File E341351 Project 4789507340

July 20, 2018

REPORT

on

# LISTING - Power Supplies for use in Audio/Video, Information and Communication Technology Equipment

# GLOBTEK (HONG KONG) LTD KOWLOON HONG KONG

Copyright  $\ensuremath{\mathbb{C}}$  2018 UL LLC

UL LLC authorizes the above named company to reproduce this Report only for purposes as described in the Conclusion. The Report should be reproduced in its entirety; however to protect confidential product information, the Construction Details Descriptive pages may be excluded.

ed:	2018-07-20
ed:	2020-08-13

נט	UL TEST REPORT AND PROCEDURE							
Standard:	<pre>UL 62368-1, 2nd Edition, 2014-12-01 (Audio/video, Information and Communication Technology Equipment - Part 1: Safety Requirements) CSA C22.2 No. 62368-1-14, 2nd Edition, 2014-12 (Audio/video, Information and Communication Technology Equipment - Part 1: Safety Requirements)</pre>							
Certification Type:	Listing							
CCN:	QQJQ, QQJQ7 Power Supplies for use in Audio/Video, Information and Communication Technology Equipment )							
Complementary Certification CCN	N/A							
Product:	ICT/ITE power supply							
Model:	<pre>1. GT*46401-**** (Replaceable plug) 2. GT*46401-***-W2* (Fixed plug) (The lst "*" part can be 'M' or '-' or 'H' for market identification and not related to safety. The 2nd "*" denotes the rated output wattage designation, with a maximum value of "40". The 3rd "*" denotes the standard rated output voltage designation, which can be "12", "15", "19", "24". The 4th "*"is optional deviation, subtracted from standard output voltage, which can be "-0.1" to "- 4.9" with interval of 0.1, or blank to indicate no voltage different.</pre>							
	-W2 can be optional, when it is blank, denote to be with replaceable plug. The last "*" denote any six character means "O- 9","A-Z","()","[]","-" or blank for marketing purposes.)							
Rating:	I/P: 100-240Vac, 50-60Hz or 50/60Hz, 1.0A							
	O/P: See Illustration - 14 for details.							
Applicant Name and Address:	GLOBTEK (HONG KONG) LTD UNIT 1402, BENSON TOWER 74 HUNG TO RD KWUN TONG KOWLOON HONG KONG							

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

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

ULS-62368-1-QQJQ-Description-2002 Form Page 1

Form Issued: 2015-02-25 Form Revised:

Copyright © 2017 UL LLC

Only those products bearing the UL Mark should be considered as being covered by  $% \left( {{{\left( {{{\left( {{{\left( {{{}}} \right)}} \right)}} \right)}} \right)$ 

File	E341351	Vol.	5	Sec.	9	Page	2	Issued:	2018-07-20
		and H	Report					Revised:	2020-08-13

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of this page through to the end of the Engineering Conditions of Acceptability.

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

Prepared	Amy Wong/Suki H	Kwong	Reviewed	Brian Wong
by:	Ally WOIIG/SULL I	wong	by:	BITAIL MOILS

ULS-62368-1-QQJQ-Description-2002 Form Page 2

Copyright © 2017 UL LLC

Only those products bearing the UL Mark should be considered as being covered by  $% \left( {{{\boldsymbol{x}}_{i}}} \right)$ 

# Supporting Documentation The following documents located at the beginning of this Procedure supplement the requirements of this Test Report: A. Authorization - The Authorization page may include additional Factory Identification Code markings. B. Generic Inspection Instructions i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report ii Part AE details any requirements which may be applicable to all products covered by . this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report C. Listing Mark/Recognized Component Mark Data Page - details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

### Product Description

The product is a Direct plug-in equipment for Class II intended for use with Audio/video, information and communication technology equipment, there electronic components mounted on PWB, and housed in a thermoplastic enclosure by ultrasonic welding.

#### Model Differences

All models are similar to each other except for output rating, transformer, rating of Secondary components and model designation, see Illustration - 14 for details.

