

**LTE 185U SERIES** 185W MULTIPLE OUTPUT SWITCHING POWER SUPPLY

**LTE 250U SERIES** 250W MULTIPLE OUTPUT SWITCHING POWER SUPPLY

**FEATURES :**

DIMENSIONS : 8"x4.5"x1.67"  
 DOUBLE SIDE PCB FOR HIGH RELIABILITY  
 BUILT-IN CLASS B EMI FILTER  
 EN61000-3-2 CLASS D (POWER FACTOR CORRECTION)  
 ADJUSTABLE MAIN OUTPUT  
 OVERLOAD PROTECTION  
 OVERVOLTAGE PROTECTION  
 BUILT-IN BROWN-OUT PROTECTION  
 SHORT CIRCUIT PROTECTION  
 REMOTE SENSE ON MAIN OUTPUT  
 OVERTEMPERATURE PROTECTION (OPTIONAL)  
 POWER GOOD SIGNAL (OPTIONAL)  
 CE MARKED TO LOW VOLTAGE DIRECTIVE (LVD)

**APPLICATION :**

COMPUTER PERIPHERALS/LAN & HUB  
 TEST & INDUSTRIAL EQUIPMENTS  
 MEDICAL INSTRUMENTS  
 TELECOMMUNICATIONS

**ENVIRONMENTAL :**

OPERATING TEMPERATURE : 0°C TO 40°C AMBIENT, DERATED EACH OUTPUT AT 2.5% PER °C FROM 40°C TO 70°C  
 STORAGE TEMPERATURE : -40°C TO 85°C  
 HUMIDITY : OPERATING, NON-CONDENSING, 5% TO 95%  
 VIBRATION : RANDOM OPERATING 2.4 GRMS/MAX. 3 AXES 50~500Hz 10 MINUTES/AXIS  
 SHOCK : OPERATING HALF SINE 20 GPK/MAX. 3 AXES 10ms 6 SHOCKS TOTAL

**INPUT SPECIFICATIONS :**

VOLTAGE	90-264 VAC, UNIVERSAL
FREQUENCY	47-63Hz
CURRENT	3ARMS. MAX. @115VAC 185W LOAD / 4ARMS. MAX. @115VAC 250W LOAD 2ARMS. MAX. @230VAC 185W LOAD / 2.5ARMS. MAX. @230VAC 250W LOAD
INRUSH SURGE CURRENT	40A TYPICAL, COLD START @25°C, 115VAC

**OUTPUT SPECIFICATIONS :**

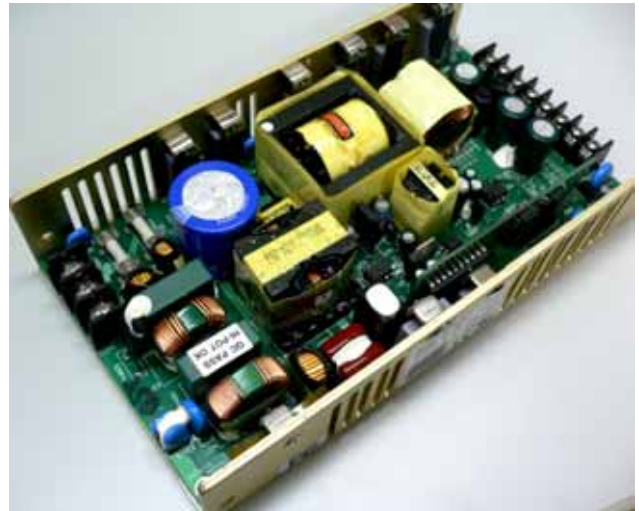
OUTPUT WATTAGE	185 WATTS MAX.(CONVECTION RATING)/250 WATTS MAX.(WITH 30CFM FORCED AIR)
VOLTAGE	SEE TABLE
CURRENT	SEE TABLE
LINE REGULATION	+/- 0.5% TYPICAL
LOAD REGULATION	MAIN OUTPUTS +/- 5%, AUX. OUTPUTS +/- 10% TYPICAL (NOTE1)
NOISE & RIPPLE	1% TYPICAL AT FULL LOAD (NOTE2)
OVERSHOOT/UNDERSHOOT	10% MAX. @ TURN-ON/ TURN-OFF

