHARGE*_**	3.2-5.9	2	8.4	N/A	N/A	N/A	N/A
	6.0-8.9	1.6	13.44	N/A	N/A	N/A	N/A
	9.0-12.6	1.4	17.64	N/A	N/A	N/A	N/A
GTM91128* DUALC*_****	3.2-5.9	1.8	7.56	5-7.5	3.6	18	20
	6.0-8.9	1.4	12.46	9.5-12	2.3	21.85	25
	9.0-12.6	1.2	15.12	14	1.9	26.6	30

GTM91128LI*CEL**_**** series and GTM91128***_**** series are same except their model number and charger output voltage.

GT_***** series:**

The 1st “*” part can be ‘M’ or ‘-’ or ‘H’ for market identification and not related to safety.
The 2nd “*” can be 96180 or 96300 or 91120 or 91128 for market identification
The 3rd “*” denotes the rated output wattage designation, which can be “01” to “36”, with interval of 1V.
The 4th “*” denotes the standard rated output voltage designation, when the 2nd “*” = 96180 which can be “07”, “11”, “17.9”, “30”, “38”, “48”, “54” or “56”; when the 2nd “*”=96300 or 91120 which can be “07.5”, “10.5”, “14.5”, “19.5”, “24”, “36”, “48”, “54” or “56”.
The 5th “*” is optional deviation, subtracted from standard output voltage, which can be “-0.01” to “-12.0” with interval of 0.01V, or blank to indicate no voltage different.
The 4th “*” and 5th “*” together denote the output voltage, with a range of 5 - 56 volts.
The 6th “*” = blank, it means wall plug in with interchangeable blade
= -T2 means desktop class II with C8 AC inlet

- =T2A means desktop class II with C18 AC inlet
- =T3 means desktop class I or class II with functional earth with C14 AC inlet
- =T3A means desktop class I or class II with functional earth with C6 AC inlet
- =R2 means hybrid desktop housing class II with C8 AC inlet
- =R3A means hybrid desktop housing class I or class II with functional earth with C6 AC inlet
- =F means Open Frame class I or class II with functional earth
- =FW means Open Frame class II
- =P2 means Encapsulated class II
- =P3 means Encapsulated class I or class II with functional earth

The 7th “*” = Blank or -AP or -PP or -SP

-AP (with baby board) stands for Active POE (full IEEE compliant)

-PP (no baby board) stands for Passive POE

-SP (no baby board) stands for Simple POE

The last “*” can be any six character consist 0 to 9 or A to Z or ()[] or – or blank for marketing purpose.

When the 2nd “*” = 91128,
the model will be GTM91128LI1CEL Output: 4.2V, 1000mA;
or Model GTM91128LI2CEL Output: 8.4V, 1000mA;
or Model GTM91128LI3CEL Output: 12.6V, 1000mA;

Ratings

When 2nd “*” = 96180, Input: 100-240V~, 50-60Hz, 0.6A Output: 5-56Vdc

When 2nd “*” = 96300 or 91120, Input: 100-240V~, 50-60Hz, 1.5A or 1.0A Output: 5-56Vdc (for 96300 and 91120)

When the model with POE, the output voltage is Max. 56Vdc,
others will be up to 48Vdc.

Model list:

GT*96180-**** Interchangeable plug models

Model	Output Voltage	Max. output current	Max. output power
GT*96180-*07**	5-7Vdc	3.6A	18W
GT*96180-*11**	7.1-11Vdc	2.53A	18W
GT*96180-*17.9**	11.1-17.9Vdc	1.62A	18W
GT*96180-*30**	18-30Vdc	1.0A	18W
GT*96180-*38**	30.1-38Vdc	0.6A	18W
GT*96180-*48**	38.1-48Vdc	0.47A	18W

GT*96180-***-T2/T2A/T3/T3A* Desktop models

Model	Output Voltage	Max. output current	Max. output power
GT*96180-*07*-T2/T2A/T3/T3A*	5-7Vdc	3.6A	18W
GT*96180-*11*-T2/T2A/T3/T3A*	7.1-11Vdc	2.53A	18W
GT*96180-*17.9*-T2/T2A/T3/T3A*	11.1-17.9Vdc	1.62A	18W
GT*96180-*30*-T2/T2A/T3/T3A*	18-30Vdc	1.0A	18W
GT*96180-*38*-T2/T2A/T3/T3A*	30.1-38Vdc	0.6A	18W
GT*96180-*48*-T2/T2A/T3/T3A*	38.1-48Vdc	0.47A	18W

GT*96300-***-T2/T2A/T3/T3A/R2/R3A* Desktop models

Model	Output Voltage	Max. output current	Max. output power
GT*96300-*07.5*-T2/T2A/T3/T3A/R2/R3A*	5-7.5Vdc	4.5A	22.5W
GT*96300-*10.5*-T2/T2A/T3/T3A/R2/R3A*	7.6-9Vdc	3.94A	30W
GT*96300-*10.5*-T2/T2A/T3/T3A/R2/R3A*	9.1-10.5Vdc	3.95A	36W
GT*96300-*14.5*-T2/T2A/T3/T3A/R2/R3A*	10.6-14.5Vdc	3.39A	36W
GT*96300-*19.5*-T2/T2A/T3/T3A/R2/R3A*	14.6-19.5Vdc	2.46A	36W
GT*96300-*24*-T2/T2A/T3/T3A/R2/R3A*	19.6-24Vdc	1.83A	36W
GT*96300-*36*-T2/T2A/T3/T3A/R2/R3A*	24.1-36Vdc	1.49A	36W