Test Item Particulars (NOT FOR FIELD REPRESE	NTATIVE'S USE)
Classification of installation and use by . :	☑ Ordinary person □ Instructed person □ Skilled person
Supply Connection:	<pre>     pluggable equipment</pre>
Equipment mobility:	<pre>   movable □ hand-held ⊠ transportable   stationary □ for building-in ⊠   direct plug-in</pre>
	<pre>rack-mounting wall-mounted</pre>
Over voltage category (OVC):	□ OVC I □ OVC II □ OVC III □ OVC IV □ other:
Fundamental Frequency:	∑ 50/60 Hz 50 Hz 60 Hz ∑ other 50-60 Hz N/A
Class of equipment:	□ Class I ⊠ Class II□ Class III □ Not classified □ Class II with functional earthing
Access location:	$\square$ restricted access location $\square$ N/A
Pollution degree (PD)	□ PD 1
IP protection class:	⊠ IP X0 □ IP
Tested for IT power systems:	🗌 Yes 🛛 No
IT testing, phase-phase voltage (V):	□ ⊠ N/A
Altitude during operation (m)	□ Up to 2,000
Altitude of test laboratory (m) Mass of equipment (kg)	

Technical Consideration (NOT FOR FIELD REPRESENTATIVE'S USE)

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 40 degree C
- The means of connection to the mains supply is: Pluggable A
- The product is intended for use on the following power systems: TN
- Considered current rating of protective device as part of the building installation (A) : 20
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10%
- The equipment disconnect device is considered to be: Plug
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual
- The product was investigated to the following additional standards: (1) The product was evaluated to be operated up to 4,000 m above sea level per Annex G and the multiplication factor (1.29, linear interpolation used) of table A.2 of IEC 60664-1, Edition 2.0: 2007 was applied to determine the minimum required clearance; (2) The product was evaluated to the maximum acceptable moment, center of gravity, dimensions and weight of the product in accordance with UL 1310; (3) The blade dimension was evaluated to be complied with NEMA configurations in accordance with Wiring Devices-Dimensional Specifications, ANSI/NEMA WD6.

Engineering Conditions of Acceptability (NOT FOR FIELD REPRESENTATIVE'S USE)

N/A

# Additional Information

N/A

## Additional Standard

The product fulfils the requirements of: N/A

ULS-62368-1-QQJQ-Description-2002 Form Page 5

File E341351	Vol. 5	Sec.	9 Page	б	Issued:	2018-07-20
	and Report				Revised:	2020-08-13

