



ISO 9001:2000  
REGISTERED

## GTM21096 SERIES-19W



### 0-19 Watts, Switchmode, Single Output, Family (1.7"x3.3") Open Frame & PCB Mount, Universal Input, Medical, Class I & II

Part Number Ordering System (See Page 224)  
Output Plug/Cord Options (See Page 189)



INDOOR USE ONLY



ALL MODELS UNDER THIS SERIES ARE CERTIFIED TO BE IN COMPLIANCE WITH ALL THE APPLICABLE REQUIREMENTS OF UL60601-1 2ND EDITION, CSA 22.2 NO.601.1-M90 AND EN 60601-1:A2. GLOBTEK'S MEDICAL POWER SUPPLIES ARE DESIGNED TO BE USED IN APPLICATIONS THAT DO NOT CONNECT THE OUTPUT TO PATIENT CIRCUITS DIRECTLY. THE POWER SUPPLY CAN BE USED IN SYSTEM WITH PATIENT APPLIED PARTS ONLY WHEN APPROPRIATE SYSTEM LEVEL ISOLATION IS PROVIDED BY THE END SYSTEM.

#### ELECTRICAL SPECIFICATIONS:

**INPUT VOLTAGE:**  
90 VAC TO 264 VAC

**INPUT CURRENT:**  
< 0.5 A RMS AT 90 VAC INPUT

**INPUT FREQUENCY:**  
47 HZ - 63 HZ

**OUTPUT CURRENT:**  
NO LOAD TO FULL LOAD, NO MINIMUM LOAD REQUIRED

**OUTPUT POWER (RATED):**  
19 WATTS MAX

**OUTPUT RIPPLE (PEAK TO PEAK):**  
1% OF OUTPUT VOLTAGE, PEAK TO PEAK, TYPICAL

**OUTPUT REGULATION (LINE/LOAD):**  
± 5% MEASURED AT THE OUTPUT CONNECTOR

**LINE REGULATION:**  
+/- 1% TYPICAL MEASURED AT FULL LOAD

**REMOTE SENSING (OPTION):**  
PROVIDES REGULATION WITHIN + 1% OF NOMINAL VOLTAGE OF MAIN OUTPUT AT LOAD LEVEL. FOR 3.3V SINGLE OUTPUT, REMOTE IS REQUIRED.

**TURN ON/ TURN OFF OVERTHOOT:**  
5% MAXIMUM, 1mS TYPICAL RECOVERY TIME FOR 25% STEP LOAD

**TURN-ON DELAY:**  
1 SEC MAX

**HOLD-UP TIME:**  
10mS TYPICAL AT NOMINAL INPUT VOLTAGE AND FULL LOAD

**INRUSH CURRENT:**  
30A TYPICAL AT 115Vac INPUT AND 40A TYPICAL AT 230Vac INPUT

**EFFICIENCY:**  
75 % TYPICAL

**SWITCHING FREQUENCY:**  
100KHZ TYPICAL, VARIES WITH LINE AND LOAD

**OVER-VOLTAGE PROTECTION:**  
OVER-VOLTAGE: VOLTAGE LIMITED TO LESS THAN 130%, CROWBAR METHOD

**OVER-CURRENT / SHORT CIRCUIT:**  
CONSTANT CURRENT METHOD MOMENTARY SHORT CIRCUIT PROTECTED, OUTPUT WILL AUTORECOVER UPON REMOVAL OF SHORT.

