LPC-20 series





- · Constant current design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Over voltage
- Cooling by free air convection
- Small and compact size
- Fully encapsulated with IP67 level (Note.7)
- Fully isolated plastic case
- \bullet Class $\scriptstyle\rm II$ power unit, no FG
- Class 2 power unit
- Pass LPS
- Suitable for LED lighting and moving sign applications
- 100% full load burn-in test
- · Low cost, high reliability
- 2 years warranty

SPECIFICATION

LPS IP67 (for 350mA only) c us (except for 350mA)

RATED CURRENT 350mA	SPECIFICATION MODEL		LPC-20-350 LPC-20-700		
DC VOLTAGE RANGE 9 - 48V 9 - 30V 21W 2	MODEL	DATED OURDENT			
NATED POWER Note 16.8W 21W 20mm/p-p 20mm/p-	ОИТРИТ				
NUTROLITION 1.00 2.00					
VOLTAGE TOLERANCE Note.3 \$5.0%					
CURRENT ACCURACY 15.0% 1.10% 1		` ,	• •	200mVp-p	
LINE REGULATION					
LOAD REGULATION ±2.0% SETUP, RISE TIME Note, 500ms, 250ms / 230VAC 500ms, 250ms / 115VAC at full load					
SETUP, RISE TIME					
HOLD UP TIME (Typ.) Soms/230VAC 16ms/115VAC at full load					
NOTTAGE RANGE		,			
INPUT FREQUENCY RANGE 47 - 63Hz EFFICIENCY (Typ.) 83% 0.55A/115VAC 0.35A/230VAC		(• /			
NPUT AC CURRENT (Typ.) 0.55A/15VAC 0.35A/230VAC 0.35A/23	INPUT				
AC CURRENT (Typ.) 0.55A/115VAC 0.35A/230VAC INRUSH CURRENT (Typ.) COLD START 70A(twidth=220µs measured at 50% lpeak) at 230VAC MAX. No. of PSUS on 16A CIRCUIT BREAKER 0.25mA/ 240VAC BUBLEAKAGE CURRENT 0.25mA/ 240VAC PROTECTION OVER VOLTAGE 50.4 ~ 60V 31.5 ~ 40.5V Protection type : Shut off o/p voltage, clamping by zener diode WORKING TEMP. 3-00~ +70°C (Refer to "Derating Curve") WORKING TEMP. 3-00~ +70°C (Refer to "Derating Curve") WORKING HUMIDITY 20 ~ 90% RH non-condensing STORAGE TEMP., HUMIDITY 40 ~ +80°C, 10 ~ 95% RH TEMP. COEFFICIENT 40.03%/°C (0 ~ 50°C) VIBRATION 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes UL879, UL1310, CSA C22.2 No. 207-M89(except for LPC-20-350), CAN/CSA C22.2 No. 223-M91(except for LPC-20-35 TUV EN60950-1, IP67 approved WITHSTAND VOLTAGE I/P-0/P:31VAC ISOLATION RESISTANCE I/P-0/P:31VAC EMC EMISSION Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*25mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Flipple & noise are measured at 230MHz of bankwidth by using a 12° twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first Cold start. Turning ONOFF the power supply velo to increase of the set up time.					
INRUSH CURRENT(Typ.) COLD START 70A(twidth=220µs measured at 50% peak) at 230VAC		(): /	21111		
MAX. No. of PSUs on 16A CIRCUIT BREAKER LEAKAGE CURRENT 0.25mA / 240VAC PROTECTION OVER VOLTAGE WORKING TEMP. WORKING HUMIDITY 20 ~ 90% RH non-condensing ENVIRONMENT TEMP. COEFFICIENT VIBRATION SAFETY \$ EMC WITHSTAND VOLTAGE WITHSTAND AND VOLTAGE SA		, , ,			
CIRCUIT BREAKER CIRCUIT BR		INRUSH CURRENT(Typ.)	COLD START 70A(twidth=220µs measured at 50% Ipeak) at 230VAC		
PROTECTION OVER VOLTAGE S0.4 ~ 60V			8 units (circuit breaker of type B) / 14 units (circuit breaker of type C) at 230VAC		
PROTECTION OVER VOLTAGE Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode Protection type: Shut off o/p voltage, clamping by zener diode ### TEMP. COEFFICIENT ### DORNOR OF Shut Off O TEMP. ### DORNOR OF Shut OF Shut Off O TEMP. ### DORNOR OF Shut OF Shut Off O Shut O TEMP. ### DORNOR OF Shut Off O Shut O TEMP. ### DORNOR OF Shut Off O Shut O TEMP. ### Protection type: Shut off o/p voltage, clamping by zener diode ### DORNOR OF Shut O TEMP. ### Protection type: Shut off o/p voltage, clamping by zener diode ### DORNOR OF Shut O TEMP. ### Protection type: Shut Off off One in the sene and shut O TEMP. ### Protection type: Shut Off Off One in the sene and shut O TEMP. ### Protection type: Shut Off One in the sene and shut O TEMP. ### Protection type: Shut Off One in the sene and shut O TEMP. ### Protection type: Shut Off One in the sene and shut O TEMP. ### Protection type: Shut Off One in the sene and shut O TEMP. ### Protection type: Shut O T		LEAKAGE CURRENT	0.25mA / 240VAC		
