

Delivering leading edge, innovative power solutions for more than 30 years....

Model:GTM96900P90VV.V-T2

May 10, 2021

90W Desktop Power Supply Adapter offering IEC60950, 60601, 62368, UL1310, IEC60335 Certifications and DOE EPS 2.0 Level VI compliant, Class II

Information

Model Number GTM96900P90VV.V-T2

Description The 90W Desktop Power Supply family also serves as an LED Driver which meets 61000-3-2 Class C Harmonics and has IEC61347, LPS, and UL1310 (Class 2 Transformer) certification, Class II.



Agency Documents <http://www.globtek.info/certs/GTM96900P90VV.V/>

CE EC-Declaration https://www.globtek.com/pdf/ec_declaration/a0Oa000000MigSZEAZ

RoHS/RoHS2 Declaration https://www.globtek.com/pdf/rohs_cert/a0Oa000000MigSZEAZ

REACH Declaration https://www.globtek.com/pdf/iso_certificates/REACH.pdf

Conflict Minerals Declaration <https://www.globtek.com/pdf/conflict-minerals.pdf>

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MODEL PARAMETERS

Type	Desktop/External
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	ICT / ITE / Medical Power Supply/Class 2/Household Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	1.5A
Wattage (W)	90.0
Vout Range (V)	12-54
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
Ingress Protection	IP41
Size (mm)	149.38 x 62.6 x 33.5 +/-1.0

PROPRIETARY INFORMATION

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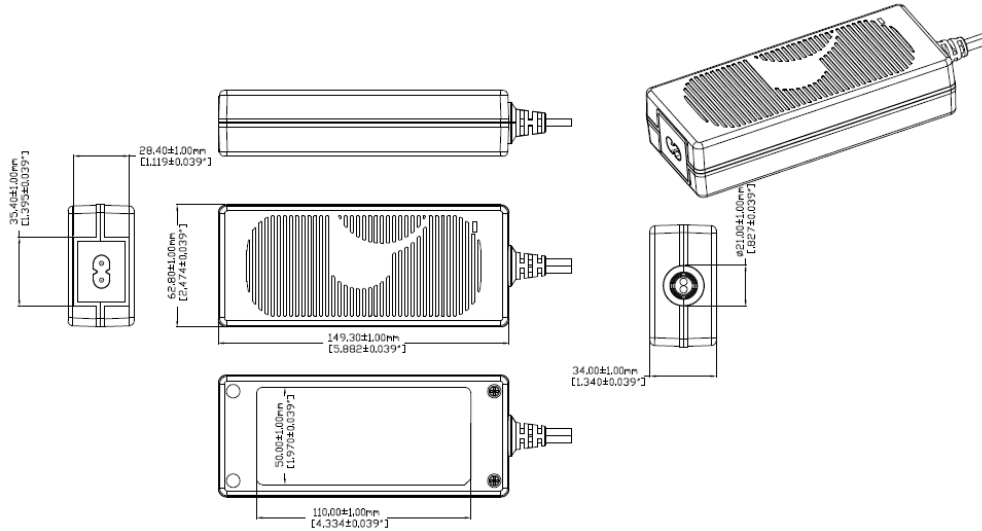
<https://en.globtek.com/datasheet/id/a0Oa000000MigSZ>

