

접 수 번 호 : 17-024965-01  
(Receipt No.)



## 안 전 인 증 서

### Safety Certificate

안 전 인 증 번 호 : SU10453-16001A  
(Certificate No.)

제 조 업 자/수 입 업 자 명 : Dongguan MLF Tech.Co.,Ltd  
(Manufacturer/importer)

주 소 : No.8, Qingping Road, Qinghutou Village, Tangxia Town,  
(Address) Dongguan City, Guangdong Province, China

제 품 명 : 직류전원장치(AC Adapter)  
(Product)

기 본 모 델 명 : MLF-C061202000CK  
(Basic Model)

파 생 모 델 명 : See the attachment 2  
(Series Model)

정격/안전기준상의 모델구분 : 100-240Vac, 50/60Hz, 0.8A max. (Output: 12Vdc,  
(Rating) 2A, 24W)

시 험 기 준 : K60950-1 (2011-12)  
(Standard)

본 인증서는 제 조 국 명 : 중국  
제 조 업 자 명 : DONGGUAN MLF TECH.CO.,LTD  
제조공장의 주소 : NO.8, QINGPING ROAD, QINGHUTOU VILLAGE, TANGXIA TOWN, DO  
NGGUAN CITY, GUANGDONG PROVINCE, CHINA  
의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항·제4항 또는 제10조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2),9(4) or10 (2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2017 년 05 월 02 일  
Year month day

한국산업기술시험원  
KOREA TESTING LABORATORY



\* 이 인증서는 「전기용품 및 생활용품 안전관리법 시행규칙」에 따른 제품의 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

첨부서류

1. 전기용품의 안전관리부품 및 재질목록(List of Critical Components)
2. 기본모델·파생모델의 내용 (Descriptions of the basic and series model)
3. 안전인증의 변경 현황 (Revisions Status)



□ 첨부 1 : 안전관리부품 및 재질목록  
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Plastic Enclosure	Sabic Innovative Plastics US L L C	945(GG)	V-0, 120 °C, min. thickness 2.0 mm	UL
Plug holder	Sabic Innovative Plastics US L L C	940(f1)	V-0, 120 °C, min. thickness 2.0 mm	UL
PCB	Cheerful Electronic (Hk) Ltd	03A	V-0, 130 °C	UL
(Alternate)	Shandong Jinbao Electronics Co Ltd	ZD-9F	V-0, 130 °C	UL
(Alternate)	Interchangeable	Interchangeable	V-0 or better, 130 °C	UL
Fuse (F1)	Dongguan Hongda Electronic Technology Co., Ltd	2009	T 2 AL, 250 Vac	VDE
(Alternate)	XC Electronics (Shenzhen) Corp Ltd	5TE	T 2 AL, 250 Vac	VDE
Fusible resistor (F1) (Only used for output power was less than or equal to 18W)	Dongguan Hongda Electronic Technology Co., Ltd	RXF series	2.2 ohm, 2 W	VDE
(Alternate)	Shenzhen Great Electronics Co. Ltd.	RXF	2.2 ohm, 2 W	VDE
Varistor (MOV1) (optional)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR10561-M, TVR14471-M, TVR14561-M	Min. 300 Vac, Min 125 °C	VDE
(Alternate)	Lien Shun Electronics Co., Ltd.	10D471K, 10D561K, 14D471K, 14D561K	Min. 300 Vac, Min 125 °C	VDE
(Alternate)	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	10D471K, 10D561K, 14D471K, 14D561K	Min. 300 Vac, Min 125 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Y-capacitor (Y1)	Shantou High- New Technology Development Zone Songtian Enterprise Co Ltd	CD	Max. 2200 pF, min. 250 Vac, 125 °C, Y1 type	VDE
(Alternate)	Hsuan Tai Electronic Co. Ltd.	CY	Max. 2200 pF, min. 250 Vac, 125 °C, Y1 type	VDE
(Alternate)	Success Electronics Co., Ltd	SB	Max. 2200 pF, min. 250 Vac, 125 °C, Y1 type	VDE
(Alternate)	Xiangtai Electronic (Shenzhen) Co Ltd	YO series	Max. 2200 pF, min. 250 Vac, 125 °C, Y1 type	VDE
Opto-coupler (U2)	Lite-On Electronics	LTV-816, LTV-817	Reinforced	VDE
(Alternate)	Bright Led Electronics Corp	BPC-817C, BPC-817S, BPC-817M	Reinforced	VDE
(Alternate)	Everlight Electronics Co Ltd	EL817	Reinforced	VDE
(Alternate)	Cosmo Electronic Corp	KP1010, K1010	Reinforced	VDE
Transformer (T1) (for output 8.1- 13.0V)	Dongguan City Maoxin Transformer Co Ltd	626-T-AS T2	Class B	Tested with Appliance

☐ 유의사항 (Attention) :

- 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등록을 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.  
*As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiple listing or changing the items above, the certification revision shall be applied.*
- 인증변경신청 없이 임의로 변경하는 경우는, 전기용품 및 생활용품 안전관리법 시행규칙 제 20 조제 1 항 또는 제 36 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.  
*The Safety Certification will be cancelled under the Article 20(1), 36(1) of the Enforcement Rule of the Electrical appliances and Consumer Products Safety Control Act if the contents of the Certification is altered without our authorization.*