GT*96300-*48*-T2/T2A/T3/T3A/R2/R3A*	36.1-48Vdc	0.99A	36W
GT*91120-***-T2/T3A/F/FW/P2/P3* External/Hybrid desktop or Open Frame or Encapsulated			
Model	Output Voltage	Max. output current	Max. output power
GT*91120-*07.5*-T2/T3A/F/FW/P2/P3*	5-7.5Vdc	4A	30W
GT*91120-*10.5*-T2/T3A/F/FW/P2/P3*	7.6-10.5Vdc	3.94A	30W
GT*91120-*14.5*-T2/T3A/F/FW/P2/P3*	10.6-14.5Vdc	2.83A	30W
GT*91120-*19.5*-T2/T3A/F/FW/P2/P3*	14.6-19.5Vdc	2A	30W
GT*91120-*24*-T2/T3A/F/FW/P2/P3*	19.6-24Vdc	1.6A	30W
GT*91120-*36*-T2/T3A/F/FW/P2/P3*	24.1-36Vdc	1.25A	30W
GT*91120-*48*-T2/T3A/F/FW/P2/P3*	36.1-48Vdc	0.83A	30W
GT*96180-***-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP			
Model	Output Voltage	Max. output current	Max. output power
GT-96180-*30-12.0-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	18Vdc	1A	18W
GT-96180-*30-6.0-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	24Vdc	0.75A	18W
GT-96180-*38-2.0-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	36Vdc	0.5A	18W
GT-96180-*48-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	48Vdc	0.375A	18W
GT-96180-*54-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	54Vdc	0.33A	18W
GT-96180-*56-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	56Vdc	0.32A	18W
GT*96300-***-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP			
Model	Output Voltage	Max. output current	Max. output power
GT-96300-*19.5-1.5-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	18Vdc	2A	36W
GT-96300-*24-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	24Vdc	1.5A	36W
GT-96300-*36-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	36Vdc	1A	36W
GT-96300-*48-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	48Vdc	0.75A	36W
GT-96300-*54-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	54Vdc	0.66A	36W
GT-96300-*56-T2/T2A/T3/T3A/R2/R3A-AP/PP/SP*	56Vdc	0.64A	36W
Abbreviations used in the report: - normal conditions - functional insulation - double insulation - between parts of opposite polarity N.C. FI DI BOP - single fault conditions - basic insulation - supplementary insulation - reinforced insulation S.F.C BI SI RI			
Indicate used abbreviations (if any)			

Modification 1:

The original test report ref. No. 151100936SHA-001 dated on 2016-06-27 was modified on 2018-04-08 to include the following addition:

1. Update national differences version for Japan and Australia/New Zealand.
2. Update Model similarity from "When 2nd "*" = 96300 or 91120, Input: 100-240V~, 50-60Hz, 1.5A or 1.0A Output: 5-56Vdc" to "When = 96300 or 91120 or 91128, Input: 100-240V~, 50-60Hz, 1.5A or 1.0A; Output: 5-56Vdc (for 96300 and 91120)"
3. Add output voltage nature "dc" in the model list table.
4. Correct temperature of Photo coupler which manufactured by "Lite-On", "Sharp" and "Bright led" from 100°C to 110°C in table 1.5.1 in bold.
5. Add three photos of PCB for GTM96180 series, due to following three changes.
 - 1) Add an alternative grounding connection type, which with R22, R23 and without R24.
 - 2) Add an alternative grounding connection type, which without R22, R23 and with R24.
 - 3) Add and alternative power board, which without heatsink for D2. (only for GTM96180 series which output greater than 15Vdc)
6. Supplement photos of PCB for GTM96180 series (Class I), which without R22, R23 and R24.

Clause considered: Clause 1.6, Clause 2.6.3, Clause 4.5, table 1.6.2 and table 4.5.

Modification 2:

The original test report ref. No. 151100936SHA-001 dated on 2016-06-27 and 151100936SHA-001 M1 dated on 2018-04-08 were modified on 2018-12-09 to include the following changes and/ or additions:

1. Add new model series: GTM91128***.**** series and GTM91128LI*CEL**.* series.
2. Change the Product model name "GTM91128 series" to "GTM91128LI1CEL, GTM91128LI2CEL, GTM91128LI3CEL" in transformer list in the component list Table 1.5.1.
3. Assign Photo coupler, Varistor and transformer information for GTM91128***.**** series and GTM91128LI*CEL**.* series in the component list Table 1.5.1.
4. Transformer information for old model GTM91128LI1CEL, GTM91128LI2CEL and GTM91128LI3CEL are aligned with GTM91128***.**** series and GTM91128LI*CEL**.* series.
5. Change the PCB manufacturer's name of "SHANGHAI AREX PRECISION ELECTRONIC CO LTD" to "DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD." and add new alternative PCB model 03V0 of DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD.
6. Deleted alternative fuse model 385T series of Das & Sons International Ltd, alternative Y capacitor model JN series of JYA-NAY Co., Ltd. and model JX-series of Jerro Electronics Corp.
7. Added Mylar sheet's information into the component list Table 1.5.1.

After review, all tests were performed. 4.5.5 Ball pressure test and 4.7 Resistance to fire are evaluated only for new alternative PCB model 03V0 of DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD.