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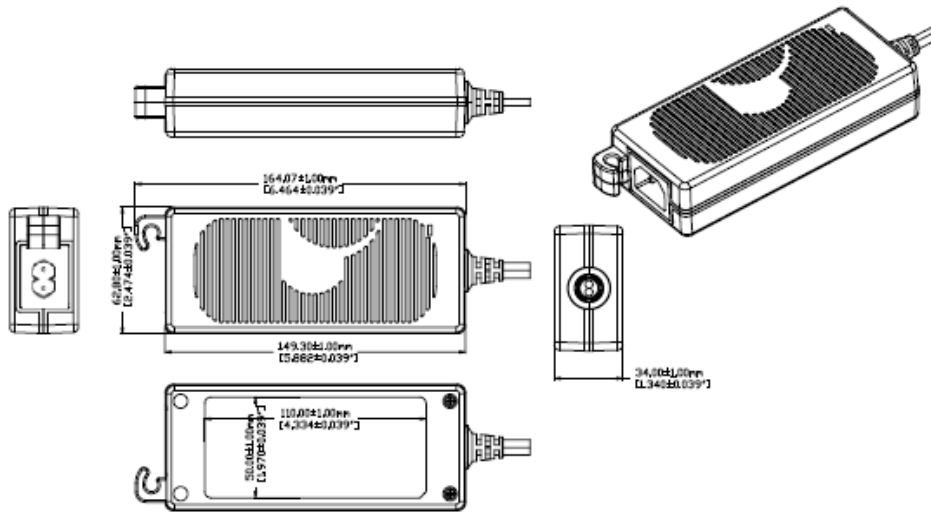
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ENCLOSURE



Alternative housing with input cord clamp to prevent accidental removal of the power cord. Product PN# ends with suffix "CL"



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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM96900P8512-T2	12 V	7.1	85.20	RFQ
GTM96900P8512-T2Z	12 V	7.1	85.20	RFQ
GTM96900P9015-T2Z	15 V	6	90.00	RFQ
GTM96900P9015-T2	15 V	6	90.00	RFQ
GTM96900P9019-T2Z	19 V	4.73	89.87	RFQ
GTM96900P9019-T2	19 V	4.73	89.87	RFQ
GTM96900P9022-T2Z	22.0 V	4.09	89.98	RFQ
GTM96900P9024-T2Z	24 V	3.75	90.00	RFQ
GTM96900P9024-T2	24 V	3.75	90.00	RFQ
GTM96900P9030-T2Z	30 V	3	90.00	RFQ
GTM96900P9030-T2	30 V	3	90.00	RFQ
GTM96900P9036-T2	36 V	2.5	90.00	RFQ
GTM96900P9036-T2Z	36 V	2.5	90.00	RFQ
GTM96900P9048-T2Z	48 V	1.875	90.00	RFQ
GTM96900P9048-T2	48 V	1.875	90.00	RFQ
GTM96900P9054-T2Z	54 V	1.66	89.64	RFQ
GTM96900P9054-T2	54 V	1.66	89.64	RFQ

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SPECIFICATIONS

A) ELECTRICAL SPECIFICATIONS:

01. Input Voltage: Specified 90-264 Vac, Nameplate rated: 100-240Vac
 - 90-264Vac range @ 100% of rated load current
 - 85-264 Vac range @ 90% of rated load current
 - 90-370 VDC range @ 100% of rated load current
02. Input Frequency: Specified 47-63 Hz, Nameplate rated 50/60Hz
03. Power Factor: 0.90 minimum @ 230Vac, 0.97 minimum @ 115Vac
04. Output Regulation: +/- 4% measured at the output connector
05. Line Voltage Regulation: +/- 0.5% typical measured at full load
06. Green Power On Indicator LED
07. Output Ripple (Vp-p): 1% or 200 mV whichever is greater, measured at 20 MHz bandwidth with 0.1uF ceramic capacitor in parallel with a low impedance 47uF electrolytic capacitor connected at the end of the output connector at nominal line
08. Turn-ON/OFF Overshoot: 5% maximum, 1 ms typical recovery time for 25% to 50% step load
09. Turn-ON Delay: 1 second typical
10. Hold-Up Time: 20 ms minimum
11. Inrush Current: 30A maximum at 115Vac input and 60A maximum at 230 Vac input
12. Switching Frequency: Varies from 25KHz to 125KHz
13. Efficiency: Compliant with Efficiency Level VI standard and 230 CoC Tier 2 Limits
14. No Load Standby Power: <0.15 W @ 230Vac
15. Output Type: IEC62368-1 Limited Power Source (LPS), 8A and 100W max. (Z suffix only)

B) PROTECTIONS

01. Input Protection: Input line fusing and 300Vac rated MOV
02. Over-Current Protection (Non-LPS Version): 110 - 160% of rated output current, auto-restart
02. Over-Current Protection (LPS Version): Overload limited to less than 8A and less than 100W, auto-restart
03. Over-Temperature: Temperature inherently limited by design
04. Output Over-Voltage: 110% to 135% of nominal output voltage under full load condition, and less than 60V max. Latching protection, cycle AC OFF to reset.