**OTHER PROTECTION:**  
INPUT FUSING; LINE FUSING

**SAFETY APPROVALS:**  
MEDICAL MODELS: UR TO UL 2601, C-UR TO 22.2 # 601, TUV TO EN 60601, CE CLASS I & II

#### DIELECTRIC WITHSTAND VOLTAGE:

4000VAC PRIMARY-SECONDARY; 1500 VAC PRIMARY- GROUND

#### LEAKAGE CURRENT:

< 0.1 mA

#### LINE SURGE:

EN 61000-4-5 LEVEL 4

#### EMI:

COMPLIES WITH EN55022 CLASS B AND FCC PART 15 CLASS B WHEN TESTED WITH RESISTIVE LOAD, BOTH CONDUCTED AND RADIATED EMI

#### CE MARK:

TESTED TO COMPLY WITH EN61000-3-2 EN61000-3-3 AND EN50082-1 INCLUDING EN61000-4-2 (SYSTEM LEVEL), EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11 LEVEL 4..

#### MTBF:

GREATER THAN 200,000 HOURS AT 25° C AMBIENT TEMPERATURE NOMINAL LINE AND FULL LOAD PER MIL-217 STANDARD

#### OPERATING TEMPERATURE:

0° C TO 40° C AMBIENT TEMPERATURE

#### STORAGE TEMPERATURE:

-40° C TO 80° C

#### HUMIDITY:

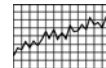
0% TO 90% RELATIVE HUMIDITY

#### MODEL NUMBER CODE:

GTM2: INTERNAL CODE;  
M: MEDICAL MODEL, UL 2601-1  
1096: FAMILY DESIGNATION, 10-20W OPEN FRAME  
1003 TO 1948: OUTPUT POWER / OUTPUT VOLTAGE  
F: OPEN FRAME OR B: PCB MOUNTED  
-: UNITS ENDING WITH "W" ARE CLASS II UNITS, UNITS ENDING WITHOUT "W" ARE CLASS I UNITS.

#### NOTES:

- EACH OUTPUT CURRENT MAY VARY WITHIN IT'S DESIGNATION RANGE, AS LONG AS OUTPUT POWER IS NOT EXCEEDED.
- SINGLE OUTPUT ARE AVAILABLE FROM 3.3V-48V IN 0.1V INCREMENTS
- (X.X) OPTIONAL FOR SPECIFYING OUTPUT VOLTAGE DEVIATION FROM STANDARD MODEL: SUBTRACTING X.X VOLTS FROM STANDARD OUTPUT VOLTAGE.



SEE APPENDIX "C" FOR ELECTRICAL PERFORMANCE CURVES

\*FROM 24.1 V TO 48 V, AVAILABLE ONLY WITH TUV AND CB APPROVALS.

#### OUTPUT VOLTAGE / CURRENT: CLASS I MODELS, PROTECTIVE GROUND

MODEL NUMBER	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	RATED OUTPUT POWER (W)
GTM21096-1003-F(B)	+3.3	0 - 2.6	0-9
GTM21096-1505-1.0-F(B)	+4.0	0 - 2.6	0-10
GTM21096-1508-X.X-F(B)	+5.0	0 - 2.6	0-13
GTM21096-1506-X.X-F(B)	+6.0	0 - 2.5	0-15
GTM21096-1509-2.0-F(B)	+7.0	0 - 2.0	0-15
GTM21096-1509-1.0-F(B)	+8.0	0 - 1.8	0-15

SPECIFICATIONS MAY CHANGE WITHOUT PRIOR NOTICE. CONSULT GLOBTEK CUSTOMER SERVICE FOR LATEST SPECIFICATIONS.



