

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

Model:GTM96183-WWPD-USB1C-Q

January 16, 2021

## GTM96183-WWPD-USB1C-Q

### Information

**Model Number**

GTM96183-WWPD-USB1C-Q

**Description**

GTM96183-WWPD-USB1C-Q, USB Adaptive Power Source ITE/Medical Power supply, Wall Plug-in, USB Adaptive Power Supply AC Adaptor, , Input Rating: 100-240V~, 50-60 Hz, Blade Options for Q Series Wall Plug-in Power Supplies, Output Rating: 36 Watts, Power rating with convection cooling (W) , 3.6-20V in 0.1V increments, Approvals: EAC; PSE; CAN ICES-3; RCM; China RoHS; Level VI; CB 60601-1; LPS 62368; RoHS; Ukraine; VCCI; WEEE; Double Insulation; CCC; FCC; cETLus 60601-1 3rd; 230V CoC Tier 2; CB 60950; CB 62368;

**Model Picture**

**Agency Documents**
**CE EC-Declaration**
[https://www.globtek.com/pdf/ec\\_declaration/a003a00000M3yqaEAB](https://www.globtek.com/pdf/ec_declaration/a003a00000M3yqaEAB)
**RoHS/RoHS2 Declaration**
[https://www.globtek.com/pdf/rohs\\_cert/a003a00000M3yqaEAB](https://www.globtek.com/pdf/rohs_cert/a003a00000M3yqaEAB)
**REACH Declaration**
[https://www.globtek.com/pdf/iso\\_certificates/REACH.pdf](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**

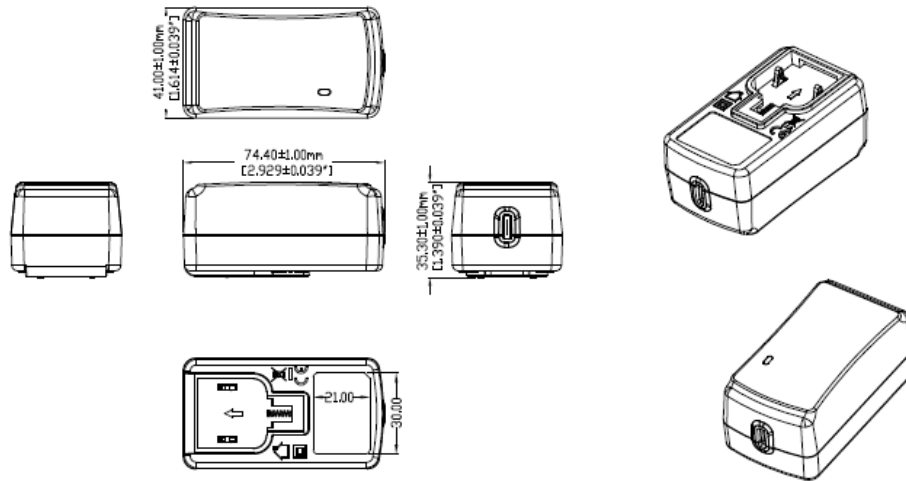
|                    |   |
|--------------------|---|
| Type               | Wall Plug-in  |
| Technology         | USB Adaptive Power Supply AC Adaptor                                |
| Category           | USB Adaptive Power Source ITE/Medical Power supply                  |
| Input Voltage      | 100-240V~, 50-60 Hz   |
| I/P Amps (A)       | 0.6A  |
| Wattage (W)        | 36.0  |
| Vout Range (V)     | 3.6-20  |
| Efficiency Level   | USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782 |
| Ingress Protection | Indoor Use  |
| Size (mm)          | 41.0 x 70.0 x 35.1  |

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# ENCLOSURE



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## RATING TABLE

| Model Number              | Voltage | Amps(A) | Watts(W) | RFQ                 |
|---------------------------|---------|---------|----------|---------------------|
| GTM96183-18PD-USB1C-Q     | V       |         |          | <a href="#">RFQ</a> |
| GTM96183-36PD-USB1C-Q     | V       |         |          | <a href="#">RFQ</a> |
| GTM96183-18PD-PPS-USB1C-Q | V       |         |          | <a href="#">RFQ</a> |
| GTM96183-36PD-PPS-USB1C-Q | V       |         |          | <a href="#">RFQ</a> |

