

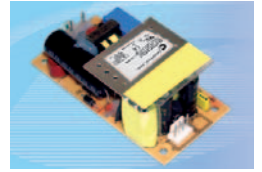


ISO 9001:2000
REGISTERED

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 EN610003-3 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 50,000 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

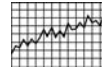
1003 TO 1948: OUTPUT POWER / OUTPUT VOLTAGE

F: OPEN FRAME OR B: PCB MOUNTED

-: UNITS ENDING WITH "W" ARE CLASS II UNITS, UNITS ENDING WITHOUT "W" ARE CLASS I UNITS.

NOTES:

1. EACH OUTPUT CURRENT MAY VARY WITHIN IT'S DESIGNATION RANGE, AS LONG AS OUTPUT POWER IS NOT EXCEEDED.
2. SINGLE OUTPUT ARE AVAILABLE FROM 3.3V-48V IN 0.1V INCREMENTS
3. (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.

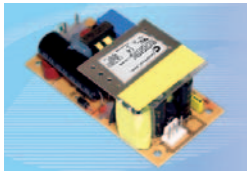
OUTPUT VOLTAGE / CURRENT: CLASS I MODELS, PROTECTIVE GROUND

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



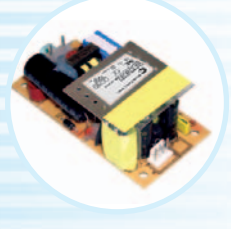
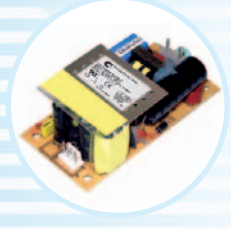
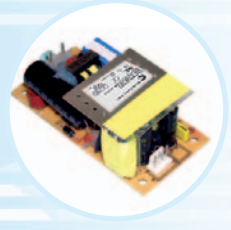
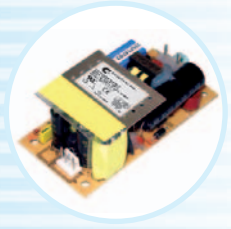
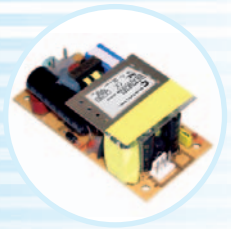
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**OUTPUT VOLTAGE / CURRENT:
CLASS I MODELS, PROTECTIVE GROUND**

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
GTM21096-1948-12.0X.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

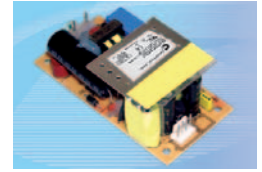




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Part Number Ordering System (See Page 224)
Output Plug/Cord Options (See Page 189)



MECHANICAL CONFIGURATION

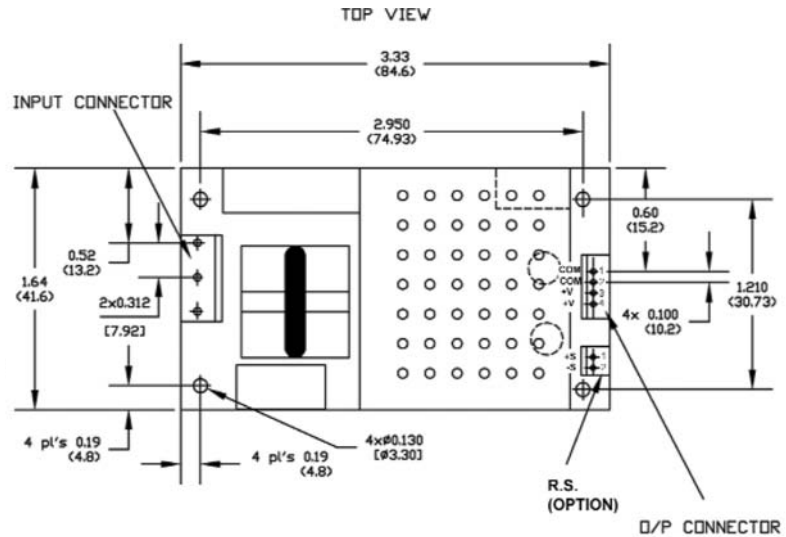
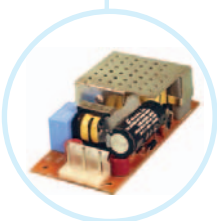
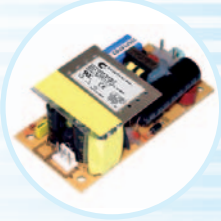
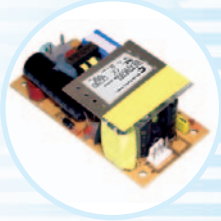
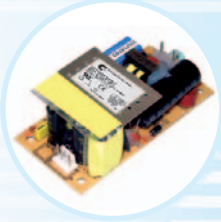
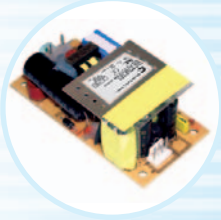
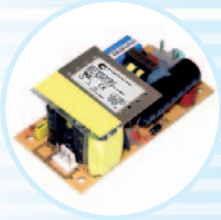
OPEN FRAME SWITCHING POWER SUPPLY, WITH MOUNTING HOLES, POSITIONED AS SHOW BELOW.
OPTION: PCB MOUNT, WITH IN / OUT CONNECTORS HEADERS PINS ON PCB SOLDER SIDE.