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**OUTPUT VOLTAGE / CURRENT:  
CLASS I MODELS, PROTECTIVE GROUND**

MODEL NUMBER	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (A)	RATED OUTPUT POWER (W)
GTM21096-1509-X.X-F(B)	+9.0	0 - 1.7	0-15
GTM21096-1512-2.0-X.X-F(B)	+10.0	0 - 1.5	0-15
GTM21096-1512-1.0-X.X-F(B)	+11.0	0 - 1.3	0-15
GTM21096-1512-X.X-F(B)	+12.0	0 - 1.25	0-15
GTM21096-1815-2.0-X.X-F(B)	+13.0	0 - 1.4	0-18
GTM21096-1815-1.2-X.X-F(B)	+13.8	0 - 1.3	0-18
GTM21096-1815-1.0-X.X-F(B)	+14.0	0 - 1.2	0-18
GTM21096-1815-X.X-F(B)	+15.0	0 - 1.2	0-18
GTM21096-1818-2.0-X.X-F(B)	+16.0	0 - 1.2	0-18
GTM21096-1818-1.0-X.X-F(B)	+17.0	0 - 1.0	0-18
GTM21096-1818-X.X-F(B)	+18.0	0 - 1.0	0-18
GTM21096-1824-5.0-X.X-F(B)	+19.0	0 - 1.15	0-15
GTM21096-1824-4.0-X.X-F(B)	+20.0	0 - 1.09	0-15
GTM21096-1824-X.X-F(B)	+24.0	0 - 1.07	0-15
GTM21089-1948-20.4-X.X-F(B) (C-TUV-US ONLY)	+27.6	0 - 0.65	0-18
GTM21096-1940-18.0-X.X-F(B) (C-TUV-US ONLY)	+30.0	0 - 0.6	0-18
GTM21096-1948-12.0-X.X-F(B) (C-TUV-US ONLY)	+36.0	0 - 0.5	0-19
GTM21096-1948-X.X-F(B) (C-TUV-US ONLY)	+48.0	0 - 0.4	0-19

**OUTPUT VOLTAGE / CURRENT:  
CLASS II MODELS, DOUBLE INSULATED**

GTM21096-1003-X.X-F(B)W	+3.3	0 - 2.6	0-9
GTM21096-1509-1.0-X.X-F(B)W	+4.0	0 - 2.6	0-9
GTM21096-1509-X.X-F(B)W	+5.0	0 - 2.6	0-13
GTM21096-1506-X.X-F(B)W	+6.0	0 - 2.5	0-15
GTM21096-1509-2.0-X.X-F(B)W	+7.0	0 - 2.0	0-15
GTM21096-1509-1.0-X.X-F(B)W	+8.0	0 - 1.8	0-15
GTM21096-1509-X.X-F(B)W	+9.0	0 - 1.7	0-15
GTM21089-1512-2.0-X.X-F(B)W	+10.0	0 - 1.5	0-15
GTM21089-1512-1.0-X.X-F(B)W	+11.0	0 - 1.3	0-15
GTM21096-1512-X.X-X.X-F(B)W	+12.0	0 - 1.25	0-15
GTM21096-1815-2.0-X.X-F(B)W	+13.0	0 - 1.15	0-15
GTM21096-1815-1.2-X.X-F(B)W	+13.8	0 - 1.09	0-15
GTM21096-1815-1.0-X.X-F(B)W	+14.0	0 - 1.07	0-15
GTM21096-1815-X.X-F(B)W	+15.0	0 - 1.2	0-18
GTM21096-1818-2.0-X.X-F(B)W	+16.0	0 - 1.2	0-18
GTM21096-1818-1.0-X.X-F(B)W	+17.0	0 - 1.0	0-18
GTM21096-1818-X.X-F(B)W	+18.0	0 - 1.0	0-18
GTM21096-1824-5.0-X.X-F(B)W	+19.0	0 - 0.95	0-18
GTM21096-1824-4.0-X.X-F(B)W	+20.0	0 - 0.90	0-18
GTM21096-1824-X.X-F(B)W	+24.0	0 - 1.0	0-18
GTM21096-1948-20.4-X.X-F(B)W (C-TUV-US ONLY)	+27.6	0 - 0.65	0-18
GTM21096-1940-18.0-X.X-F(B)W (C-TUV-US ONLY)	+30.0	0 - 0.6	0-18
GTM21096-1948-12.0-X.X-F(B)W (C-TUV-US ONLY)	+36.0	0 - 0.5	0-19
GTM21096-1948-X.X-F(B)W (C-TUV-US ONLY)	+48.0	0 - 0.4	0-19