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## SPECIFICATIONS

### USB Power Delivery Capabilities

|                                       |   |
|---------------------------------------|---|
| Protocol supported:                   | USB Power Delivery (PD) 2.0/3.0 + PPS   |
| Advertised Power Data Objects (PDOs): | Standard option: 5V, 5.8V, 9V, 12V, 15V, 15.1V, 20V<br>PPS option: 5V, 9V, 15V, 20V, PPS (5-11V), PPS (5-16V), PPS (5-20V)  |
| Note 1:                               | Custom fixed PDOs available upon request. PDO1 must be 5V. PDO2 through PDO7 may be set to any custom voltage from 5V to 20V, with a step size of 100mV.  |
| Note 2:                               | In critical applications, the use of a non-authorized USB PD power supply may pose a substantial risk. Power supply authorization may be implemented using USB PD Vendor Defined Messages (VDMs) to prevent system operation with non-authorized power sources. Please see our article <a href="#">Product Security and Risk Mitigation for USB Power Delivery (PD) Based Systems</a> for additional information. |

### Input

|                      |  |
|----------------------|--|
| Input Voltage:       | Specified: 90-264VAC, Nameplate: 100-240VAC<br>100% rated load current for 90-264VAC<br>85% rated load current for 85-264VAC<br>100% rated load current for 110-370VDC |
| Input Frequency:     | Specified: 47-63Hz, Nameplate: 50-60Hz   |
| No Load Input Power: | < 75mW @ 230VAC (EU CoC Tier 2 compliant)  |
| Inrush Current:      | < 30A @ 115VAC, < 60A @ 230VAC (cold start)  |
| Efficiency:          | DoE Efficiency Level VI and CoC Tier 2 compliant (tested according to DoE 10 CFR Part 430, Subpart B, Appendix Z)  |

### Output

|                     |  |
|---------------------|--|
| Turn-on Delay:      | < 1 second @ 115VAC and full load  |
| Output Regulation   | ± 4% max. (measured at the end of a 1m long output cord)   |
| Line Regulation:    | ± 0.5% typ. (measured at the end of a 1m long output cord)   |
| Ripple:             | 100mV max. (using a 47µF low-ESR electrolytic cap + 0.1µF ceramic cap, measured @ 20MHz BW, at the output connector) |
| Transient Response: | 5% max. deviation, 1ms max. recovery time (with 25% load step),  |
| Hold-up Time:       | 8ms min. (100VAC and full load)  |
| Power Indicator:    | Green LED  |

### Protections

|                   |   |
|-------------------|---|
| Input Protection: | MOV transient suppressor, input line fusing<br>Level 1: 110-130%, Auto-recovery, adaptive to selected PDO |
|-------------------|---|

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|                              |   |
|------------------------------|---|
| Over-Voltage Protection:     | Level 2: 24-28V, Latched off, cycle AC to reset   |
| Over-Current Protection:     | 110-130%, Auto-recovery, adaptive to selected PDO |
| Short-Circuit Protection:    | Auto-recovery                                     |
| Over-Temperature Protection: | Auto-recovery                                     |

## Environmental

|                        |   |
|------------------------|---|
| MTBF:                  | 1,500,000 hours @ 25°C ambient, full load (Telcordia SR-332, Issue 3) |
| Operating Temperature: | -10°C to 40°C (full load)   |
| Storage Temperature:   | -40°C to 80°C   |
| Humidity:              | 0% to 95% relative humidity, non-condensing                           |
| Altitude               | 5000m   |
| Cooling:               | Convection  |
| RoHS:                  | Complies with EU 2011/65/EU and China SJ/T 11363-2006                 |

## Safety

|                               |   |
|-------------------------------|---|
| Dielectric Withstand Voltage: | 4000VAC or 5656VDC from input to output<br>10mA, 1 minute   |
| Touch Current:                | NC: 80µA max.<br>SFC: 400µA max.  |
| Earth Leakage Current         | 300µA max. NC/SFC (N/A for 2-conductor input models)  |
| Means of Protection:          | 2 x MOPP  |
| Output Isolation Options:     | -Q suffix: Class II 2-conductor (interchangeable blades)<br>-T2 suffix: Class II 2-conductor<br>-T3 suffix: Class II, with functional earth (FE)<br>Class I, earth wire connected directly to output negative |
| Note 3:                       | Review output isolation options with our article: <a href="#">PSU Isolation and Identify</a>  |