Clause Title       Marking or Instruction Details         Equipment identification marking - Manufacturer identification       Listee's or Recognized company's name, Trade Name, Trademark or File Number.         Particle       Number.         Equipment identification       Model Number         Equipment identification       Model Number         Equipment identification       Model Number         Equipment rating marking - ratings       Input Ratings (voltage, frequency, current) Output Ratings (voltage, dc, current)         Power rating - Class II symbol       Symbol for Class II construction (60417-2-IEC-5172)         Fues - replaceable by skilled person (component ID:FSI)       FSI, T2AL, 250V located on or adjacent to fuse or fuseholder.         Special Instructions to UL Representative       For transformer test - When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in Production-Line Testing Requirements be conducted at the component manufacturer.         Production-Line Testing Requirements         Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.         Model       Component       Parts       Test Test probe location V rms V dc Time, s All models         All models       TU       N/A       Primary to Secondary 3000       4242       1 All models <tr< th=""><th>Markings,</th><th>instructions</th><th>and instructiona</th><th>l safeguards</th><th></th><th></th></tr<>	Markings,	instructions	and instructiona	l safeguards							
<pre>identification marking - Manufacturer identification  Equipment identification Equipment rating Model Number identification Equipment rating Input Ratings (voltage, frequency, current) Output Ratings (voltage, dc, current) Power rating - Class Symbol for Class II construction</pre>	Clause Tit	le M	arking or Instruc	tion Details							
identification         marking - model         identification         Equipment rating         marking -ratings         Output Ratings (voltage, frequency, current)         Output Ratings (voltage, dc, current)         Power rating - Class         II symbol         Fuses - replaceable         by skilled person         (component ID:FS1)         Special Instructions to UL Representative         For transformer test - When the tests are conducted at other location, inspect test         record and specification sheet provided by the component manufacturer. Verify the         special Instructions to UL Representative         For transformer test - When the tests are conducted at other location, inspect test         record and specification sheet provided by the component manufacturer. Verify the         special Constructions - Refer to Generic Inspection Instructions,         Requirements         Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions,         Parts       Test probe location V rms V dc         Model       Component       Parts         Models       EUT       N/A         All models       EUT       N/A         All models       Euchric Strength Test Exemptions - This test is not required for the following models:	identifica marking - Manufactur	tion N er	-	ized company's name,	Trade Name,	Trademark or File					
marking -ratings       Output Ratings (voltage, dc, current)         Power rating - Class II symbol       Symbol for Class II construction (60417-2-IEC-5172)         Fuses - replaceable by skilled person (component ID:FS1)       FS1, T2AL, 250V located on or adjacent to fuse or fuseholder.         Special Instructions to UL Representative record and specification sheet provided by the component manufacturer. Verify the specification sheet provided by the component manufacturer. Verify the specification sheet provided by the component manufacturer. Verify the specification sheet indicates 10% routine test specified in Production-Line Testing Requirements be conducted at the component manufacturer.         Production-Line Testing Requirements       Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.         Model       Component       Parts       Test probe location V rms       V dc       Time, s         All models       T1       N/A       Primary to Secondary 3000       4242       1         All models       EUT       N/A       Primary to Secondary 3000       4242       1         All models       EUT       N/A       Primary to Secondary 3000       4242       1         Electric Strength Test Exemptions - This test is not required for the following models:       All models       I       N/A	identifica marking - m	tion model	Model Number								
II symbol       Symbol for Class II construction (60417-2-IEC-5172)         Fuses - replaceable by skilled person (component ID:FS1)       FS1, T2AL, 250V located on or adjacent to fuse or fuseholder.         Special Instructions to UL Representative       For transformer test - When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in Production-Line Testing Requirements be conducted at the component manufacturer.         Production-Line Testing Requirements       Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.         Model       Component       Parts       Test probe location V rms       V dc       Time, s         All models       TI       N/A       Primary to Secondary 3000       4242       1         All models       EUT       N/A       Primary to Secondary 3000       4242       1         All models       Electric Strength Test Exemptions - This test is not required for the following models:       All models       Image: Secondary Secon		-			cent)						
by skilled person (component ID:FS1)  Special Instructions to UL Representative For transformer test - When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in Production-Line Testing Requirements be conducted at the component manufacturer. Production-Line Testing Requirements Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.  Removable Removable Removable Removable Removable Removable Removable All models EUT N/A Primary to Secondary 3000 4242 1 Electric Strength Test Exemptions - This test is not required for the following models: All models Electric Strength Test Exemptions - This test is not required for the following models:			1								
For transformer test - When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in Production-Line Testing Requirements be conducted at the component manufacturer.         Production-Line Testing Requirements         Blectric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.         Model       Component         Parts       Test probe location         All models       T1         N/A       Primary to Secondary 3000       4242         All models       EUT         All models       Fundamentary test exemptions - This test is not required for the following models:         All models       Electric Strength Test Exemptions - This test is not required for the following models:	by skilled	person	'S1, T2AL, 250V lc	ocated on or adjacent	to fuse or f	Euseholder.					
Removable       Test         Model       Component       Parts       Test probe location       V rms       V dc       Time, s         All models       T1       N/A       Primary to Secondary 3000       4242       1         All models       EUT       N/A       Primary to Secondary 3000       4242       1         Earthing Continuity Test Exemptions - This test is not required for the following models:         All models       Electric Strength Test Exemptions - This test is not required for the following models:	record and specificat Requiremen <b>Production</b> <b>Electric S</b>	specificati ion sheet in ts be conduc -Line Testin trength Test	on sheet provided dicates 100% rout ted at the compon g Requirements Special Construct	l by the component man ine test specified in ment manufacturer.	ufacturer. N Production-	Jerify the -Line Testing					
ModelComponentPartsTest probe locationV rmsV dcTime, sAll modelsT1N/APrimary to Secondary 300042421All modelsEUTN/APrimary to Secondary 300042421Earthing Continuity Test Exemptions - This test is not required for the following models:All modelsElectric Strength Test Exemptions - This test is not required for the following models:	Part AC for	r further in									
All models       EUT       N/A       Primary to Secondary 3000       4242       1         Earthing Continuity Test Exemptions - This test is not required for the following models:         All models         Electric Strength Test Exemptions - This test is not required for the following models:	Model	Component		Test probe location	V rms V						
Earthing Continuity Test Exemptions - This test is not required for the following models: All models Electric Strength Test Exemptions - This test is not required for the following models: 	All models	Т1	N/A	Primary to Secondary	3000 4	1242 1					
All models Electric Strength Test Exemptions - This test is not required for the following models:	All models	EUT	N/A	Primary to Secondary	3000 4	1242 1					
Electric Strength Test Exemptions - This test is not required for the following models:	Earthing C	ontinuity Te	st Exemptions - I	his test is not requi	red for the	following models:					
	All models										
	Electric S	trength Test	Exemptions - Thi	s test is not require	d for the fo	ollowing models:					
Electric Strength Test Component Exemptions - The following solid-state components may be											
disconnected from the remainder of the circuitry during the performance of this test:											
N/A											
Sample and Test Specifics for Follow-Up Tests at UL											
Test Model Component Material Test Sample(s) Specifics	Model	Component	Material	Test	Sample(						
N/A	N/A										