Model GTM91128LI1CELM-0421805024, GTM91128LI1CELM-0420405036, GTM91128LI3CELM-1261214010, GTM91128LI3CELM-1260214019, GTM91128LI1CEL-T2-04220 and GTM91128LI3CEL-12614 are tested as typical models.

Clauses Concerned.....: All clauses;
Table 1.5.1;
Photos

Modification 3:

The original test report ref. No. 151100936SHA-001 dated on 2016-06-27 with modification 1 dated on 2018-04-08 and modification 2 dated on 2018-12-09 was modified on 2019-12-05 to include the following addition:

1. Added the suppliers of appliance inlet type C18.
2. Added the suppliers of Line filter LF1.
3. Added new remark for bridging resistor.
4. Added the temperature data of Line filter in temperature test.
5. Added the test table of discharge of capacitors.
6. Added new suppliers "SABIC JAPAN L L C" of enclosure.
7. Added new suppliers of PCB.
8. Added new photos of PCB view.

After review, discharge of capacitors and temperature test were performed, no other test was considered necessary.

Clauses Concerned.....: Clause 2.1.1.7; Clause 4.5;
Table 1.5.1; Table 4.5;

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.1.1.7	Discharge of capacitors in equipment		P
	Measured voltage (V); time-constant (s):	See appended table 2.1.1.7	—
4.5	Thermal requirements		P
4.5.1	General		P
4.5.2	Temperature tests		P
	Normal load condition per Annex L :	Rated load with continuous operation.	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat :	(see appended table 4.5.5)	P

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

1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾	
PCB	WALEX ELECTRONIC (WUXI) CO LTD	T2, T2A, T2B T4	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E154355	
Alt. use	DONGGUAN HE TONG ELECTRONICS CO LTD	CEM1 2V0 FR4	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E243157	
Alt. use	CHEERFUL ELECTRONIC (HK) LTD	02 03 03A	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E199724	
Alt. use	DONGGUAN DAYSUN ELECTRONIC CO LTD	DS2	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E251754	
Alt. use	SUZHOU CITY YILIHUA ELECTRONICS CO LTD	YLH-1	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E251781	
Alt. use	DAFENG AREX ELECTRONICS TECHNOLOGY CO LTD	02V0 04V0 03V0	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60335-1 UL 796	Tested with appliance UL E186016	
Alt. use	BRITE PLUS ELECTRONICS (SUZHOU) CO LTD	DKV0-3A DGV0-3A	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E177671	
Alt. use	KUOTIANG ENT LTD	C-2 C-2A	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E227299	
Alt. use	SHENZHEN TONGCHUANGXI N ELECTRONICS CO LTD	TCX	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E250336	
Alt. use	PACIFIC WIN INDUSTRIAL LTD	PW-02 PW-03	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E228070	

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	YUANMAN PRINTED CIRCUIT CO LTD	1V0	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E74757
Alt. use	SUZHOU XINKE ELECTRONICS CO LTD	XK-1 XK-2 XK-3	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E231590
Alt. use	KUNSHAN CITY HUA SHENG CIRCUIT BOARD CO LTD	HS-S	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E229877
Alt. use	JIANGSU DIFEIDA ELECTRONICS CO LTD	DFD-1	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E213009
Alt. use	HUIZHOU SHUNJIA ELECTRONICS CO LTD	SJ-B	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E320884
Alt. use	SHANGHAI H-FAST ELECTRONICS CO LTD	211001	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E337862
Alt. use	JIANGXI ZHONG XIN HUA ELECTRONICS INDUSTRY CO LTD	ZXH-1 ZXH-2 ZXH-3	Min. 1.6 mm thickness, min. V-0, 130°C	IEC 60950-1 UL 796	Tested with appliance UL E331298
Fuse (F1, F2) (F2 is optional)	Conquer Electronics Co., Ltd.	MST series	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017118 UL E82636
Alt. use	Ever Island Electric Co., Ltd. And Walter Electric	2010, ICP	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40018781 UL E220181
Alt. use	Bel Fuse Ltd.	RST-Serie(s)	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40011144 UL E20624
Alt. use	Cooper Bussmann LLC	SS-5	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015513 UL E19180

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Shenzhen Lanson Electronics Co. Ltd.	SMT	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40012592 UL E221465
Alt. use	Dongguan Better Electronics Technology Co., Ltd.	932	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40033369 UL E300003
Alt. use	Hollyland Company Limited	5ET	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40015669 UL E156471
Alt. use	Sunny East Enterprise Co. Ltd.	CFD-Serie(s)	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40030246 UL E133774
Alt. use	Conquer Electronics Co., Ltd.	MET series	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017157 UL E82636
Alt. use	Zhongshan Lanbao Electrical Appliances Co., Ltd.	RTI-10 Serie(s)	T1.6A, 250V; T3.15A, 250V	IEC 60127-1 IEC 60127-3 UL 248-1 UL 248-14	VDE 40017009 UL E213695
Bridging resistor (Optional) For model series GT*96180-***** use only	TY-Ohm Suzhou Electronic Works Co. Ltd	RT	10MΩ, 1W	IEC/EN 60950-1	VDE 40031266 UL E321764
Alt. use	Yageo Components (Suzhou) Co. Ltd	HHV	10MΩ, 1W	IEC/EN 60950-1	VDE 40031974 UL E333286
Y capacitor (CY1, CY2) (Optional)	TDK-EPC Corporation, Capacitors Group Circuit Devices Business Group	CD	Y1, AC250V, max 2200pF, 25/085/21/B	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40029780 UL E37861
Alt. use	Success Electronics Co., Ltd.	SE	Y1, AC250V, or AC500V, max 2200pF, 40/125/56/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037211 VDE 40020002 UL E114280