## EMC

|   |   |
|---|---|
| Applicable Standards:                   | Medical: EN 60601-1-2 (4e)<br>Emissions: EN55032, EN61000-6-3, EN61000-6-4<br>Immunity: EN55024, EN61000-6-1 (4e), EN61000-6-2 (4e) |
| Conducted Emissions:                    | Class B, FCC Part 15, Class B (with resistive load)   |
| Radiated Emissions:                     | Class B, FCC Part 15, Class B (with resistive load)   |
| Harmonic Current Voltage Distortion:    | EN61000-3-2, Class A  |
| Voltage Fluctuations/Flicker:           | EN61000-3-3   |
| Electrostatic Discharge (ESD) Immunity: | EN61000-4-2, 10KV contact discharge, 18KV air discharge, Criterion A  |
| Radiated RF Immunity:                   | EN61000-4-3, 10V/m @ 80-1000MHz, 3V/m @ 1-2.7GHz, 80% 1KHz AM, Criterion A  |
| EFT/Burst Immunity:                     | EN61000-4-4, 4KV/100KHz., Criterion A   |
| Line Surge Immunity:                    | EN61000-4-5, 2KV differential, 4KV common-mode, Criterion A   |
| Conducted RF Immunity:                  | EN61000-4-6, 10VRMS, 80% 1KHz AM, Criterion A   |

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|                       |   |
|-----------------------|---|
| Voltage Dip Immunity: | EN61000-4-11, Criterion B/C   |
| Note 4:               | When a Class II power supply is connected to an earth-referenced system, conducted/radiated EMI levels tend to increase since the distant earth connection creates a long return path for common-mode EMI currents. This model includes an output common-mode choke to help alleviate system-level EMI issues. This choke can be removed for cost-sensitive applications. |

## Enclosure

|           |   |
|-----------|---|
| Housing:  | High impact plastic, 94V0 polycarbonate, non-vented |
| Markings: | Adhesive backed label or laser engraving            |

## Security

|                     |   |
|---------------------|---|
| USB Power Delivery: | Two non-standard voltage profiles are included: 5.8V and 15.1V. System designers may use these non-standard profiles to reduce the likelihood of system operation with non-GlobTek power supplies. 12.0V is also not standard, but is often included in other power supplies. |
|                     | The power supply will respond to a USB PD "Discover Identity" VDM with 0x4754 in the "ProductID" field. USB PD host systems may check this value before initiating/allowing power negotiation.  |
| Note 5:             | These measures do not guarantee a secure implementation, and are only suggested as a method of risk mitigation.   |
| Note 6:             | Please see our article <a href="#">Product Security and Risk Mitigation for USB Power Delivery (PD) Based Systems</a> for additional information.   |

## Special Options

Non-standard - Contact GlobTek

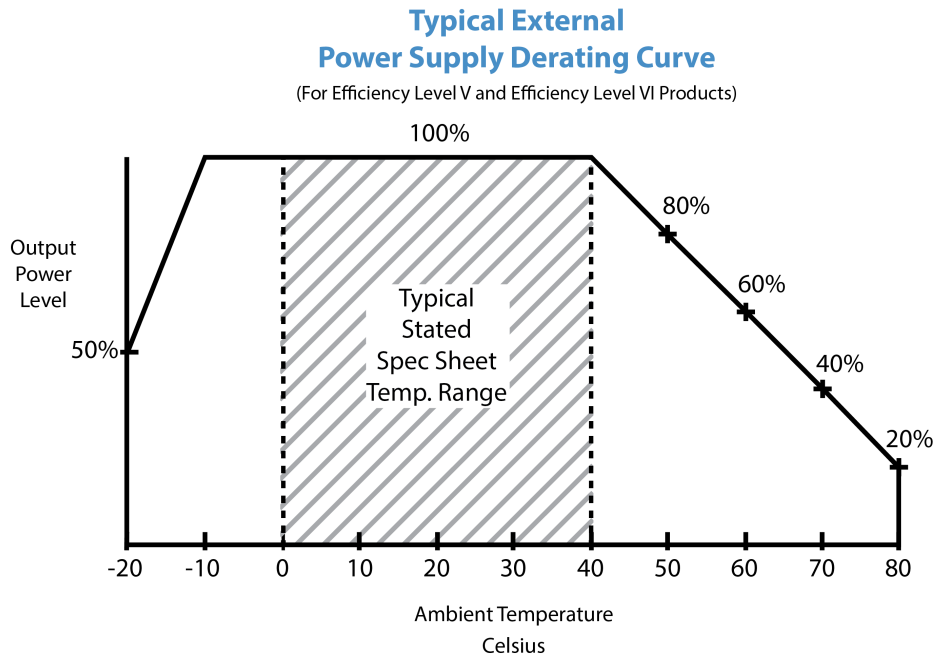
1. Custom housing and output cord colors
2. Custom fixed output cord length, for applicable models (1m, 2m, 3m lengths)
3. Custom markings and marking methods
4. Custom USB PD PDOs: Output voltages selectable between 5V and 20V, in 100mV increments