Protection type : Shut off op voltage, clamping by zener clode WORKING TEMP. -30~ +70°C (Refer to "Derating Curve")	PROTECTION	OVEDVOLTAGE	50.4 ~ 60V	31.5 ~ 40.5V	
WORKING HUMIDITY 20 ~ 90% RH non-condensing		Protection type : Shut off o/p voltage, clamping by zener diode			
ENVIRONMENT TEMP. COEFFICIENT ±0.03%/°C (0 ~ 50°C) VIBRATION 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes UL879, UL1310, CSA C22.2 No. 207-M89(except for LPC-20-350), CAN/CSA C22.2 No. 223-M91(except for LPC-20-35 TUV EN60950-1, IP67 approved WITHSTAND VOLTAGE I/P-O/P:3KVAC ISOLATION RESISTANCE I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH EMC EMISSION Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118°35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.	ENVIRONMENT	WORKING TEMP.	-30~ +70°C (Refer to "Derating Curve")		
TEMP. COEFFICIENT ±0.03%/°C (0 ~ 50°C) VIBRATION 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes UL879, UL1310, CSA C22.2 No. 207-M89(except for LPC-20-350), CAN/CSA C22.2 No. 223-M91(except for LPC-20-35 TUV EN60950-1, IP67 approved WITHSTAND VOLTAGE I/P-O/P:3KVAC ISOLATION RESISTANCE I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH EMC EMISSION Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		WORKING HUMIDITY	20 ~ 90% RH non-condensing		
VIBRATION 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes UL879, UL1310, CSA C22.2 No. 207-M89(except for LPC-20-350), CAN/CSA C22.2 No. 223-M91(except for LPC-20-355) TUV EN60950-1, IP67 approved WITHSTAND VOLTAGE I/P-O/P:3KVAC ISOLATION RESISTANCE I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH EMC EMC EMISSION Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH		
SAFETY STANDARDS UL879, UL1310, CSA C22.2 No. 207-M89(except for LPC-20-350), CAN/CSA C22.2 No. 223-M91(except for LPC-20-35 TUV EN60950-1, IP67 approved WITHSTAND VOLTAGE I/P-O/P:3KVAC ISOLATION RESISTANCE I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH EMC EMISSION Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
SAFETY & WITHSTAND VOLTAGE I/P-O/P:3KVAC ISOLATION RESISTANCE I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH EMC EMISSION Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT NOTE 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
ISOLATION RESISTANCE		SAFETY STANDARDS	UL879, UL1310, CSA C22.2 No. 207-M89(except for LPC-20-350), CAN/CSA C22.2 No. 223-M91(except for LPC-20-350), TUV EN60950-1, IP67 approved		
EMC EMISSION Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		WITHSTAND VOLTAGE	I/P-O/P:3KVAC		
EMC EMISSION Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 EMC IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH		
MTBF 786.5Khrs min. MIL-HDBK-217F (25°C) DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		EMC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3		
DIMENSION 118*35*26mm (L*W*H) PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A		
PACKING 0.22Kg; 60pcs/14.2Kg/0.62CUFT 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.	OTHERS	MTBF	786.5Khrs min. MIL-HDBK-217F (25°C)		
 NOTE 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. 		DIMENSION	118*35*26mm (L*W*H)		
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.		PACKING	0.22Kg; 60pcs/14.2Kg/0.62CUFT		
7. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minute.8. The unit might not be suitable for lighting applications in EU countries. Please check with your local authorities for the possible use of the unit.	NOTE				