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Success Electronics Co., Ltd.	SB	Y1, AC250V, max 2200pF, 40/125/56/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40037221 VDE 40020001 UL E114280
Alt. use	Murata Mfg. Co., Ltd.	KX	Y1, AC250V, max 2200pF, 25/125/21/B	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40002831 UL E37921
Alt. use	Walsin Technology Corp.	AH	Y1, AC250V, max 2200pF, 25/125/21/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40001804 UL E146544
Alt. use	Haohua Electronic Co.	CT 7	Y1, AC250V, max 2200pF, 30/125/56/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40003902 UL E233106
Alt. use	Jyh Chung Electronic Co., Ltd.	JD	Y1, AC250V, max 2200pF, 40/125/21/C	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 137027 UL E187963
X capacitor (CX1) (Optional)	Cheng Tung Industrial Co., Ltd.	CTX	Min. 300VAC, Max. 0.47μF, 110 °C, X1 or X2	IEC 60950-1 UL 60384-14 UL 1414	Tested with appliance UL E193049
Alt. use	Tenta Electric Industrial Co. Ltd.	MEX	Min. 250VAC, Max. 0.47μF, 40/100/21/B, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 119119 UL E222911
Alt. use	Joey Electronics (Dong Guan) Co., Ltd.	MPX	Min. 250VAC, Max. 0.47μF, 40/105/21/B, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032481 UL E216807
Alt. use	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40015608 UL E183780
Alt. use	Yuon Yu Electronics Co. Ltd.	MPX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40032392 UL E200119

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Sinhua Electronics (Huzhou) Co., Ltd.	MPX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40014686 UL E237560
Alt. use	Jiangsu Xinghua Huayu Electronics Co., Ltd.	MPX – Series	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40022417 UL E311166
Alt. use	Dain Electronics Co., Ltd.	MEX, MPX, NPX	Min. 250VAC, Max. 0.47μF, 40/100/21/C, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40018798 UL E147776
Alt. use	Shenzhen Jinghao Capacitor Co., Ltd.	CBB62B	Min. 250VAC, Max. 0.47μF, 40/110/56/B, X1 or X2	IEC/EN 60384-14 UL 60384-14 UL 1414	VDE 40018690 UL E252286
Photo coupler (U2/U3) (U2 for GTM91120, GTM91128LI *CEL **_**** and GTM91128** *_**** series)	Everlight Electronics Co., Ltd.	EL817	Dti=0.5mm Int. , dcr=6.0mm EXT.dcr=7.7mm, 55/110/21	IEC/EN 60747-5-2	VDE 132249
Alt. use	COSMO Electronics Corporation	K1010 / KP1010	Dti=0.6mm Int. , dcr=4.0mm EXT.dcr=5.0mm, 55/115/21	IEC/EN 60747-5-2	VDE 101347
Alt. use	Lite-On Technology Corporation	LTV-817	Dti=0.8mm Int. , EXT.dcr=7.8mm, 55/110/21	IEC/EN 60747-5-2	VDE 40015248
Alt. use	Fairchild Semiconductor Pte Ltd.	H11A817B / FOD817B	Insulation voltage: 850V; Transient overvoltage: 6000V; CT1175; Int. Cr/ Ext. Cr: ≥7,0/ 7,0 mm; 30/110/21	IEC/EN 60747-5-2	VDE 40026857

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Sharp Corporation Electronic Components and Devices Group	PC817	Insulation voltage: 890V; Transient overvoltage: 9000V Int. Cr/ Ext. Cr: 7.62/ 7.62 mm; 55/110/21	IEC/EN 60747-5-2	VDE 40008087
Alt. use	Bright Led Electronics Corp.	BPC-817 A/B/C/D/L BPC-817 M BPC-817 S	Dti=0.4mm EXT.dcr=7.0mm, 30/110/21	IEC/EN 60747-5-2	VDE 40007240
Alt. use	Toshiba Corporation Semiconductor & Storage Products Company	TLP781F	Dti > 0.4mm, Ext cr > 8.0mm, Isolation 6000Vac 55/115/21	IEC/EN 60747-5-2	VDE 40021173
Varistor (MOV/MOV 1, MOV for GTM91120, GTM91128LI *CEL **_**** and GTM91128** *_**** series) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10471K, TVR14471K (UL E314979)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005944
Alt. use	Centra Science Corp.	10D471K, 14D471K (UL E316325)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40008220
Alt. use	Success Electronics Co., Ltd.	SVR10D471K SVR14D471K (UL E330256)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40030401
Alt. use	Walsin Technology Co., Ltd.	14D471K (UL E309297)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40010090
Alt. use	HuiZhou Lien Shun Electronic Co., Ltd	14D471K (UL E315524)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40005858

