



ISO 9001:2000  
REGISTERED



**0-65 Watts, 3"X5" Open Frame, Universal Input,  
Dual and Triple Output Family, ITE**

Part Number Ordering System (See Page ???)  
Output Plug/Cord Options (See Page ???)  
Medical Versions (See Page ???)



**ELECTRICAL SPECIFICATIONS:**

**INPUT VOLTAGE:**  
UNIVERSAL INPUT FROM 100VAC TO 240VAC

**INPUT CURRENT:**  
1.5A@65W MAXIMUM AT 100VAC FULL LOAD

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

**OUTPUT CURRENT:**  
NO MINIMUM LOAD REQUIRED

**OUTPUT POWER (RATED):**  
65 WATTS MAX FREE AIR CONVECTION

**OUTPUT RIPPLE (PEAK TO PEAK):**  
LESS THAN 1% OF OUTPUT VOLTAGE

**OUTPUT REGULATION (LINE/LOAD):**  
+/-2% MEASURED AT THE OUTPUT CONNECTOR END OF THE PSU

**LINE REGULATION:**  
+ / - 0.5% OF NOMINAL VOLTAGE MEASURED AT O/P CONNECTOR\*

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

**TURN-ON DELAY:**  
3 SEC TYPICAL

**HOLD-UP TIME:**  
12mS MINIMUM AT 65W AT 120VAC INPUT

**INRUSH CURRENT:**  
20A MAXIMUM AT 120VAC AND 40A MAXIMUM AT 230VAC

**EFFICIENCY:**  
75% TYPICAL AT NOMINAL INPUT AND FULL LOAD\*

**SWITCHING FREQUENCY:**  
100 KHZ TYPICAL

**OVER-VOLTAGE PROTECTION:**  
OUTPUT VOLTAGE LIMITED BY CROWBAR METHOD, HICCUP MODE

**OVER-CURRENT / SHORT CIRCUIT:**  
HICCUP MODE, UNIT WILL RECOVER ONCE FAULT IS REMOVED

**OTHER PROTECTION:**  
INPUT LINE FUSING

**SAFETY APPROVALS:**  
EN60950, UL/CSA60950 3ED., EN60601, UL60601 A1/A2, CB, DEMKO, CE TO EN61000-3-2, EN610003-3, EN61000-4-2, EN61000-4-3, EN61000-4-4 EN61000-4-5, EN61000-4-6, EN61000-4-11, EMI TO EN55011 MEDICAL AND EN55022 ITE CLASS B, TESTED WITH RESISTIVE LOAD

**OUTPUT VOLTAGE / CURRENT / POWER:**

MODEL NUMBER	DUAL OUTPUT SECTION (PRELIMINARY)	OUTPUT VOLTAGE (VDC)	65W OUTPUT CURRENT (A) FREE AIR CONVECTION	RATED OUTPUT POWER (W)
GT-2066(P)330500-XX	F(W) OR EXXX(W) OR HXXX(W)	+3.3/+5.0	10.0/1.4	40
GT-2066(P)051200-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+12.0	10.0/1.25	65
GT-2066(P)05N1200-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/-12.0	10.0/1.25	65
GT-2066(P)051500-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+15.0	10.0/1.0	65
GT-2066(P)05N1500-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/-15.0	10.0/1.0	65
GT-2066(P)052400-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+24.0	10.0/0.62	65
GT-2066(P)24N0500-XX	F(W) OR EXXX(W) OR HXXX(W)	+24.0/-5.0	2.29/2.0	65
GT-2066(P)05N0500-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/-5.0	11.0/2.0	65
GT-2066(P)12N1200-XX	F(W) OR EXXX(W) OR HXXX(W)	+12.0/-12.0	4.41/1.0	65
GT-2066(P)15N1500-XX	F(W) OR EXXX(W) OR HXXX(W)	+15.0/-15.0	3.33/1.0	65
GT-2066(P)18N1800-XX	F(W) OR EXXX(W) OR HXXX(W)	+18.0/-18.0	2.61/1.0	65
GT-2066(P)24N2400-XX	F(W) OR EXXX(W) OR HXXX(W)	+24.0/-24.0	2.20/0.50	65



**DIELECTRIC WITHSTAND VOLTAGE:**  
4242VDC (3000VAC) FROM PRIMARY TO SECONDARY  
2121VDC (1500VAC) SECONDARY TO GROUND

**LEAKAGE CURRENT:**  
LESS THAN 300uA AT 240VAC

**LINE SURGE:**  
EN 61000-4-5 LEVEL 2

**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, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11.

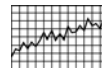
**MTBF (BELCORE METHOD I, CASE 1):**  
1.1 MILLION HRS, 40C, GROUND BENIGN

