

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

Model:GTM96060-06VV-Q

April 9, 2020

DOE EPS 2.0 Level VI Power Supply / Charger / AC Adapter, 6W, Available with 5-24VDC output Certified to Medical and ITE Standards

Information

Model Number	GTM96060-06VV-Q
Description	GTM96060-06VV-Q, ITE / Medical Power Supply/Class 2/Household Power Supply, 60601-1-4th Ed. , Wall Plug-in, Regulated Switchmode AC-DC Power Supply AC Adaptor, , Input Rating: 100-240V~, 50-60 Hz, Blade Options for Q Series Wall Plug-in Power Supplies, Output Rating: 6 Watts, Power rating with convection cooling (W) , 3.3-36V in 0.1V increments, Approvals: CCC; FCC; CAN ICES-3; IP42; CB 62368; 230V CoC Tier 2; ETL; EAC; cETLus; cETLus; UL 1310; CB 60601-1 2MOPP; CB EN/IEC 60335-1; S-Mark IEC/EN 60601-1; S-Mark 60950; cETLus UL1310; CE; Double Insulation; CE; China RoHS; Level VI; LPS; RoHS; Ukraine; VCCI; WEEE; CB 60950; cETLus 60601-1 3rd; RCM; PSE; PSE; PSE; PSE;

Model Picture



Agency Documents	http://www.globtek.info/certs/GTM96060/
CE EC-Declaration	https://www.globtek.com/pdf/ec_declaration/a0Oa000000NrvDbEAJ
RoHS/RoHS2 Declaration	https://www.globtek.com/pdf/rohs_cert/a0Oa000000NrvDbEAJ
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

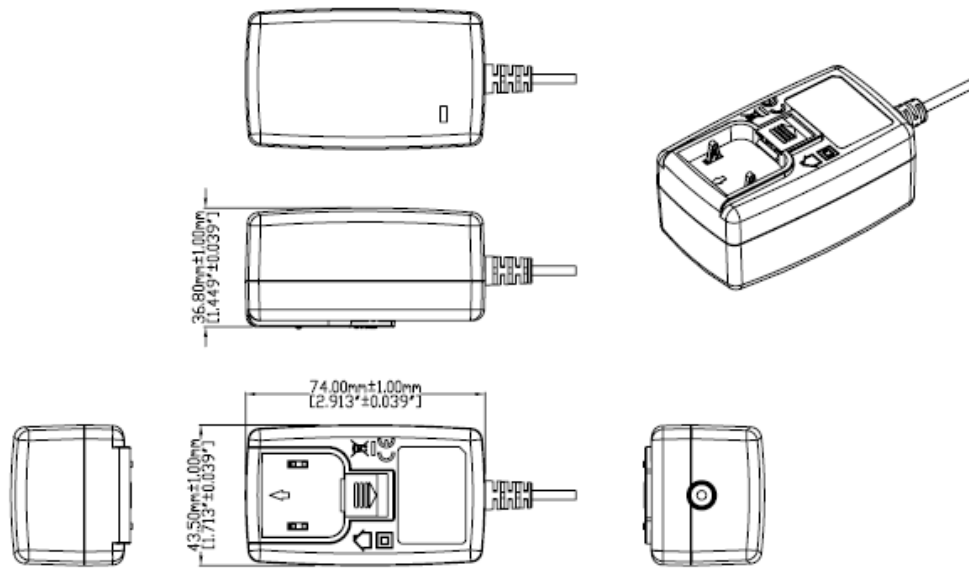
Type	Wall Plug-in
Technology	Regulated Switchmode AC-DC Power Supply AC Adaptor
Category	ITE / Medical Power Supply/Class 2/Household Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	0.6 A
Wattage (W)	6.0
Vout Range (V)	3.3-36
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
Ingress Protection	IP52 (Optional IP54-IP55)
Size (mm)	43.5*74.0*36.8

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ENCLOSURE



LED INDICATOR: Green Power ON indicator LED standard. May be ordered without LED as an option, for cost reduction.

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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM96060-0706-1.0	5 V	1.5	7.50	RFQ
GTM96060-0606-1.0	5 V	1.2	6.00	RFQ
GTM96060-0606-0.05	5.95 V	1	5.95	RFQ
GTM96060-0612-3.0	9 V	0.66	5.94	RFQ
GTM96060-0612-2.5	9.5 V	0.63	5.99	RFQ
GTM96060-0612	12 V	0.5	6.00	RFQ
GTM96060-0615-1.5	13.5 V	0.44	5.94	RFQ
GTM96060-0615	15 V	0.4	6.00	RFQ
GTM96060-0618	18 V	0.333	5.99	RFQ
GTM96060-0624-5.0	19 V	0.316	6.00	RFQ
GTM96060-0624-4.0	20 V	0.3	6.00	RFQ
GTM96060-0624	24 V	0.25	6.00	RFQ
GTM96060-0636-6.0	30 V	0.2	6.00	RFQ
GTM96060-0636	36 V	0.166	5.98	RFQ