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Ceramate Techn. Co., Ltd.	GNR10D471K GNR14D471K (UL E315429)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40031745
Alt. use	Brightking (Shenzhen) Co., Ltd.	14D471K 10D471K (UL E327997)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 40027827
Alt. use	Joyin Co., Ltd.	JVR10N471K JVR14N471K (UL E325508)	Max. Continuous voltage: min 300Vac(rms), 85°C; The coating is V-0	IEC 61051-1 IEC 61051-2 IEC 61051-2-2	VDE 005937
Appliance inlet CON1 Class I units (C6 type)	Zhejiang LECI Electronics Co., Ltd.	DB-6	2.5A, 250Vac	IEC/EN 60320-1	VDE 40032465
Alt. use	Rich Bay Co., Ltd.	R-30790	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030381
Alt. use	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-02	2.5A, 250Vac	IEC/EN 60320-1	VDE 40034448
Alt. use	TECX-UNIONS Technology Corporation	TU-333	2.5A, 250Vac	IEC/EN 60320-1	ENEC 00633
Alt. use	Rong Feng Industrial Co., Ltd.	RF-190	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030379
Alt. use	Inalways Corporation	0724	2.5A, 250Vac	IEC/EN 60320-1	ENEC 2010080
Alt. use	Zhe Jiang Bei Er jia	ST-A04-002	2.5A, 250Vac	IEC/EN 60320-1	VDE 40016045
Alt. use	Shenzhen Delikang Electronics Technology Co. Ltd.	CDJ-2	2.5A, 250Vac	IEC/EN 60320-1	VDE 40015580
Appliance inlet CON1 Class I units (C14 type)	Zhejiang LECI Electronics Co., Ltd.	DB-14	10A, 250Vac	IEC/EN 60320-1	VDE 40032137
Alt. use	Rich Bay Co., Ltd.	R-301SN	10A, 250Vac	IEC/EN 60320-1	VDE 40030228
Alt. use	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-03	10A, 250Vac	IEC/EN 60320-1	VDE 40034447
Alt. use	TECX-UNIONS Technology Corporation	TU-301-S, TU-301-SP	10A, 250Vac	IEC/EN 60320-1	ENEC 00647
Alt. use	Rong Feng Industrial Co., Ltd.	SS-120	10A, 250Vac	IEC/EN 60320-1	VDE 40028101

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	Inalways Corporation	0711	10A, 250Vac	IEC/EN 60320-1	ENEC 2010084
Alt. use	Zhe Jiang Bei Er jia	ST-A01-003J	10A, 250Vac	IEC/EN 60320-1	VDE 40013388
Appliance inlet CON1 Class II units (C8 type)	Zhejiang LECI Electronics Co., Ltd.	DB-8	2.5A, 250Vac	IEC/EN 60320-1	VDE 40032028
Alt. use	Rich Bay Co., Ltd.	R-201SN90	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030384
Alt. use	Sun Fair Electric Wire & Cable (HK)Co. Ltd.	S-01	2.5A, 250Vac	IEC/EN 60320-1	VDE 40034449
Alt. use	TECX-UNIONS Technology Corporation	SO-222	2.5A, 250Vac	IEC/EN 60320-1	VDE 40043268
Alt. use	Rong Feng Industrial Co., Ltd.	RF-180	2.5A, 250Vac	IEC/EN 60320-1	VDE 40030168
Alt. use	Zhe Jiang Bei Er jia	ST-A03-005	2.5A, 250Vac	IEC/EN 60320-1	VDE 40014833
Alt. use	Shenzhen Delikang Electronics Technology Co. Ltd.	CDJ-8	2.5A, 250Vac	IEC/EN 60320-1	VDE 40025531
Appliance inlet CON1 Class II units (C18 type)	HCR ELECTRONICS CO., LTD	SK05	10A, 250Vac	IEC/EN 60320-1	ENEC (NO4018)
Alt. use	Rong Feng Industrial Co., Ltd.	SS-120	10A, 250Vac	IEC/EN 60320-1	VDE 40028101
Input connector CON1 (For open frame)	NELTRON INDUSTRIAL CO LTD	2114S	Min 240V; Min 1.5A; Flame class min. V-2;	IEC/EN 60950-1	Tested with appliance UL E144392
Alt. use	JOINT TECH ELECTRONIC INDUSTRIAL CO LTD	A7920 series A3960 series	Min 250V; Min 7A; Flame class min. V-2;	IEC/EN 60950-1	Tested with appliance UL E179987
Alt. use	ZHEJIANG HONGXING ELECTRICAL CO LTD	HX396XX-YYY series	Min 250V; Min 5A; Flame class min. V-2;	IEC/EN 60950-1	Tested with appliance UL E228500
Earthing wire for Class I model	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIES CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E237831

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
Alt. use	ZHUANG SHAN CHUAN ELECTRICAL PRODUCTS (KUNSHAN) CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E333601
Alt. use	DONGGUAN CHUANTAI WIRE PRODUCTS CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E315628
Alt. use	YONG HAO ELECTRICAL INDUSTRY CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E240426
Alt. use	DONGGUAN GUNEETAL WIRE & CABLE CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E204204
Alt. use	SHENG YU ENTERPRISE CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E219726
Alt. use	KUNSHAN XINGHONGMENG ELECTRONIC CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E315421
Alt. use	SUZHOU YEMAO ELECTRONIC CO LTD	1015, 1007, 1185	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E353532
Connection wiring for encapsulated models	KUNSHAN NEW ZHICHENG ELECTRONICS TECHNOLOGIES CO LTD	1015, 2468	Min. 20 AWG, Min. 300V, Min. 80°C	IEC/EN 60950-1	Tested with appliance UL E237831
Alt. use	Interchangeable	1015, 2468	Min. 20AWG, min. 300Vac, min. 80°C	IEC/EN 60950-1 UL 758	Tested with appliance UL approved
Output cord	Interchangeable	Interchangeable	Min. 24AWG, min. 300Vac, min. 80°C	IEC/EN 60950-1 UL 758	Tested with appliance UL approved
Heat-shrinkable tubing	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	RSFR, RSFR-H, RSFR-HPF	600V, 125 °C	IEC/EN 60950-1	Tested with appliance UL E203950