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## DERATING CURVE





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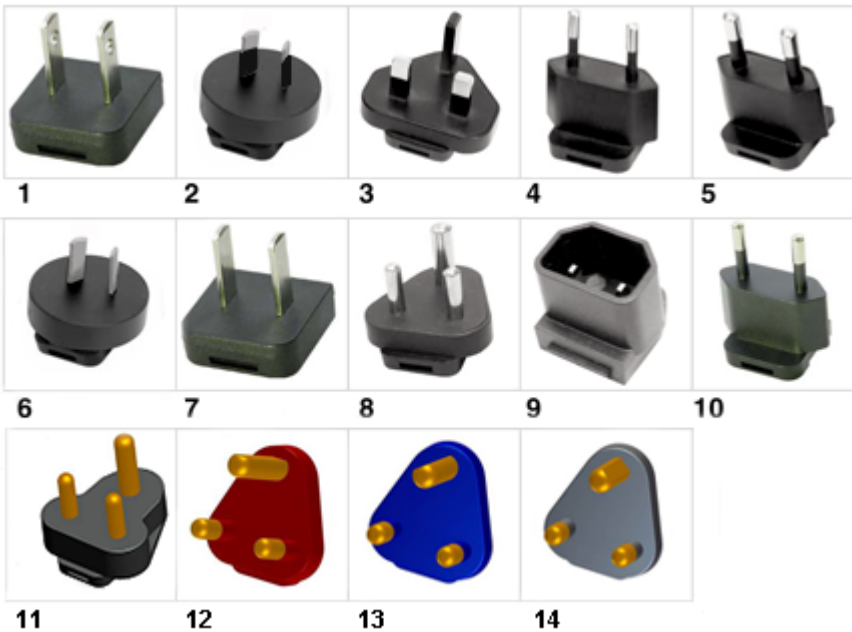
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**INPUT CONFIGURATION**

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 Type 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. IEC60320/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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<http://en.globtek.com/datasheet/id/a003a00000M3yqa>

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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, 278/2009, Mar 2014  |
| No Logo Applicable  | IEC 60601-1:2005 (Third Edition) + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1 (2012 reprint) (Ed 3.1) for GTM96183 only  |
| No Logo Applicable  | CB for IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013  |
| No Logo Applicable  | CB for IEC 62368-1:2014 (Second Edition)  |
|   | CCC to GB4943. 1-2011; GB9254-2008; GB17625. 1-2012 with Tropical and Altitude up to 5000 m approval.   |
|  | AAMI ES60601-1 Issued: 2012/08/20 Med Electrical Equipment - Part 1: CAN/CSA-C22.2 No.60601-1:14, 3rd Edition Issued: 2014/03/01 - Med Electrical Equipment - Part 1: IEC 60601-1-11 Issued: 2015/01/20 Ed. 2 Medical Elec. Equip.- Part 1-11:<br>GTM96183 only |
|  | CHINA SJ/T 11364-2014, China RoHS Chart: <a href="http://en.globtek.com/globtek-rohs.php">http://en.globtek.com/globtek-rohs.php</a>  |
|  |   |
|  | Declaration ДС № EAЭС N RU Д-US.KA01.B.10453_19 Custom Union of Russia, Belarus and Kazakhstan<br><a href="http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration">http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration</a>     |
|  | 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   |