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SPECIFICATIONS

A) ELECTRICAL SPECIFICATIONS:

01. Input Voltage: Specified 90-264 Vac, Nameplate rated: 100-240Vac
 - 90-264 Vac range @ 100% of rated load current
 - 85-264 Vac range @ 85% of rated load current
 - 110-370 VDC range @ 100% of rated load current
02. Input Frequency: Specified 47-63 Hz, Nameplate rated 50-60Hz
03. Output Regulation: +/- 5% measured at the output connector
04. Line Voltage Regulation: +/- 1% typical measured at full load
05. Green Power On Indicator LED
06. Output Ripple (Vp-p): 0.5% x Vnom or 50 mV pp whichever is greater, measured at 20 MHz bandwidth with 0.1 uf ceramic capacitor in parallel with a low impedance 47 uf electrolytic capacitor connected at the end of the output connector. (< 0.2% x Vnom or 25mVpp option available, for special low ripple applications.)
07. Turn-ON/OFF Overshoot: 5% maximum, 1 mS typical recovery time for 25% to 50% step load
08. Turn-ON Delay: 1 second maximum @ full load, 100Vac input
09. Hold-Up Time: 8 mS min @ 100Vac input voltage and full load
10. Inrush Current: 30A maximum cold start @ 230Vac input
11. Switching Frequency: 65 KHz typical
12. Efficiency: Compliant with Efficiency Level VI and 230 CoC Tier 2 standards, for 5V and > models
13. No Load Standby Power: <0.075 W @ 230Vac

B) PROTECTION

01. Input Protection: Input line fusing and 300Vac rated MOV
02. Output Over-Voltage: 110% to 130% of nominal output voltage

C) CURRENT LIMITING

01. Current Limiting for Standard Constant Voltage Models (non-CC type):
 - Short Circuit and Overload Protected, auto recovery
 - Output Current Limit: 125% to 250% of rated output
(upper end of current limit range is determined by normal output power rating, not derated output power level)
02. Current Limiting for Constant Current Models (CC type):
 - +/- 10% of specified nominal Output Current Rating
 - Regulated from Vout nominal to 0.25X Vout Nominal
 - Avg Output current below 0.25X Vout will be reduced, and unit will hiccup cycle

D) SAFETY

01. Dielectric Withstand Voltage: 4000Vac or 5656Vdc from input to output
02. Earth Leakage Current: N/A for Class II units, there is no PE Ground pin, so Earth Leakage current is not measured
03. Touch Current: < 60uA
04. Means of Protection: 2 x MOPP
05. Primary to Secondary Bridging Capacitor: Two 470pF, Y1 type capacitors in series
06. Compliant Standards: See listings at end of this drawing for specifics

E) EMC

EN 60601-1-2, 4th edition

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Emissions, per EN 55032, EN 61000-6-3, EN61000-6-4, 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, 1.5kV 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, Criteria

F) OTHER:

01. MTBF: 1,000,000 Hours @ 40°C ambient temperature, Full Load
02. Operating Temperature: -10°C to 50°C ambient temperature with 6W load,
See below derating table for output power capability at alternate temperature
03. Humidity: 0% to 95% relative humidity, non-condensing
04. Storage Temperature: -30°C to 80°C
05. Cooling: Convection
06. ROHS: Compliant with latest regulations, see approvals section below

G) ENCLOSURE

01. Housing: High impact plastic, 94V0 polycarbonate, non-vented
02. Size: 43.5 x 74.0 x 35.3 +/-1.0 mm
03. Markings: Label and/or Pad Printed and/or Molded in the case