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	QIFURUI ELECTRONICS CO	QFR-h	600V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E225897
Alt. use	DONGGUAN SALIPT CO LTD	SALIPT S-901-300 SALIPT S-901-600	Min. 300V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E209436
Alt. use	GUANGZHOU KAIHENG ENTERPRISE GROUP	K-2 (+) K-2 (CB)	Min. 300V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E214175
Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-HFT	Min. 300V, 125°C	IEC/EN 60950-1 UL 224	Tested within appliance UL E180908
Line filter LF1 (for 96300 & 91120 & 91128 series)	GlobTek/HAOPUW EI/HEJIA	LF007	17mH	IEC 60950-1	Tested with appliance
Line filter LF1 (for 96180 series)	GlobTek/HAOPUW EI/HEJIA/BOAM	NF00001D	32mH	IEC 60950-1	Tested with appliance
Transformer (T1) ¹⁾	GlobTek / BOAM / HAOPUWEI / ENG	See attachment for details	Class B, with critical component listed below	IEC 60950-1	Tested with appliance
- Magnet wire	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWN/U (UL E201757)	MW28-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	PACIFIC ELECTRIC WIRE & CABLE (SHENZHEN) CO LTD	UEWS/U (UL E201757)	MW75-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JUNG SHING WIRE CO LTD	UEW-4 (UL E174837)	MW75C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JUNG SHING WIRE CO LTD	UEY-2 (UL E174837)	MW28-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JIANGSU HONGLIU MAGNET WIRE TECHNOLOGY CO LTD	2UEW/130 (UL E335065)	MW75-C, 130°C	IEC 60950-1	Tested with appliance

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	CHANGZHOU DAYANG WIRE & CABLE CO LTD	2UEW/130 (UL E158909)	MW75-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	WUXI JUFENG COMPOUND LINE CO LTD	2UEWB (UL E206882)	MW75#, 130°C	IEC 60950-1	Tested with appliance
Alt. use	JIANGSU DARTONG M & E CO LTD	UEW (UL E237377)	MW 75-C, 130°C	IEC 60950-1	Tested with appliance
Alt. use	SHANDONG SAINT ELECTRIC CO LTD	UEW/130 (UL E194410)	MW75#, 130°C	IEC 60950-1	Tested with appliance
Alt. use	ZHEJIANG LANGLI ELECTRIC EQUIPMENTS CO LTD	UEW (UL E222214)	MW 79#, 130°C	IEC 60950-1	Tested with appliance
-Triple-insulated wire (Secondary)	Great Leoflon Industrial Co., Ltd.	TRW (B) Serie(s)	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 136581 UL E211989
- Alt. use	COSMOLINK CO. Ltd.	TIW-M Serie(s)	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 138053 UL E213764
- Alt. use	Furukawa Electric Co., Ltd. Electronics & Automotive Systems Company Global Business Development Division	TEX-E	Class B, reinforced insulation	IEC 60950-1 UL 2353 UL 60601-1	VDE 006735 UL E206440
- Alt. use	TOTOKU ELECTRIC CO LTD	TIW-2	Reinforced insulation, rated 130° C (Class B)	UL 2353 UL60950-1 UL 60601-1	VDE 40005152 UL E249037
- Alt. use	E&B TECHNOLOGY CO LTD	E&B-XXXB E&B-XXXB-1	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	VDE 40023473 UL E315265
- Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TIW	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	Tested with appliance UL E249037

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
- Alt. use	SHENZHEN JIUDING NEW MATERIAL CO LTD	DTIW-B	Reinforced insulation, Class B	IEC 60950-1 UL 2353 UL 60601-1	VDE 40037495 UL E357999
-Bobbin	CHANG CHUN PLASTICS CO LTD	T375J T375HF	V-0, 150°C, thickness 0,45 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E59481
- Alt. use	CHANG CHUN PLASTICS CO LTD	4130	V-0, 140°C, thickness 0,74 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E59481
- Alt. use	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150°C, thickness 0,45 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E41429
- Alt. use	HITACHI CHEMICAL CO LTD	CP-J-8800	V-0, 150°C, thickness 0,45 mm min.	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E42956
-Insulating tape	3M COMPANY ELECTRICAL MARKETS DIV (EMD)	1350F-1 1350T-1 44	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E17385
- Alt. use	BONDTEC PACIFIC CO LTD	370S	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E175868
- Alt. use	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ CT WF	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E165111
- Alt. use	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD	JY25-A	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E246950
- Alt. use	CHANG SHU LIANG YI TAPE INDUSTRY CO LTD	LY-XX*	Min.130°C	IEC 60950-1 UL 510	Tested with appliance UL E246820
-PTFE tubing	GREAT HOLDING INDUSTRIAL CO LTD	TFT / TFS	Min. 300V, 200°C	IEC 60950-1	Tested with appliance UL E156256