C) SAFETY

01. Dielectric Withstand Voltage: 4000Vac or 5656Vdc from input to output,
 - On Class I models, 3000Vac or 4242Vdc from input to earth
02. Earth Leakage Current: Class I models < 300uA, N/A for Class II models
03. Touch Current: Class I models < 20uA, Class II models < 70uA
04. Output Isolation Options:
 - a) C8 or C18 Inlet, Class II
 - b) C6 or C14 Inlet, Class II FE, Output Isolated from Earth contact
 - c) C6 or C14 Inlet, Class I, Output negative directly attached to Earth contact
05. Earth Continuity Test: < 0.1 Ohm between Earth Pin at AC input and PCB termination point (Class I models only)
06. Means of Protection: 2 x MOPP
07. Primary to Secondary Bridging Capacitance: Two IEC60384-14 certified Y1 type capacitors in series
08. Compliant Standards: See listings at end of this drawing for specifics

D) EMC

EN 60601-1-2, 4th edition

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Emissions, per EN 55032, EN 61000-6-3, EN 61000-6-4, CISPR11 and CISPR22

Conducted Emissions: Class B, FCC Part 15, Class B

Radiated Emissions: Class B, FCC Part 15, Class B

Line Frequency Harmonics EN61000-3-2, Class A

Voltage Fluctuations/Flicker EN61000-3-3

Immunity, per EN 55024, EN 61000-6-1, EN 61000-6-2

Static Discharge Immunity EN61000-4-2, 10KV Contact Discharge, 18KV air discharge

Radiated RF Immunity EN61000-4-3, 10V/m 80-1000MHz, 3V/m 1-2.7GHz, 80% 1KHz AM.

EFT/Burst Immunity EN61000-4-4, 4KV/100kHz.

Line Surge Immunity EN61000-4-5, 2KV differential, 4kV common-mode

Conducted RF Immunity EN61000-4-6, 3Vrms, 80% 1KHz AM

Power Frequency Magnetic Field Immunity EN61000-4-8, 3A/m

Voltage Dip Immunity EN61000-4-11

E) OTHER:

01. 1,500,000 hours @ 25°C ambient, full load (Telcordia SR-332, Issue 3)

02. Operating Temperature:

GTM961200P Family: -10°C to 40°C ambient temperature with full load

Regarding Operating Temperature,

a- See below derating table for output power capability at alternate temperature

b- Extended low end temperature range available as custom option

03. Humidity: 0% to 95% relative humidity, non-condensing

04. Storage Temperature: -30°C to 80°C

05. Cooling: Natural convection

06. RoHS: Compliant with latest regulations, see approvals section below

07. Operational Altitude: 5000M

F) DESKTOP STYLE ENCLOSURE

01. Housing: High impact plastic, 94V0 polycarbonate, non-vented

02. Size: 149.4 x 62.6 x 33.5 +/-1.0 mm

03. Markings: Label or Laser printed

04. AC Input mechanical options: Desktop C6, C8, C14 or C18 IEC Inlet.

G) SPECIAL OPTIONS

01. IEC62368-1 Limited Power Source (LPS) version (add Z suffix)

02. Custom cord-sets, cord types, and connector types

03. Custom markings/logos

04. Custom housing and cord-set colors

05. Reduced output power marking/rating

06. Short term output surge capability (non-LPS versions only)

07. Reduced leakage current version for Type-CF leakage current

08. Improved output voltage tolerance

09. Reduced output voltage ripple

10. Improved EN61000-4-5 line surge immunity (3KV differential, 5KV common-mode)

11. Reduced harmonic current levels for LED lighting (EN61000-3-2 Class C) for three load ranges: 27-50W, 40-65W, and 57-90W

12. Improved reliability PCB laminate with plated through-holes for IPC610 Class 2 compliance

13. Low temperature operation, down to -40°C

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14. Epoxy potted version, "P2" or "P3" suffix, with flying wires
15. Tolerance for back EMF applications, motor loads, or other high inductance reverse energy flow requirements
16. Improved ingress protection (IP) rating

H) OUTPUT CONNECTORS

Several output connector options are available with various output current ratings.