File	E341351	Vol.	5	Sec.	9	Page	7	Issued:	2018-07-20
		and	Report					Revised:	2020-08-13

Copyright © 2017 UL LLC

File E341351	Vol. 5	Sec.	9	Page 8	Issued:	2018-07-20
	and Report				Revised:	2020-08-13

4.1.2	TABLE: list of cr	ritical compone	nts			Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformit Y	Supplement ID
01. Label (optional)	Interchangeable	Interchangeab le	Minimum 70 degree C. if maximum surface temperature not specified.	PGDQ2, PGJI2	UL	
02. Enclosure and plug holder material	SABIC JAPAN L L C	945 (GG)	Two pieces construction, secured together by ultrasonic welding, rated V-0 or better, 120 degree C min. Minimum 2.0 mm thickness. See Enclosure Ill. 1 and 2. for dimensions	QMFZ2	UL	
02a. Enclosure and plug holder material (Alternate)	SABIC INNOVATIVE PLASTICS US L L C	915R(GG)	Two pieces construction, secured together by ultrasonic welding, rated V-0 or better, 120 degree C min. Minimum 2.0 mm thickness. See Enclosure Ill. 1 and 2. for dimensions	QMFZ2	UL	
02b. Enclosure and plug holder material (Alternate)	LG CHEM (GUANGZHOU) ENGINEERING PLASTICS CO LTD	LUPOY EF- 1006F(m)	Two pieces construction, secured together by ultrasonic welding, rated V-0 or better, 115 degree C min. Minimum 2.0 mm thickness. See Enclosure Ill. 1 and 2. for dimensions	QMFZ2	UL	
02c. Enclosure and		FR6005 + (z)	Two pieces	QMFZ2	UL	
ULS-62368-1-QQJQ-Desc Form Page 8	-	F at © 2017 III. I.I.C	Form Issued: 2015-02-25 orm Revised:			

File E341351	Vol. 5	Sec.	9	Page 9	Issued:	2018-07-20
	and Report				Revised:	2020-08-13

plug holder	DEUTSCHLAND AG		construction, secured		
material	[PC RESINS]		together by ultrasonic		
			welding, rated V-0 or		
(Alternate)			better, 105 degree C		
(112002110000)			min. Minimum 2.0 mm		
			thickness. See		
			Enclosure Ill. 1 and 2.		
			for dimensions		
02d. Enclosure and	SILVER AGE	PC2330	Two pieces	QMFZ2	UL
plug holder	ENGINEERING		construction, secured		
material	PLASTICS		together by ultrasonic		
	(DONGGUAN) CO		welding, rated V-0 or		
(Alternate)	LTD		better, 115 degree C		
(Arternate)			min. Minimum 2.0 mm		
			thickness. See		
			Enclosure Ill. 1 and 2.		
			for dimensions		
03. Input Blades	Interchangeable	Interchangeab	Solid copper, non-		
		le	grounding, non-		
			polarized, NEMA 1-15P		
			configuration,		
			integrally moulded on		
			Bottom Enclosure.		
			Spaced minimum 5.1 mm		
			from perimeter edge of		
			Enclosure.		
04. Fuse (FS1)	Interchangeable	Interchangeab	T2AL, 250Vac	JDYX	UL
04. Fuse (FSI)	THEETCHANGEADIE	le	IZAL, 250Vac	UDIX	6 <u>H</u>
04a. Fuse (FS1)	Conquer	MST	T2AL, 250Vac	JDYX2	UL
(Alternate)	Electronics Co	1101	IZAL, ZJUVAC	UDIAZ	
(Alternate)	Ltd				
04b. Fuse (FS1)	Ever Island	2010	T2AL, 250Vac	JDYX2	UL
(Alternate)	Electric Co Ltd			021112	
(Arternate)	& Walter				
	Electric				
04b. Fuse (FS1)	COOPER BUSSMANN	SS-5	T2AL, 250Vac	JDYX2	UL
(Alternate)	LLC			021112	
	-	1	Form Laguad: 2015 02 25		