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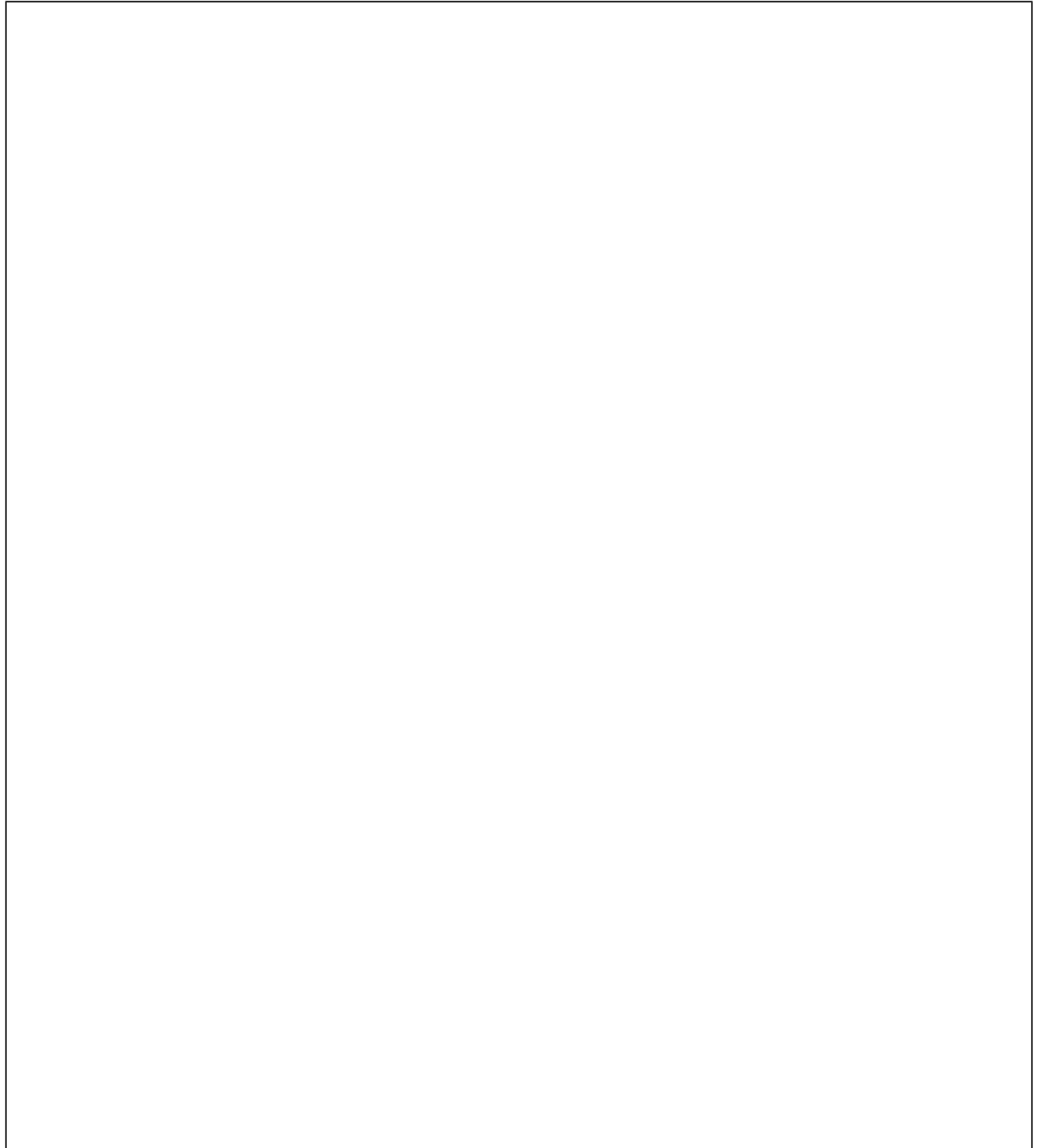
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|  |   |
|--|---|
|  | demonstrate compliance with the ICES-3 emission limits with the actual system load.   |
|                   | Indoor Use Only - Mark is on the label or Molded in the case  |
| <br>GlobTek, Inc. | JAPAN TUV R-PSE, Cert. No. JD 50471561.pdf, to J62368-1(H30) , J55032(H29), J3000(H25) ,[15V?30V]. Please reference the following website for PSE regulations:<br><a href="http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/">http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/</a> |
| 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)  |
| LPS  | Limited Power Source 62368  |
|                  | Morocco SDoC declaration<br><a href="http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/">http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/</a>   |
|                 | Australia and New Zealand Regulatory Compliance, Mark (<br><a href="http://rcm.standards.org.au/rcmfaq/rcmfaq.htm">http://rcm.standards.org.au/rcmfaq/rcmfaq.htm</a>  |
| RoHS   | Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3) <a href="http://www.ce-mark.com/Rohs%20final.pdf">http://www.ce-mark.com/Rohs%20final.pdf</a>  |
|                 | UKCA Certification  |
| <br>10276       | Ukraine UKRSepr (Document:<br><a href="http://www.globtek.com/html/iso_certificates/GT_Ukraine.pdf">www.globtek.com/html/iso_certificates/GT_Ukraine.pdf</a>  |
|                 | Japan: Voluntary Control Council for Interference (VCCI)  |
|                 | WEEE: Complies with EU 2012/19/EU (<br><a href="http://ec.europa.eu/environment/waste/weee/index_en.htm">http://ec.europa.eu/environment/waste/weee/index_en.htm</a> )<br>Mark is on the label or Molded in the case  |

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