GlobTek can supply 10A rated 2.1mm and 2.5mm style DC Power Jacks, to complement our

10A output rated 2.1mm and 2.5mm DC power plugs used on our output cordsets.

Please visit <https://en.globtek.com/news/high-current-coaxial-barrel-plug-jacks-for-high-wattage-power-supplies> for a real time product offering of mating connectors.

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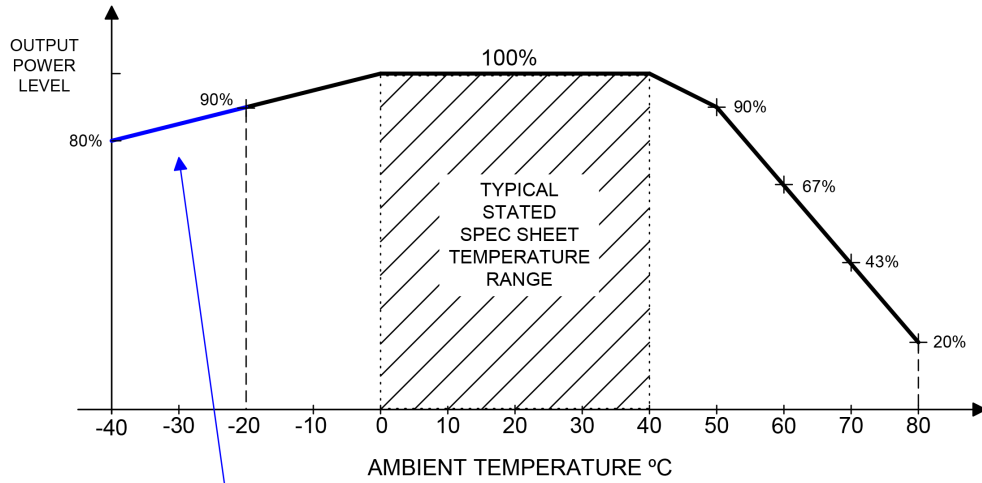
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DERATING CURVE

TYPICAL EXTERNAL POWER SUPPLY DERATING CURVE

(GTM96900 LPS PRODUCTS)



Blue Line represents special/optional Low Temperature, High Performance Construction

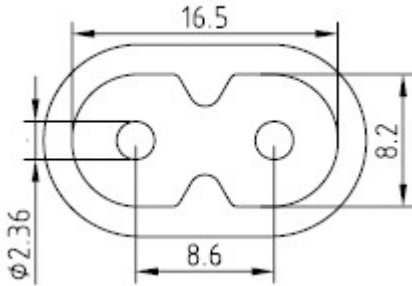
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INPUT CONFIGURATION

Description IEC 60320/C8 AC Inlet connector, Class II, Non-Earth Ground (aka "Figure-8")



Mates with IEC 60320/C7 Plug

Below are standard cordsets which are "not included" (unless stated above); these may be purchased separately or packaged with the power supply. Please contact your Sales Engineer if the style required is not shown below. Many more available in different lengths, colors or cable material.