Form Issued: 2015-02-25

Form Revised:

File E341351
--------------

Vc

Vol. 5 Sec and Report

Sec. 9 Page 10 Issued: 2018-07-20 Revised: 2020-08-13

04c. Fuse (FS1) (Alternate)	Bel Fuse Inc	RST	T2AL, 250Vac	JDYX2	UL
04d. Fuse (FS1) (Alternate)	DONGGUAN BETTER ELECTRONIC TECHNOLOGY CO LTD	932	T2AL, 250Vac	JDYX2	UL
04e. Fuse (FS1) (Alternate)	HOLLYLAND CO LTD	5et	T2AL, 250Vac	JDYX2	UL
04f. Fuse (FS1) (Alternate)	LITTELFUSE WICKMANN WERKE	392	T2AL, 250Vac	JDYX2	UL
05. X-Capacitor (CX1)	Cheng Tung Industrial Co Ltd	СТХ	Max. 0.33 uF, min. 250 Vac, Class X1 or X2, min. 110 degree C. (comply with IEC 60384-14)	FOWX2	UL
05a. X-Capacitor (CX1)(Alternate)	Tenta Electric Industrial Co Ltd	MEX	Rated max 0.33uF, min 250 V, X1 or X2 type, 100 degree C. (comply with IEC 60384-14)	FOWX2	UL
05b. X-Capacitor (CX1)(Alternate)	Ultra Tech Xiphi Enterprise Co Ltd	нох	Rated max 0.33 uF, min 250 V, X1 or X2 type, 100 degree C. (comply with IEC 60384-14)	FOWX2	UL
05c. X-Capacitor (CX1)(Alternate)	CARLI ELECTRONICS CO LTD	MPX	Rated max 0.33uF, min 250 V, X1 or X2 type, 100 degree C. (comply with IEC 60384-14)	FOWX2	UL

ULS-62368-1-QQJQ-Description-2002 Form Page 10 Form Issued: 2015-02-25 Form Revised:

File	E341351	Vol.	5	Sec.	9	Page	11	Issued:	2018-07-20
		and I	Report					Revised:	2020-08-13

05d. X-Capacitor	JOEY ELECTRONICS	MDY	Rated max 0.33uF, min	FOWX2	UL
(CX1)(Alternate)	(DONG GUAN) CO	MPA	250  V,  X1 or X2 type,	FOWAZ	
(CAI) (AICEINACE)	LTD		105 degree C. (comply		
	шр				
	X T A MOREA T		with IEC 60384-14)		
05e. X-Capacitor	XIANGTAI	MKP/MPX	Rated max 0.33uF, min	FOWX2	UL
(CX1)(Alternate)	ELECTRONIC		250 V, X1 or X2 type,		
	(SHENZHEN) CO		110 degree C. (comply		
	LTD		with IEC 60384-14)		
06. Bleeder	TZAI YUAN	HSMD series	Max.1.5MOhm, min.1/4W	AZOP2	UL
Resistor (RS1,	ENTERPRISE CO	SMD series			
RS2)	LTD				
06a. Bleeder	PROSPERITY	FVS03, TF06V,	Max.1.5MOhm, min.1/4W	AZOP2	UL
Resistor (RS1,	DIELECTRICS CO	FVS05, TF08V,			
RS2) (Alternate)	LTD	FVS06, TF12V,			
		FVS20, TF20V,			
		FVS25, TF25V			
06b. Bleeder	Ralec Electronic	RTV05, RTV06,	Max.1.5MOhm, min.1/4W	AZOP2	UL
Resistor (RS1,	Corp	RTV12, RTV20,			
RS2) (Alternate)		RTV25			
07. Bleeder	TZAI YUAN	HSMD series	Max.510KOhm, min.1/4W	AZOP2	UL
Resistor (RS3)	ENTERPRISE CO	SMD series			
	LTD				
07a. Bleeder	PROSPERITY	FVS03, TF06V,	Max.510KOhm, min.1/4W	AZOP2	UL
Resistor (RS3)	DIELECTRICS CO	FVS05, TF08V,			
(Alternate)	LTD	FVS06, TF12V,			
		FVS20, TF20V,			
		FVS25, TF25V			
07b. Bleeder	Ralec Electronic		Max.510KOhm, min.1/4W	AZOP2	UL
Resistor (RS3)	Corp	RTV12, RTV20,			
(Alternate)	-	RTV25			
08. Bridging Diode	Interchangeable	Interchangeab	4A minimum, 600V		
(BD1)	5	le	minimum.		
09. Storage	Interchangeable	Interchangeab	Rated 400 V, max. 68uF,		
Capacitor (C1)		le	min. 105 degree C,		
For models For			provided with integral		
output power ≤30W			pressure relief		
10. Storage	Interchangeable	Interchangeab	-		