**GENERAL SPECIFICATIONS :**

EFFICIENCY : >65% TYPICAL AT FULL LOAD  
 TURN-ON TIME : 1SEC MAX. AT FULL LOAD @ 115VAC  
 HOLD-UP TIME : 16mS TYPICAL AT FULL LOAD @ 115VAC  
 REMOTE SENSE : 250mV +/- 50mV @ V1 AT FULL LOAD  
 MTBF DEMONSTRATED : >100,000 HOURS AT FULL LOAD AND 25°C AMBIENT CONDITIONS

**ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS :**

EMI CONDUCTED/RADIATED : FCC & CISPR CLASS B  
 DESIGNED TO MEET EN61000-3-3,-4-2,-3,-4,-5,-6,-8,-11



**185U & 250U SERIES MODEL LIST**

#MODEL	NO.	VOLTAGE (VDC)	LOAD RANGE (A)			LOAD REGULATION (%) (NOTE 1)	RIPPLE & NOISE (PARD) (mVp-p) (NOTE 2)
			MIN.	MAX. (NOTE 2)			
<b>LTE185U / 250U SINGLE OUTPUT VOLTAGE/CURRENT RATING CHARTS</b>							
		185U/250U	185U/250U	185U	250U	185U/250U	185U/250U
S0	1	+3.3V	0	35	46	+/- 3%	100mV
S1	1	+5V	0	35	46	+/- 3%	100mV
S2	1	+12V	0	15.42	20.84	+/- 3%	180mV
S3	1	+15V	0	12.34	16.67	+/- 3%	225mV
S4	1	+24V	0	7.7	10.42	+/- 3%	240mV
S5	1	+48V	0	3.86	5.21	+/- 3%	480mV
<b>LTE185U / 250U DUAL OUTPUT VOLTAGE/CURRENT RATING CHARTS</b>							
D12	1	+5V	1.8	18	25	+/- 5%	100mV
	2	+12V	0.8	8	11	+/- 10%	180mV
D14	1	+5V	1.8	18	25	+/- 5%	100mV
	2	+24V	0.4	4	5.5	+/- 10%	240mV
D1B	1	+5V	1.85	18.5	25	+/- 5%	100mV
	2	-5V	1.85	18.5	25	+/- 10%	150mV
D2C	1	+12V	0.8	7.7	10.5	+/- 5%	180mV
	2	-12V	0.8	7.7	10.5	+/- 10%	180mV
D24	1	+12V	0.8	7.4	10	+/- 5%	180mV
	2	+24V	0.4	4	5.5	+/- 10%	240mV
<b>LTE185U / 250U TRIPLE OUTPUT VOLTAGE/CURRENT RATING CHARTS</b>							
T12C	1	+5V	1.8	16	25	+/- 5%	100mV
	2	+12V	0.75	7.5	9	+/- 10%	180mV
	3	-12V	0.14	1.4	2	+/- 10%	180mV
T12B	1	+5V	1.8	17	25	+/- 5%	100mV
	2	+12V	0.75	7.5	10	+/- 10%	180mV
	3	-5V	0.14	1.4	2	+/- 10%	100mV
T124	1	+5V	1.8	16	24	+/- 5%	100mV
	2	+12V	0.65	6	7	+/- 10%	180mV
	4	+24V	0.14	1.4	2	+/- 10%	240mV
T012	1	+3.3V	1.6	16	25	+/- 5%	100mV
	4	+5V	1.6	16	20	+/- 5%	100mV
	2	+12V	0.3	3	5	+/- 10%	180mV
T14C	1	+5V	1.8	17	24	+/- 5%	100mV
	2	+24V	0.35	3.5	4.5	+/- 10%	240mV
	3	-12V	0.14	1.4	2	+/- 10%	180mV
<b>LTE185U / 250U QUAD OUTPUT VOLTAGE/CURRENT RATING CHARTS</b>							
Q12CB	1	+5V	1.6	15	23	+/- 5%	100mV
	2	+12V	0.7	6	8.5	+/- 10%	180mV
	3	-12V	0.15	1.0	2	+/- 10%	180mV
	4	-5V	0.15	1.5	2	+/- 10%	100mV
Q12C4	1	+5V	1.6	15	22	+/- 5%	100mV
	2	+12V	0.5	4.0	6	+/- 10%	180mV
	3	-12V	0.15	1.0	2	+/- 10%	180mV
	4	+24V	0.15	1.3	2	+/- 10%	240mV
Q12C5	1	+5V	1.6	13	19	+/- 5%	100mV
	2	+12V	0.5	4.5	6	+/- 10%	180mV
	3	-12V	0.15	1.5	2	+/- 10%	180mV
	4	+48V	0.1	1	1.3	+/- 10%	480mV
Q02C1	1	+3.3V	1.3	13	18	+/- 5%	100mV
	2	+12V	0.5	5	6	+/- 10%	180mV
	3	-12V	0.14	1.4	2	+/- 10%	180mV
	4	+5V	1.2	12	18	+/- 5%	100mV
Q13D4	1	+5V	1.6	15	20	+/- 5%	100mV
	2	+15V	0.35	3.5	5	+/- 10%	180mV
	3	-15V	0.15	1.5	2	+/- 10%	180mV
	4	+24V	0.15	1.5	2	+/- 10%	240mV