[Standard International IEC 320/C7 Cordsets](#)

Part Number	Type	Standard	Connector	Length (mm)	Length (feet)
2094112M703(R)	Argentina (Type I)	IRAM 2063	IEC 320/C7	2000	7
5014112M703A(R)	Australian (Type I)	AS 3112	IEC 320/C7	2000	7
207B4111M8703(R)	Brazil (Type N)	NBR14136	IEC 320/C7	1800	6
4533501M8703(R)	China (Type A)	GB 2099.1	IEC 320/C7	1830	6
2074112M703A(R)	European (Type C)	CEE 7/16	IEC 320/C7	2000	7
2084111M8703B(R)	India (Type D)	IS 1293	IEC 320/C7	1800	6
451J3401M8703(R)	Japan (Type A)	JIS 8303	IEC 320/C7	1830	6
2044112M703A(R)	Korea (Type C)	KS C8305	IEC 320/C7	2000	7
4511116F703A(R)	North America (Type A)	NEMA 1-15P	IEC 320/C7	1830	6
	South Africa (Type				

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2084111M8703(R)	M)	BS 546	IEC320/C7	1830	6
4033401M8703A(R)	Taiwan (Type A)	CNS690	IEC 320/C7	1830	6
6104112M703A(R)	UK, Hong Kong, Singapore, Gulf States (Type G)	BS1363	IEC 320/C7	2000	7
451G1116F703A(R)	Gulf States (Kuwait, Bahrain, Oman, Qatar, Saudi Arabia, Yemen and the United Arab Emirates (UAE)(Type A)	Nema 1-15P	IEC320/C7	1830	6

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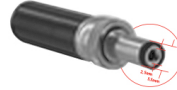
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OUTPUT CONFIGURATION

Common output connector options:


 L Type (Coaxial
5.5x2.5mm plug)

 C Type (Coaxial
5.5x2.1mm plug)

 K Type (Coaxial
3.5x1.3mm plug)

 LL Type (5.5x2.5mm
Locking 760k type)

 CL Type (5.5x2.1mm
Locking S761k type)

 ML2 Type (Molex
housing 43025-0200)

 YL3 Type
(KPPX-3P)


YL4 Type (KPPX-4P)


 EJ1/2/3/4/5 (EIAJ
RC-5320A type
connectors)

 MSB Type (Micro
USB)

 USBC Type (USB
Type C)

 Inquire for custom
design

 For a comprehensive list of options, [click here](#)

Contact GlobTek for your specific requirements or custom solutions.

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Approvals

Logo	Description
No Logo Applicable	CB for IEC 60601-1:2006/A1:2013+A12:2014 IEC 60601-1-11:2015
No Logo Applicable	CB for IEC 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013
No Logo Applicable	CB for IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
No Logo Applicable	CB for IEC61347-1:2015 + A1:2017 IEC61347-2-13:2014, A1:2016
No Logo Applicable	CB for IEC 62368-1:2014 (Second Edition)
	CCC Altitude up to 5000 m GB17625.1-2012, GB4943.1-2011, GB/T9254-2008
	Test standard: EN 55032: 2012+AC: 2013 EN 61000-3-2:2014 EN 61000-3-3:2013 EN 55024:2010 EN 60601-1-2:2015
	Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [UL 62368-1:2014 Ed.2] Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [CSA C22.2#62368-1:2014 Ed.2]
	CHINA SJ/T 11364-2014, China RoHS Chart: http://en.globtek.com/globtek-rohs.php

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Conforms to AAMI STD.ES60601-1,IEC 60601-1-11 Certified to CAN/CSA STD.C22.2 NO.60601-1	Conforms to AAMI STD.ES60601-1,IEC 60601-1-11 Certified to CAN/CSA STD.C22.2 NO.60601-1
Conforms to UL STD. 1310 Certified to CSA STD. C22.2 NO.223	Conforms to UL STD. 1310 Certified to CSA STD. C22.2 NO.223
Conforms to UL STD. 60950-1 Certified to CSA STD C22.2 NO.60950-1	Conforms to UL STD. 60950-1 Certified to CSA STD C22.2 NO.60950-1
Conforms to UL STD. 62368-1 Certified to CSA STD C22.2 NO.62368-1	Conforms to UL STD. 62368-1 Certified to CSA STD C22.2 NO.62368-1
	