OUTPUT CONNECTOR:

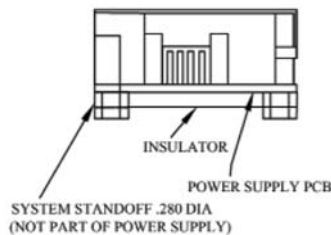
OPEN FRAME: 4 PIN STRAIGHT SQUARE PIN FRICTION LOCK HEADER, MOLEX: 22-28-0040 UL 94V-0 RATED NYLON HOUSING; .100 (2.54) BETWEEN CONDUCTORS, .025(0.64) SQUARE PINS, TIN PLATED, HEADER MATCH WITH MOLEX # 2695 CONNECTORS OR EQUIVALENT.

PCB MOUNT: 4 PINS STRAIGHT SQUARE NON-LOCKING HEADER WITH .100(2.54) BETWEEN CONDUCTORS, .025(0.64) SQUARE PINS, TIN MATED UL 94V-0 RATED NYLON HOUSING, MOLEX 22-03-2041, SYSTEM BOARD SOLDERED.

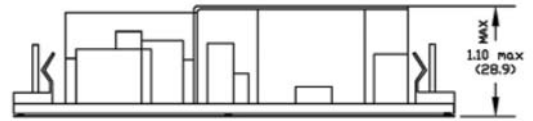
REMOTE SENSE (OPTION): 2 PINS STRAIGHT HEADER WITH LOCKING RAMP, WITH UL 94V-0 RATED NYLON BASE, .100(2.54) PITCH BETWEEN CONDUCTORS, .025 (0.64) SQUARE PINS, TIN PLATED MOLEX: 22- 28-0020, HEADER MATES WITH MOLEX # 2695 CONNECTOR OR EQUIVALENT.



FRONT VIEW



SIDE VIEW



CLASS I OR II INPUT CONFIGURATION:

OPEN FRAME STRAIGHT SQUARE PIN LOCKING HEADERS, WITH .312(7.92) BETWEEN CONDUCTORS, .045 (1.14) SQUARE PINS, TIN PLATED UL 94V-0 RATED NYLON HOUSING, MOLEX: 09-65-2038 (3 CIRCUITS, WITH 1 PIN REMOVED FOR CLASS II). HEADER MATES WITH MOLEX NO. 2139 CONNECTOR OR EQUIVALENTS.

PCB MOUNT:

STRAIGHT SQUARE PIN NON-LOCKING HEADER, WITH .312 (7.92) BETWEEN CONDUCTORS, .045(1.14) SQUARE PINS, TIN PLATED UL 94V-0 RATED NYLON HOUSING, MOLEX: 09-67-4031 (3 CIRCUITS, WITH 1 PIN REMOVED OR CLASS II), SYSTEM BOARD SOLDERED.