**OPERATING TEMPERATURE:**  
-20°C TO 50°C AMBIENT TEMPERATURE

**STORAGE TEMPERATURE:**  
-40°C TO 80°C

**HUMIDITY:**  
OPERATING, NON-CONDENSING; 5% TO 90% RH

- NOTES:**
- EACH OUTPUT CURRENT MAY VARY WITHIN ITS DESIGNATED RANGE, AS LONG AS OUTPUT POWER IS NOT EXCEEDED.
  - SINGLE OUTPUT UNITS ARE AVAILABLE FROM 3.3V UP TO 48V IN 0.1V INCREMENTS.
  - (X.X) OPTIONAL FOR SPECIFYING OUTPUT VOLTAGE DEVIATION FROM STANDARD MODEL. SUBTRACTING X.X VOLTS FROM STANDARD OUTPUT VOLTAGE.
  - TYPICAL EFFICIENCY FOR 7.5V AND BELOW IS 70%



SEE APPENDIX "G" FOR ELECTRICAL PERFORMANCE CURVES

- OPTIONS:**
- PASSIVE PFC VERSION
  - CLASS II VERSION
  - EXTENDED PCB WITH CONFIGURABLE ENCLOSURE.
  - OPEN FRAME WITH CONFIGURABLE INPUT AND OUTPUT WIRING HARNESS.
  - L-BRACKET WITH PERFORATED COVER
  - REMOTE SENSING

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OUTPUT VOLTAGE / CURRENT:

MODEL NUMBER		OUTPUT VOLTAGE (VDC)	65W OUTPUT CURRENT (A) FREE AIR CONVECTION	RATED OUTPUT POWER (W)
<b>TRIPLE OUTPUT SECTION</b>			<b>PRELIMINARY</b>	
GT-2066(P)330512-XX	F(W) OR EXXX(W) OR HXXX(W)	+3.3/+5.0/+12.0	5.0/3.0/1.0	43.5
GT-2066(P)0512N12-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+12.0-12.0	5.0/2.3/1.0	65
GT-2066(P)0512N05-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+12.0/-5.0	7.0/2.0/1.2	65
GT-2066(P)051215-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+12.0/+15.0	5.0/2.0/1.0	65
GT-2066(P)0515N15-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+15.0/-15.0	5.0/2.0/0.67	65
GT-2066(P)051224-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+12.0/+24.0	5.8/2.0/0.50	65
GT-2066(P)0524N12-XX	F(W) OR EXXX(W) OR HXXX(W)	+5.0/+24.0/-12.0	5.0/1.0/1.33	65

MODEL NUMBER DESCRIPTION

GT(M)2065(P)333.3-X.X TO 6548-X.X

GT: GLOBTEK SERIES

M: MEDICAL GRADE; - (DASH) FOR ITE GRADE

2065: 65W FAMILY DESIGNATOR

P: PASSIVE PFC VERSION; NO "P" FOR NON-PFC VERSION

333.3 TO 6548 = 33W @ 3.3V UP TO 65W @ 48V OUTPUT POWER

XX: USE TO SPECIFY OUTPUT VOLTAGE DEVIATION FROM STANDARD MODEL BY SUBTRACTING X.X VOLTS FROM STANDARD OUTPUT VOLTAGE

DUAL AND TRIPLE OUTPUT (GT(M)2066): XXYYZZ DESIGNATES THE OUTPUT VOLTAGE COMBINATION.

F(W)

F: OPEN FRAME VERSION

W: CLASS II UNITS (NO "W" MEANS CLASS I)

(E)XXX(W)A

E: EXTENDED PCB (3X6); NO "E" MEANS STANDARD SIZE BOARD (3X5)

XXX: DENOTES PERFORATED ENCLOSURE AND BASE PLATE SIZE CODE WHERE XXX CAN BE FROM 000 TO 999 (MAXIMUM PERFORATED ENCLOSURE AND BASE PLATE SIZE IS 50" X 30")

W: CLASS II UNITS (NO "W" MEANS CLASS I)