H) SPECIAL OPTIONS

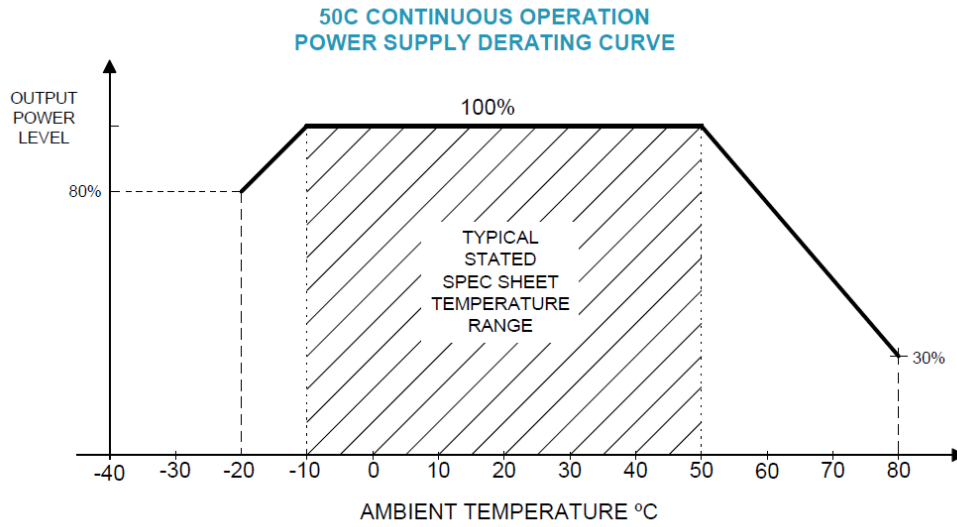
01. Cost reduction, removal of LED
02. Custom Cordsets, various cordage types, and connector types
03. Custom Markings
04. Reduced Leakage Current version, medical CF leakage current compliance
05. Tightened output voltage tolerance
06. Reduced output ripple level
07. Constant current battery charger characteristic
08. Reduced output power rating
09. High Rel PCB laminate with Plated through Holes for IPC610 Class 2 Compliance
10. Output voltage between 3.3V and 4.9V, but without EL6 and 230 CoC Tier 2
11. Special Housing Colors and Cordset Colors
12. Tamper proof, AC Wall Plug-in blade assembly. Requires a special tool to remove the AC Wall Plug-in blade assembly.

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DERATING CURVE



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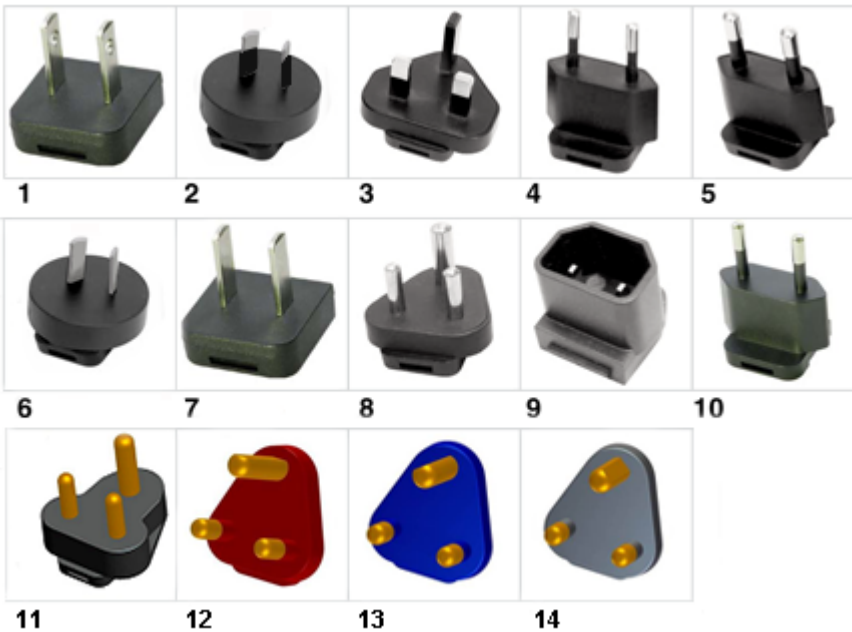
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INPUT CONFIGURATION

Description Blade Options for Q Series Wall Plug-in Power Supplies

 Data Sheet: <http://en.globtek.com/interchangeable-blades.php>

 Insertion Instructions: <http://www.globtek.com/pdf/Instructions-Interchangeable-Blades.pdf>

 Video: [Q-Blade Style Instruction Video](#)


INPUT CONNECTOR: Q-Socket (below are available blades configurations which are "not included" (unless stated above); can be purchased separately, package with power supply or as a separate "Q-KIT" if specified

01. United States / Canada / Japan NEMA 1-15P/IEC PLUG A[WORKS IN PLUG B] configuration: NA 2 blades, Class II; US/CA/JP P/N: Q-NA(R)
02. Australian AS 3112 configuration: SAA 2 blade/IEC TYPE I, Class II; AU P/N: Q-SAA(R)
03. UK BS 1363 configuration: UK 3 blade with dummy Ground/IEC TYPE G, Class II; GB P/N: Q-UK(R)
04. European CEE 7/16 configuration: Europlug 2 pins/IEC TYPE C [WORKS IN TYPE E&F], Class II; EU P/N: Q-EU(R)
05. Korean KS C8305 configuration: 2 pins/SIMILAR TO IEC TYPE C, Class II; KR P/N: Q-KR(R)
06. Argentina IRAM 2073 configuration: 2 blades/SIMILAR TO IEC TYPE I; AR P/N: Class II Q-AR(R)
07. China GB 2099 configuration: 2 blades/SIMILAR TO TYPE A, Class II; CN P/N:Q-CN(R)
08. India IS 1293 6A/BS546 configuration: 5A, 3 pins with Dummy Ground, Class II/IEC TYPE D; IN P/N: Q-IN(R)
09. IEC320/C18 Inlet, Class II; P/N: Q-C18(R)
10. Brazilian NBR6147 configuration: 2 pins, Class II;SIMILAR TO IEC TYPE C BR P/N: Q-BR(R)
11. South Africa SABS164-1, 3 round prongs, Class II + dummy ground, IEC TYPE M P/N: Q-SANS164-1-16A(R)
12. South Africa SABS164-4, 3 round prongs with a notched prong @ 0°, Class II + dummy ground, IEC TYPE M Red, P/N: Q-SANS164-4L-16A(R)
13. South Africa SABS164-4, 3 round prongs with a notched prong @ -53°, Class II + dummy ground, Blue, IEC TYPE M,