Form Issued: 2015-02-25 Form Revised:

File	E341351	Vol. 5	Sec.	9	Page	12	Issued:	2018-07-20
		and Rep	ort				Revised:	2020-08-13

a (a1)		1			
Capacitor (C1)		le	min. 105 degree C,		
For output power			provided with integral		
30-40W			pressure relief		
11. Transistor	Interchangeable	Interchangeab	Min. 600 V, 6-10A.		UL
(Q1)		le			
12. Choke (LF2)	Interchangeable	NF00025	130 degree C.		
(Optional)			See ILL04_for		
			details.		
12-01. Coil	Interchangeable	Interchangeab	Min. 130 degree C.	OBMW2	UL
		le			
12-02. Core	Interchangeable	Interchangeab	Ferrite, overall		
		le	measured overall 8 mm		
			by 4 mm by 4mm		
12-03. Triple	Great Leoflon	TRW(B)	Rated 130 degree C	OBJT2	
Insulation Wire	Industrial Co	1100(12)		00012	
	Ltd				
13. Choke (LF1)	Interchangeable	NF00124	130 degree C.		
(Optional)	Incerchangeabre	NF UUIZ4	See ILL03_for		
(Operonar)			details.		
13-01. Coil	Interchangeable	Tutouchouseh	Min. 130 degree C.	OBMW2	
13-01. COII	Interchangeable	Interchangeab	Min. 130 degree C.	OBMWZ	UL
12.00 0		le			
13-02. Core	Interchangeable	Interchangeab	Ferrite, overall		
		le	measured overall 16 mm		
			by 12mm by 8mm.		
14. Optical	Lite-On	LTV817	Isolation: 5000 Vac,	FPQU2	
Isolator (U1)	Technology Corp		min. 0.4 mm distance		
			through insulation,		
			min. 100 degree C		
14a. Optical	Everlight	EL817	Isolation: 5000 Vac,	FPQU2	UL
Isolator (U1)	Electronics Co		min. 0.4 mm distance		
(Alternate)	Ltd		through insulation,		
			min. 110 degree C		
14b. Optical	Cosmo	K1010	Isolation: 5000 Vac,	FPQU2	UL
Isolator (U1)			min. 0.4 mm distance	-	
(Alternate)			through insulation,		
			min. 115 degree C		
14c. Optical	BRIGHT LED	BPC-	Isolation: 5000 Vac,	FPQU2	UL
- L	-			~ -	

Form Issued: 2015-02-25 Form Revised:

Vol. 5 Sec. 9 Page 13 Issued: 2018-07-20 and Report

Revised: 2020-08-13

Isolator (U1) (Alternate)	ELECTRONICS CORP	817XXXXX, BPC- 817MXXXXX, BPC- 817SXXXXX, where XXXXX can be any alphanumeric character or blank.	min. 0.4 mm distance through insulation, min. 100 degree C			
14d. Optical Isolator (U1) (Alternate)	RENESAS ELECTRONICS CORPORATION	PS2561-1	Isolation: 5000 Vac, min. 0.4 mm distance through insulation, min. 100 degree C	FPQU2	UL	
14e. Optical Isolator (U1) (Alternate)	SHENZHEN ORIENT COMPONENTS CO LTD	ORPC-817Mx@, ORPC-817Sx@, ORPC-817x@	Isolation: 5000 Vac, min. 0.4 mm distance through insulation, min. 100 degree C	FPQU2	UL	
15. Bridge Capacitor (CY1)	Success Electronics Co Ltd	SE, SB, SF	Max. 1000 pF, min. 250 V, Y1 type, min 125 degree C. (Compliance with IEC 60384-14).	FOWX2		
15a. Bridge Capacitor (CY1) (Alternate)	TDK CORPORATION	CD	Max. 1000 pF, min. 250 V, Y1 type, min 125 degree C. (Compliance with IEC 60384-14).	FOWX2		
15b. Bridge Capacitor (CY1) (Alternate)	Walsin Technology Corp	АН	Max. 1000 pF, min. 250 V, Y1 type, min 125 degree C. (Compliance with IEC 60384-14).	FOWX2	UL	
15c. Bridge Capacitor (CY1) (Alternate)	Haohua Electronic Co	СТ 7	Max. 1000 pF, min. 250 V, Y1 type, min 125 degree C. (Compliance with IEC 60384-14).	FOWX2	UL	
15d. Bridge Capacitor (CY1) (Alternate)	XIANGTAI ELECTRONIC (SHENZHEN) CO	YOB, YOF, YOE	Max. 1000 pF, min. 250 V, Y1 type, min 125 degree C. (Compliance	FOWX2	UL	

ULS-62368-1-QQJQ-Description-2002 Form Page 13

Form Issued: 2015-02-25 Form Revised:

File	E341351	Vol. 5	Sec.	9	Page	14	Issued:	2018-07-20
		and Report					Revised:	2020-08-13

	LTD		with IEC 60384-14).		
15e. Bridge Capacitor (CY1) (Alternate)	MURATA MFG CO LTD	KX	Max. 1000 pF, min. 250 V, Y1 type, min 125 degree C. (Compliance with IEC 60384-14).	FOWX2	UL
15f. Bridge Capacitor (CY1) (Alternate)	JUHONG ELE CO	JB	Max. 1000 pF, min. 250 V, Y1 type, min 125 degree C. (Compliance with IEC 60384-14).	FOWX2	UL
16. Transformer (T1) (for (for output voltage 12-17.9V))	ENG Electric Co Ltd	XF00936	See ILL05_ for details.		
16-1. Transformer (Alternate) (for output voltage 18-22V	ENG Electric Co Ltd	XF00945	See ILL. 06 for details.		
16-2. Transformer (Alternate) (for output voltage 22.1- 24V)	ENG Electric Co Ltd	XF00946	See ILL. 07 for details.		
Insulation system	ENG Electric Co Ltd	ENG130-1	Class B	OBJY2	UL
16a. Core			RM10 Type, Ferrite, dimension 30mm by 20 mm by 9.2mm		
16b. Coil	Interchangeable	Interchangeab le	130 degree C	OBMW2	UL
16c. Bobbin	Chang Chun Plastics Co., Ltd.	Т375Ј	V-0, 150degree C, Phenolic, thickness 0.8mm minimum	QMFZ2	UL
16c-1. Bobbin (Alternate)	SUMITOMO BAKELITE CO LTD	PM-9820	V-0, 150degree C, Phenolic, thickness 0.71mm minimum	QMFZ2	UL
16d. Tubing/Sleeving	Great Holding Industrial Co. Ltd.	TFL, TFS, TFT	Rated 200 degree C, VW- 1, 600V max.	YDPU2	UL
16e. Triple	Great Leoflon	TRW(B)	130 degree C	OBJT2	UL

ULS-62368-1-QQJQ-Description-2002

Form Issued: 2015-02-25

Form Revised:

Form Page 14

File E341351
--------------

Vol. 5 and Report

Sec. 9 Page 15 Issued: 2018-07-20 Revised: 2020-08-13

Insulated Wire	Industrial Co. Ltd.				
16f. Varnish	John C. Dolph Co.	BC-346A	Rated minimum 200 degree C.	OBOR2	UL
16f-1. Varnish (Alternate)	Elantas Electrical Insulation Elantas Pdg Inc	V1630FS	Rated minimum 130 degree C.	OBOR2	UL
16g. Insulation Tape	3M Company	1350F-(#)	130 degree C.	OANZ2	UL
16g-1. Insulation Tape (Alternate)	3M Company	1350T-1	130 degree C.	OANZ2	UL
16g-2. Insulation Tape (Alternate)	BONDTEC PACIFIC CO LTD	370S	130 degree C.	OANZ2	UL
17. Heat Sink (HS1)	Interchangeable	Interchangeab le	Aluminium type, min. 2.0 mm thickness, See Illustration 11_for dimension details		
18. Heat Sink (Secondary)	Interchangeable	Interchangeab le	Aluminium type, min. 2.0 mm thickness, See Illustration 12_for dimension details		
19. PWB	Interchangeable	Interchangeab le	Min. V-0, min. 105 degree C.	ZPMV2	UL
20. Current sense resistor (R1) (For For output power $\leq$ 30W and output voltage $\leq$ 24V)	Interchangeable	Interchangeab le	0.3 ohm, 2W.		
21. Current sense resistor (R1) (For For output power ≤30W, output voltage 24V)	Interchangeable	Interchangeab le	0.33 ohm, 2W.		
22. Current sense resistor (R1) (For output power 30- UUS-62368-1-0010-Desc	Interchangeable	Interchangeab le	0.27 ohm, 2W.		

ULS-62368-1-QQJQ-Description-2002

Form Issued: 2015-02-25 Form Revised:

Form Page 15

File E341351	Vol. 5	Sec.	9	Page 16	Issued:	2018-07-20
	and Report				Revised:	2020-08-13

40W)						
23. LED Barrier (Optional)	SABIC JAPAN L L C	945 (GG)	Rated V-0 or better, 120 degree C min. Minimum 2.0 mm thickness.	QMFZ2	UL	
24. Output Cable	Interchangeable		Rated Minimum 30 V, Minimum 80 degree C, Maximum 3.05 m long, marked VW-1 or FT-1. Terminates with a polarized connector outside enclosure.	avlv2 ZJCZ	UL	
25. Strain Relief	Interchangeable	Interchangeab le	V-1 or better	QMF'Z2	UL	
26. Internal Glue Materials			Rated V-2 minimum.	QMFZ2	UL	

Form Issued: 2015-02-25 Form Revised:

Copyright © 2017 UL LLC

# ENCLOSURES

Туре	Supplement ID	Description
Figures Figure - 1		Overall View - 1 (GT*46401-***)
	Figure - 2	Overall View - 2 (GT*46401-***)
	Figure - 3	Overall View - 3 (GT*46401-***)
	Figure - 4	Internal View - 1 (GT*46401-****)
	Figure - 5	PWB View - 1 (GT*46401-****)
	Figure - 6	PWB View - 2 ((GT*46401-****)
	Figure - 7	Plug holder View - 1 (GT*46401-***)
	Figure - 8	Overall View - 4 (GT*46401-***-W2*)
	Figure - 9	Overall View - 5 (GT*46401-***-W2*)
	Figure - 10	PWB View - 3 (GT*46401-***-W2*)
	Figure - 11	PWB View - 4 (GT*46401-***-W2*)
Illustrations	Illustration - 1	Enclosure (GT*46401-****)
	Illustration - 2	Enclosure (GT*46401-***-W2*)
	Illustration - 3	Line filter (LF1)
	Illustration - 4	Line filter (LF2)
	Illustration - 5	Transformer T1 Specification (for 12- 17.9V) (Part #: XF00936)
	Illustration - 6	Transformer T1 Specification (for 18- 22V) (Part #: XF00945)
	Illustration - 7	Transformer T1 Specification (for 22.1-24V) (Part #: XF00946)
	Illustration - 8	Output strain relief dimension
	Illustration - 9	Input Blades dimension
	Illustration - 10	Detachable dock head with Input Blades dimension (GT*46401-****)
	Illustration - 11	Heat Sink (HS1) dimensions
	Illustration - 12	Heat Sink (HS2) dimensions
	Illustration - 13	PWB layout
	Illustration - 14	Model difference and rating

ULS-62368-1-QQJQ-Description-2002 Form Page 17