	Declaration ДС № EAЭC N RU Д-US.KA01.B.10453_19 Custom Union of Russia, Belarus and Kazakhstan http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration
	Medical Electrical Equipment - Part 1: General Requirements For Basic Safety And Essential Performance (R2012) [AAMI ES60601-1:2005 +C1;A2] [CSA C22.2#60601-1:2014 Ed.3] [AAMI HA60601-1-11:2015 Ed.2]
	Information Technology Equipment Safety Part 1: General Requirements >Valid without technical revision: 01Jan2022< [UL 60950-1:2007 Ed.2 +R:14Oct2014]
 Class 2 Power Unit	Class 2 Power Units [UL 1310:2011 Ed.6 +R:12Dec2014] up to 5A Power Supplies With Extra-Low Voltage Class 2 Outputs [CSA C22.2 No.223:2015 Ed.3]
CAN ICES-3(B)/NMB-3(B)	Compliance of this PSU with Industry Canada, Class B demonstrated with a standard output load. The ICES law stipulates that system-level testing is required to demonstrate compliance with the ICES-3 emission limits with the actual system load.
	Indoor Use Only - Mark is on the label or Molded in the case

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IP41	Ingress Protection: ?IP41 to IEC60529:2001 Protection against granular foreign bodies - Protected against vertically falling drops of water
 <p>DC-E-G71-005.2</p> <p>PRECAUCION: PARA USO EN EQUIPOS ELECTRONICOS SOLAMENTE</p>	IRAM certificateDC-E-G71-005.1 to IEC 62368-1:2014
 <p>GlobTek, Inc.</p>	JAPAN TUV R-PSE, Cert. No. JD 50313287, to J60950-1(H26) , J55022(H22),J3000(H25)[DC15?30V]. Please reference the following website for guidelines on PSE regulations: http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/
 <p>GlobTek, Inc.</p>	JAPAN TUV R-PSE, Cert. No. JD 50313287, to J60950-1(H26) , J55022(H22),J3000(H25)[DC30?60V]. Please reference the following website for guidelines on PSE regulations: http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/
 <p>GlobTek, Inc.</p>	JAPAN TUV R-PSE, Cert. No. JD 50469658, to J62368-1(H30) , J55032(H29),J3000(H25)[15V or less]. Please reference the following website for guidelines on PSE regulations: http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/
<p>EFFICIENCY LEVEL VI</p>	Efficiency: complies to section 301 of Energy Independence and Security Act (EISA) complies with Energy Star tier 2 (North America), ECP tier 2 (China), MEPS tier 2 (Australia), Code of Conduct (Europe)
LPS	Limited Power Source if Z suffix on model number
LPS	Limited Power Source if Z suffix on model number 62368
No Logo	Malaysia ST Release Letter GTM41133 GTM96900P; GTM961200P T2 T3(A) IEC60950-1(Ed.2): 2005 + A1:2009 + A2:2013 No logo
	Morocco SDoC declaration http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/

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Patent pending	Patent pending
	RCM certificate SAA-170646-EA; Australia and New Zealand Regulatory Compliance, Mark (http://rcm.standards.org.au/rcmfaq/rcmfaq.htm)
RoHS	Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3) http://www.ce-mark.com/Rohs%20final.pdf
	S-Mark Certificate EN 60601-1:2006 + A1:2013 + A12:2014 EN 60601-1-11:2015 (http://www.intertek.com/marks/s/)
	S-Mark Certificate EN 62368-1:2014 + A11 (http://www.intertek.com/marks/s/)
	S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 (http://www.intertek.com/marks/s/)
	UKCA Certification
	Ukraine UKRSepro (Document: www.globtek.com/html/iso_certificates/GT_Ukraine.pdf)
DO NOT REMOVE THE TAG WARNING/ADVERTISEMENT RISK OF ELECTRIC SHOCK DRY LOCATION USE ONLY FOR INDOOR USE ONLY Risque de choc électrique Utilisation endroit sec Pour une utilisation en intérieur See instructions if the input plug does not fit the power outlet	UL1310 Warning Label Up To 36 Volts with plugs
	Japan: Voluntary Control Council for Interference (VCCI)
	WEEE: Complies with EU 2012/19/EU (http://ec.europa.eu/environment/waste/weee/index_en.htm) Mark is on the label or Molded in the case