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P/N:
Q-SANS164-4C-16A(R)
14. South Africa SABS164-4, 3 round prongs with a notched prong @ +53°, Class II + dummy ground, Black,IEC TYPE M
P/N:
Q-SANS164-4R-16A(R)

Kits

01. Q-KIT: 1,2,3,4 above
02. Q-KIT-INTL: 2,3,4 above
03. Q-KIT-6: 1,2,3,4,5,6 above
04. Q-KIT-7: 1,2,3,4,5,6,7 above
05. Q-KIT-8: 1,2,3,4,5,6,7,8 above

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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	EU 230V CoC Tier 2 for 5V and > models, 278/2009, Mar 2014
No Logo Applicable	CB report IEC60601-1 2005 A1+C1+C2 2016-2-4 and or EN 60601-1:2006 3.1rd Edition 2xMOPP
No Logo	CB Report IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 (GTM96060-WVXX)
No Logo Applicable	CB for IEC 62368-1:2014 (Second Edition)
No Logo Applicable	CB to 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013
	CCC to GB4943.1-2011 GB9254-2008 GB17625.1-2012
	CE Certification CE Mark: tested to comply with EN 55032.2012+AC.2013 EN 61000-3-2.2014 EN 61000-3-3.2013 EN 60601-1-2.2015 EN 55024.2010
	CE Mark: tested to comply with EN61000-3-2, EN61000-3-3 and EN50082-1, including EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61001-1-2-2007 EMI: Complies with EN55011 CLASS B and FCC Part 15 B
	Information Technology Equipment Safety Part 1: General Requirements (UL 60950-1 Issued: 2007/03/27, Ed: 2 Rev: 2014/10/14) Information Technology Equipment Safety Part 1: General Requirements (CSA C22.2 No. 60950-1 Issued: 2007/03/27 Ed: 2 (R2012) Amd.
 Class 2 Power Unit	cETLus-Cert 4007497 UL1310 Recognized Component up to 36 volts

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	AAMI ES60601-1 Issued: 2012/08/20 Medical Electrical Equipment - Part 1: CAN/CSA-C22.2 No.60601-1:14, Third Edition Issued: 2014/03/01 - Medical Electrical Equipment - Part 1: IEC 60601-1-11 Issued: 2015/01/20 Ed. 2 Medical Elec. Equip.- Part 1-11:
	CHINA SJ/T 11364-2014, China RoHS Chart: http://en.globtek.com/globtek-rohs.php
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
	Certification # TC RU AR46.B.69004 Custom Union of Russia, Belarus and Kazakhstan
	Compliance of this power supply with FCC Part 15, Class B has been demonstrated with a standard output load. The FCC law stipulates that system-level testing is required to demonstrate compliance with the FCC emission limits with the actual system load.
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
IP42	Ingress Protection: ?IP42 to IEC60529:2001 Protection against granular foreign bodies - Protected against direct sprays up to 15o from the vertical Optional
	JAPAN TUV R-PSE, Cert. No. JD 50315169, to J60950-1(H26) , J55022(H22),[15V

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 GlobTek, Inc.	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/
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50315866, to J60950-1(H26) , J55022(H22),[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/
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50315866, to J60950-1(H26) , J55022(H22),[DC15V?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/
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50315866, to J60950-1(H26) , J55022(H22),[DC30V?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/
EFFICIENCY LEVEL 	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) (for 5V and > models)
LPS	Limited Power Source 60950
	Morocco SDoC declaration http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/
 N136 SAA-152514-EA	RCM certificate SAA-152514-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
 Intertek	S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 (http://www.intertek.com/marks/s/)
 Intertek IEC/EN60601-1	Semko S-Mark-Cert-EN60601-1 3.1rd Edition (http://www.intertek.com/marks/s/)

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 10276	Ukraine UKRSepro (Document: www.globtek.com/html/iso_certificates/GT_Ukraine.pdf
	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