IEC 60950-1					
Clause	Requirement + Test			Result - Remark	Verdict
-Alt. use	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD	WF	600V, 200°C	IEC 60950-1	Tested with appliance UL E203950
-Alt. use	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD	CB-TT-T / CB-TT-S	Min. 300V, 200°C	IEC 60950-1	Tested with appliance UL E180908
Enclosure (all parts)	SABIC INNOVATIVE PLASTICS B V	SE1X, SE1	PPE+PS, Min. V-1, Min. thickness:2.0mm, 105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	SE100	PPE+PS, Min. V-1, Min. thickness:2.0mm, 95°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	C2950	PC/ABS, Min. V-0, Min. thickness:2.0mm, 85°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	CX7211 EXCY0098	PC/ABS, Min. V-1, Min. thickness:2.0mm, 90°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	945	PC, Min. V-1, Min. thickness: 2.0mm, 120°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC INNOVATIVE PLASTICS B V	HF500R	PC, V-0, Min. thickness:2.0mm, 125°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E45329
Alt. use	SABIC JAPAN L L C	SE1X, SE1	PPE+PS, Min. V-1, Min. thickness: 2.0mm, 105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E207780
Alt. use	SABIC JAPAN L L C	SE100	PPHOX, Min. V-1, Min. thickness: 2.0mm, 95°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E207780
Alt. use	SABIC JAPAN L L C	C2950	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 85°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E207780

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
Alt. use	SABIC JAPAN L L C	CX7211 EXCY0098	PC/ABS, Min. V-0, Min. thickness: 2.0mm, 90°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E207780
Alt. use	SABIC JAPAN L L C	945	PC, Min. V-0, Min. thickness: 2.0mm, 120°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E207780
Alt. use	SABIC JAPAN L L C	HF500R	PC, V-0, Min. thickness: 2.0mm, 125°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E207780
Alt. use	TEIJIN CHEMICALS LTD	LN-1250P LN-1250G	PC, Min. V-0, Min. thickness: 2.0mm, 115°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E50075
Coupler	GlobTek, Inc.	Q-coupler	Max. 240V, Max. 2.0A	IEC 60320-1	Tested with appliance
Mylar sheet (Optional)	SUMITOMO BAKELITE CO LTD	AV-Lite DP 901	Diallyl Phthalate (DAP), V-0, thickness min.: 0.4mm. min.105°C,	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL 41429
- Alt. use	SABIC INNOVATIVE PLASTICS US L L C	FR700	PC, V-0, thickness: min. 0.4mm; min.105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E121562
- Alt. use	DUPONT HONGJI FILMS FOSHAN CO LTD	EM, MO31	PET, VTM-2, thickness: min. 0.4mm; min.105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E241830
- Alt. use	Kanglongxin	PC-811A, PC-813A	PC, VTM-2, thickness: min. 0.4mm; min.80°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E315185
- Alt. use	MIANYANG LONGHUA FILM CO LTD	PC-770, PC-770A, PC-870A, PC-1870A, PP-BK18	PC, VTM-0, thickness: min. 0.4mm; min.80°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E254551
- Alt. use	TORAY INDUSTRIES INC	Lumirror H10	PC, VTM-2, thickness: min. 0.4mm; min.105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E86511

IEC 60950-1					
Clause	Requirement + Test		Result - Remark		Verdict
- Alt. use	SKC CO LTD	SH71S	PC, VTM-2, thickness: min. 0.4mm; min.105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E74359
- Alt. use	FORMEX,DIV OF IL TOOL WORKS INC,FRMRLY FASTEX,DIV OF ILTOOL WORKS INC	FORMEX GK series	PC, V-0, thickness: min. 0.4mm; min.105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E121855
- Alt. use	SABIC INNOVATIVE PLASTICS US LLC	FR60 series FR63 series FR65 series FR7 series FR700 series	PC, V-0, thickness: min. 0.4mm; min.130°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E121562
- Alt. use	MIANYANG LONGHUA FILM CO LTD	PP-BK-20 PP-BK-17 PP-BK-18	PC, VTM-0, thickness: min. 0.4mm; min.80°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E254551
- Alt. use	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX PP WT- 10 series	PC, VTM-0, thickness: min. 0.4mm; min.110°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E315185
- Alt. use	CHENGDU KANGLONGXIN PLASTICS CO LTD	KLX FRPC- 1860B	PC, VTM-0, thickness: min. 0.4mm; min.80°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E315185
- Alt. use	JiangSu YuXing	CY28	PET, VTM-2, thickness: min. 0.4mm; min.105°C	IEC 60950-1 UL 94 UL 746 A/B/C/D	Tested with appliance UL E212271
Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. For all transformers under all manufacturers.					

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

Attachment for transformer as below:

Product Model	Voltage Range	Transformer model	Product Model	Voltage Range	Transformer model
GTM96180	5V-8V	TF042	GTM96300	5-8.9V	TF038
	8.1V-14.9V	TF043		9-11.9V	TF057
	15V-18.9V	TF044		12-14.9V	TF039
	19V-30V	TF045		15-24V	TF040
	30.1V-48V	TF046		24.1-48V	TF041
GTM96180 POE	18V	TF064	GTM96300 POE	18V	TF068
	24V	TF065		24V	TF069
	36V	TF066		36V	TF070
	48V	TF067		48V	TF051
	54V, 56V	TF063		54V, 56V	TF051
GTM91120 series	5-7.5V	GT-3005001	GTM91128LI*CEL**-* *****, GTM91128***.**** series;	5.0-7.5V for power supply output, 3.2V-5.9V for charger output	GT-3005001
	7.6V-10.5V	GT-3009001	GTM91128LI1CEL GTM91128LI2CEL GTM91128LI3CEL	7.6-12V for power supply output, 6.0V-8.9V for charger output	GT-3012001
	10.6V-14.5V	GT-3012001		12.1-14V for power supply output, 9.0V-12.6V for charger output	GT-3015001
	14.6V-19.5V	GT-3015001			
	19.6V-24V	GT-3024001			
	24.1V-48V	GT-3048001			