HXXX(W)A

H: OPEN FRAME WITH CONFIGURABLE INPUT AND OUTPUT WIRE HARNESS USING UL1007/UL1015 AWG18 WIRES

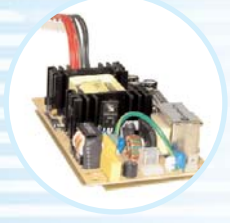
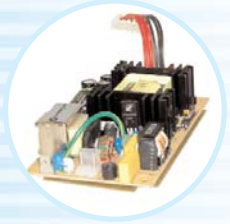
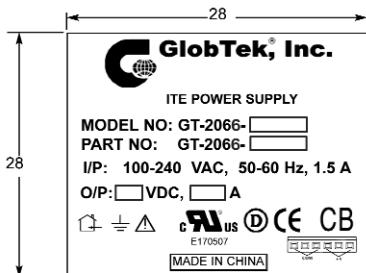
XXX: DENOTES INPUT AND OUTPUT WIRE HARNESS LENGTH CODE WHERE XXX CAN BE FROM 000 TO 999

(MAXIMUM WIRE HARNESS LENGTH FOR INPUT CONNECTOR IS 100mm AND 200mm FOR OUTPUT CONNECTOR)

W: CLASS II UNITS (NO "W" MEANS CLASS I)

NOTES:

- 1) THE MEDICAL VERSION IS DESIGNED NOT TO BE USED IN SYSTEM WITH DIRECT PATIENT CONTACT APPLICATIONS.
- 2) FOR 80W VERSIONS, 10CFM OF AIR FLOW DIRECTED TOWARD THE LONGER SIDE OF THE POWER SUPPLY IS REQUIRED. THERMAL TESTING FOR 80W EVALUATION WAS DONE IN A WIND TUNNEL MEASURING 35" X 6" X 2" . A FINE WIRE MESH SCREEN (3 LOCATIONS) WAS USED TO DISPERSE THE INCOMING AIR.
- 3) SWITCHING FREQUENCY NOISE MEASUREMENT ARE MADE ACROSS A 20MHZ BANDWIDTH WITH 10UF TATALUM CAPACITOR AND 0.1UF CERAMIC CAPACITOR CONNECTED AT THE OUTPUT CONNECTOR.
- 4) CONDUCTED AND RADIATED EMI WERE PERFORMED WITH RESISTIVE LOADS SET TO FULL LOAD, NOMINAL LINES. DEPENDING ON SYSTEM CONFIGURATION, ADDITIONAL FILTERING MAY BE REQUIRED.
- 5) ALL MODELS MAY REQUIRE A MINIMUM MOUNTING STANDOFF OF 0.16" (4.00mm) IN THE END USER PRODUCT.
- 6) FOR OPTIMUM RELIABILITY, NO PART OF THE HEATSINK SHOULD EXCEED 120C AND NO SEMI-CONDUCTOR CASE SHOULD EXCEED 130C.
- 7) WHEN REMOTE SENSE IS USED, THE REMOTE SENSE WIRE SHOULD BE TWISTED AT 2 TWIST PER INCH TO AVOID STABILITY PROBLEM IN THE POWER SUPPLY.



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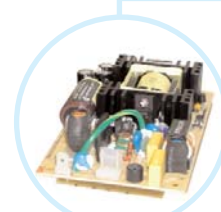
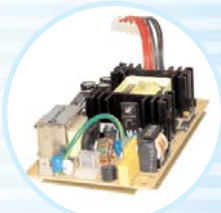
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**CONFIGURATION**

OPEN FRAME SWITCHING POWER SUPPLY WITH MOUNTING HOLES POSITIONED AS BELOW



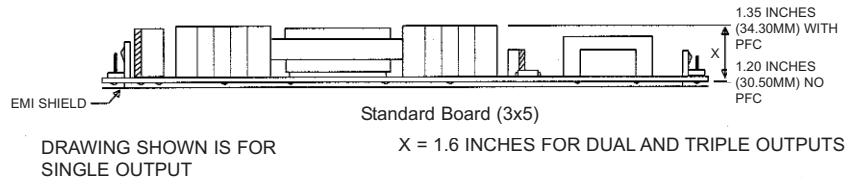
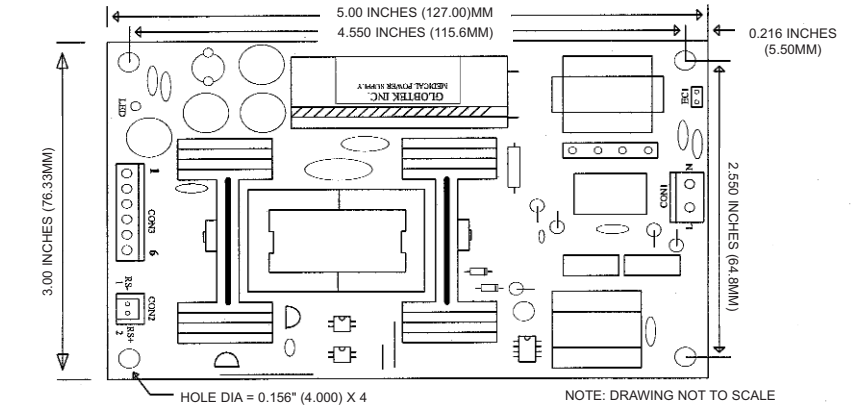
**OPEN FRAME CLASS I:**