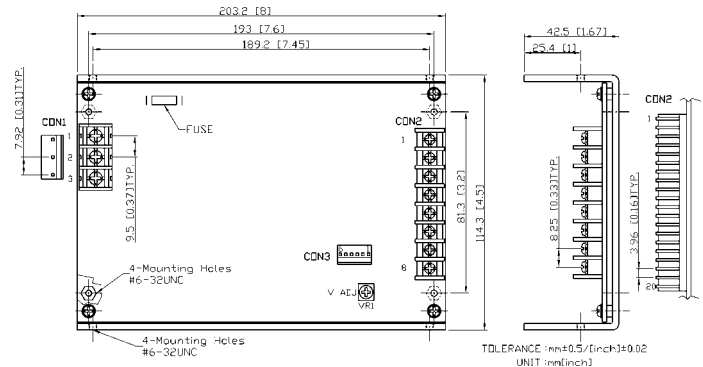
NOTE: 1. CROSS/LOAD REGULATION IS TESTED AT 10% TO 100% OF RATED LOAD AND OTHER OUTPUTS ARE SET AT 50% OF RATED LOAD.  
 2. PEAK-TO-PEAK FOR 185W (CONVECTION RATING) / 250W (WITH 30CFM FORCED AIR) @ 115VAC MIN. ; MEASUREMENTS WITH A 20MHz BANDWIDTH AND TERMINATED WITH A 10uF ELECTROLYTIC CAP. IN PARALLEL WITH A 0.1uF CERAMIC CAP.  
 3. PEAK CURRENT LASTING <30 SECONDS WITH A MAXIMUM 10% DUTY CYCLE. (FOR REFERENCE)

**PIN ASSIGNMENTS** (TERMINAL OR MOLEX EQUIVALENT TYPE)

<b>CON1</b>			
<b>AC INPUT</b>			
POLE1 (PIN1)		FG	
POLE2 (PIN2)		NEUTRA	
POLE3 (PIN3)		LINE	
<b>CON2</b>		<b>CON3</b>	
<b>1 Output</b>			
POLE1-4 (PIN1-10)	V1	PIN1	S-
POLE5-8 (PIN11-20)	RET	PIN2	S+
<b>2 OUTPUTS (V2 POSITIVE)</b>			
POLE1-2 (PIN1-5)	V1	PIN3	R.C.
POLE3,4,7,8 (PIN6-10, PIN16-20)	RET	PIN4	AC FALL
POLE5-6 (PIN11-15)	V2	PIN5	RET
<b>2 OUTPUTS (V2 NEGATIVE)</b>			
POLE1-2 (PIN1-5)	V1	PIN6	P.G.
POLE3-6 (PIN6-15)	RET		
POLE7-8 (PIN16-20)	V2		
<b>3,4 OUTPUTS</b>			
POLE1 (PIN1-3)	V2		
POLE2,3,7 (PIN4-9,17,18)	RET		
POLE4,5 (PIN10-14)	V1		
POLE6 (PIN15,16)	V4		
POLE8 (PIN19,20)	V3		

**MECHANICAL DRAWING (8"x4.5"x1.67")**

I/O CONNECTORS : TERMINAL BLOCK (OR MOLEX EQUIVALENT)



**L.T.E.** 力英電子  
LI TONE ELECTRONICS CO., LTD.

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**Switching Mode Power Supply**