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

1.5.1	TABLE: Opto Electronic Devices	P
Manufacturer	See list of safety critical components.	
Type	See list of safety critical components.	
Separately tested	Approved optocouplers used. See list of safety critical components.	
Bridging insulation	Reinforced insulation	
External creepage distance	Approved optocouplers used. See list of safety critical components.	
Internal creepage distance	-*	
Distance through insulation	Approved optocouplers used. See list of safety critical components.	
Tested under the following conditions	R	
Input	-	
Output	-	
supplementary information		
* Compliance with thermal cycling test was checked on these parts.		

2.1.1.7	TABLE: stored discharge on capacitors test	P
Model	Voltage	Comments
GTM96180-1848-T2	52V after 1s	Vpeak=372V, 37%* V peak = 137.64V
GTM96300-3648-R2	76V after 1s	Vpeak=386V, 37%* V peak = 142.82V
GTM91128LI3CELM-1261214010, GTM91128LI3CELM-1260214019	73.8V after 1s	Vpeak=340V, 37%* V peak = 125.8V
GTM3CEL-12614	113.4V after 1s	Vpeak=356V, 37%* V peak = 131.72V
Note(s): Overall capacity: 0.47μF (CX1=0.47μF)		

IEC 60950-1				
Clause	Requirement + Test		Result - Remark	Verdict
4.5	TABLE: Thermal requirements			P
	Supply voltage (V)	90	264	—
	Ambient T _{min} (°C)	40	40	—
	Model	See below table		—
Maximum measured temperature T of part/at.....:		T (°C)		Allowed T _{max} (°C)
GTM96180-1807-2.0-T2	LF1	101	90	110
GTM96180-1817.9-5.9-T2	LF1	88	71	110
GTM96180-1838-2.0-T3A	LF1	90	75	110
GTM96180-1848-T3	LF1	86	69	110
GTM96300-2307.5-2.5-R2	LF1	100	86	110
GTM96300-3617.9-5.9-R3A	LF1	102	82	110
GTM96300-3624-R2	LF1	105	90	110
GTM96300-3648-R3A	LF1	98	83	110
GTM91128LI3CEL-12614	LF1	101	85	110
GTM91128LI1CEL-T2-04220	LF1	102	90	110
GTM91128LI3CEL M-1260214019	LF1	99	83	110
GTM91128LI3CEL M-1261214010	LF1	102	87	110
GTM91128LI1CEL M-0420405036	LF1	84	65	110
GTM91128LI1CEL M-0421805024	LF1	87	72	110
Supplementary information:				

Photos of product:

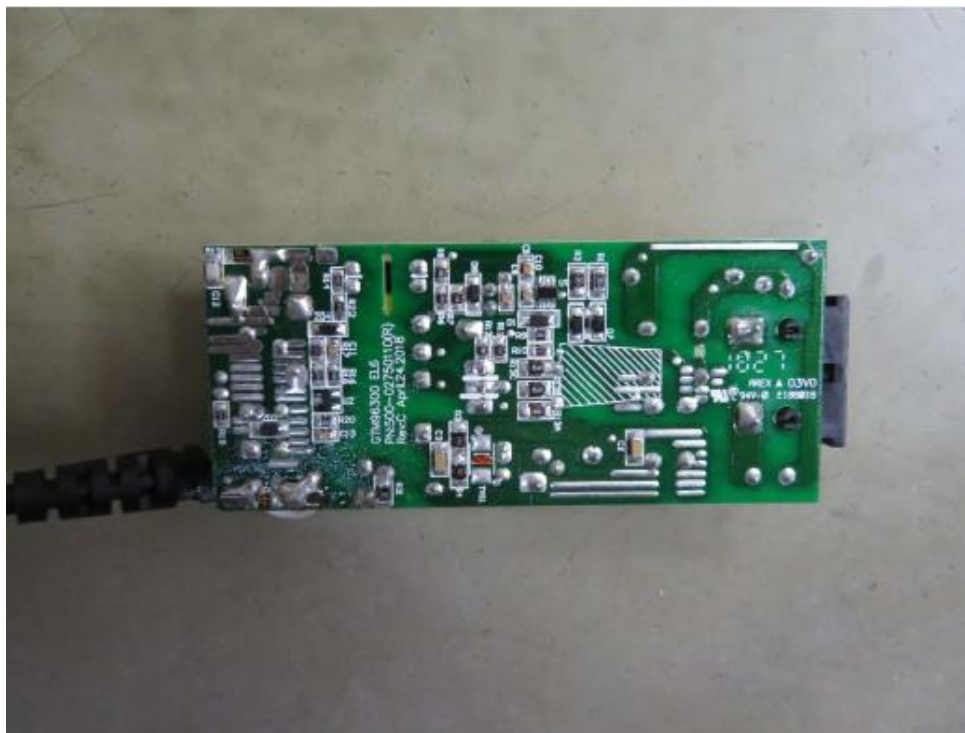
PCB view for GTM96300 series (with functional earth)



PCB view for GTM96300 series (with functional earth)



PCB view for GTM96300 series (with functional earth)



PCB view for GTM96300 series (with functional earth)