**INPUT CONNECTOR (CON1)**

MOLEX 3-PIN WITH CENTER PIN  
REMOVED MOLEX PN: 26-60-4030 MATES  
W/PN: 09-50-3031, PIN 1: AC NEUTRAL,  
PIN 3: AC LINE, EC1: EARTH GROUND  
FOR CLASS I UNITS ONLY

**INPUT CONNECTOR (CON1 OPTION)**

WIRE HARNESS WITH MOLEX  
HEADER PN: 09-50-3031  
WITH AWG 18 STRANDED WIRE,  
UL1007/UL1015 WITH CONFIGURABLE  
LENGTH UP TO 100mm.  
BLACK OR BROWN FOR AC LINE;  
WHITE OR BLUE FOR AC NEUTRAL;  
GREEN WITH YELLOW STRIPE  
FOR EARTH GROUND

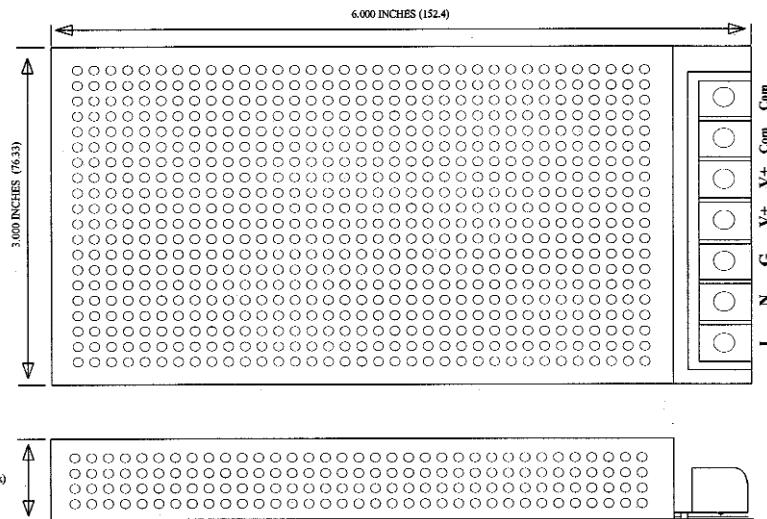


**OUTPUT CONNECTOR (CON3):** MOLEX 6-PIN FRICTION LOCK HEADER MOLEX PN: 26-60-4060 MATES WITH PN: 09-50-3061, PIN 1,2,3: V+, PIN 4,5,6: COMM, CON2 IS REMOTE SENSE CONNECTOR, MOLEX 22-28-0020 MATES WITH MOLEX PN: 22-01-2021, PIN 1: +SENSE; PIN2: -SENSE

**OUTPUT CONNECTOR (CON3) WITH WIRE HARNESS(H):** WIRE HARNESS WITH MOLEX HEADER PN: 09-50-3061 WITH AWG 18 STRANDED WIRE, UL1007 WITH CONFIGURABLE LENGTH UP TO 200mm. 3C X AWG18 RED FOR V+; 3C X AWG18 BLACK FOR COMMON. CON2 IS REMOTE SENSE CONNECTOR, MOLEX 22-28-0020 MATES WITH MOLEX PN: 22-01-2021 PIN 1: +SENSE; PIN2: -SENSE

**INPUT AND OUTPUT CONNECTOR FOR ENCLOSED (E) VERSION:** 7-PIN TERMINAL BLOCK, PIN 2: AC NEUTRAL, PIN 1: AC LINE, PIN 3: EARTH GROUND, PIN 4,5: V+, PIN 6,7: COMMON, CON4 IS OPTIONAL REMOTE SENSE CONNECTOR, MOLEX PN: 22-28-0020 MATES WITH MOLEX PN: 22-01-2021, PIN 1: +SENSE; PIN2: -SENSE

**OPTION:**  
L-BRACKET WITH PERFORATED COVER.



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