□ 첨부 2 : 기본모델 · 파생모델의 내용  
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
MLF-C060812000CK	DC Output voltage : 8.1 V , Output current: 2.0 A, Power: 16.2W
MLF-C060822000CK	DC Output voltage : 8.2 V , Output current: 2.0 A, Power: 16.4W
MLF-C060832000CK	DC Output voltage : 8.3 V , Output current: 2.0 A, Power: 16.6W
MLF-C060842000CK	DC Output voltage : 8.4 V , Output current: 2.0 A, Power: 16.8W
MLF-C060852000CK	DC Output voltage : 8.5 V , Output current: 2.0 A, Power: 17.0W
MLF-C060862000CK	DC Output voltage : 8.6 V , Output current: 2.0 A, Power: 17.2W
MLF-C060872000CK	DC Output voltage : 8.7 V , Output current: 2.0 A, Power: 17.4W
MLF-C060882000CK	DC Output voltage : 8.8 V , Output current: 2.0 A, Power: 17.6W
MLF-C060892000CK	DC Output voltage : 8.9 V , Output current: 2.0 A, Power: 17.8W
MLF-C060902000CK	DC Output voltage : 9.0 V , Output current: 2.0 A, Power: 18.0W
MLF-C060912000CK	DC Output voltage : 9.1 V , Output current: 2.0 A, Power: 18.2W
MLF-C060922000CK	DC Output voltage : 9.2 V , Output current: 2.0 A, Power: 18.4W
MLF-C060932000CK	DC Output voltage : 9.3 V , Output current: 2.0 A, Power: 18.6W
MLF-C060942000CK	DC Output voltage : 9.4 V , Output current: 2.0 A, Power: 18.8W
MLF-C060952000CK	DC Output voltage : 9.5 V , Output current: 2.0 A, Power: 19.0W
MLF-C060962000CK	DC Output voltage : 9.6 V , Output current: 2.0 A, Power: 19.2W
MLF-C060972000CK	DC Output voltage : 9.7 V , Output current: 2.0 A, Power: 19.4W
MLF-C060982000CK	DC Output voltage : 9.8 V , Output current: 2.0 A, Power: 19.6W
MLF-C060992000CK	DC Output voltage : 9.9 V , Output current: 2.0 A, Power: 19.8W
MLF-C061002000CK	DC Output voltage : 10.0 V , Output current: 2.0 A, Power: 20.0W
MLF-C061012000CK	DC Output voltage : 10.1 V , Output current: 2.0 A, Power: 20.2W
MLF-C061022000CK	DC Output voltage : 10.2 V , Output current: 2.0 A, Power: 20.4W
MLF-C061032000CK	DC Output voltage : 10.3 V , Output current: 2.0 A, Power: 20.6W
MLF-C061042000CK	DC Output voltage : 10.4 V , Output current: 2.0 A, Power: 20.8W
MLF-C061052000CK	DC Output voltage : 10.5 V , Output current: 2.0 A, Power: 21.0W
MLF-C061062000CK	DC Output voltage : 10.6 V , Output current: 2.0 A, Power: 21.2W



파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
MLF-C061072000CK	DC Output voltage : 10.7 V , Output current: 2.0 A, Power: 21.4W
MLF-C061082000CK	DC Output voltage : 10.8 V , Output current: 2.0 A, Power: 21.6W
MLF-C061092000CK	DC Output voltage : 10.9 V , Output current: 2.0 A, Power: 21.8W
MLF-C061102000CK	DC Output voltage : 11.0 V , Output current: 2.0 A, Power: 22.0W
MLF-C061112000CK	DC Output voltage : 11.1 V , Output current: 2.0 A, Power: 22.2W
MLF-C061122000CK	DC Output voltage : 11.2 V , Output current: 2.0 A, Power: 22.4W
MLF-C061132000CK	DC Output voltage : 11.3 V , Output current: 2.0 A, Power: 22.6W
MLF-C061142000CK	DC Output voltage : 11.4 V , Output current: 2.0 A, Power: 22.8W
MLF-C061152000CK	DC Output voltage : 11.5 V , Output current: 2.0 A, Power: 23.0W
MLF-C061162000CK	DC Output voltage : 11.6 V , Output current: 2.0 A, Power: 23.2W
MLF-C061172000CK	DC Output voltage : 11.7 V , Output current: 2.0 A, Power: 23.4W
MLF-C061182000CK	DC Output voltage : 11.8 V , Output current: 2.0 A, Power: 23.6W
MLF-C061192000CK	DC Output voltage : 11.9 V , Output current: 2.0 A, Power: 23.8W
MLF-C061211500CK	DC Output voltage : 12.1 V , Output current: 1.5 A, Power: 18.15W
MLF-C061221500CK	DC Output voltage : 12.2 V , Output current: 1.5 A, Power: 18.30W
MLF-C061231500CK	DC Output voltage : 12.3 V , Output current: 1.5 A, Power: 18.45W
MLF-C061241500CK	DC Output voltage : 12.4 V , Output current: 1.5 A, Power: 18.60W
MLF-C061251500CK	DC Output voltage : 12.5 V , Output current: 1.5 A, Power: 18.75W
MLF-C061261500CK	DC Output voltage : 12.6 V , Output current: 1.5 A, Power: 18.90W
MLF-C061271500CK	DC Output voltage : 12.7 V , Output current: 1.5 A, Power: 19.05W
MLF-C061281500CK	DC Output voltage : 12.8 V , Output current: 1.5 A, Power: 19.20W
MLF-C061291500CK	DC Output voltage : 12.9 V , Output current: 1.5 A, Power: 19.35W
MLF-C061301500CK	DC Output voltage : 13.0 V , Output current: 1.5 A, Power: 19.50W
MLF-C060811000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.1 V , Output current: 1.0 A, Power: 8.10 W)
MLF-C060811500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.1 V , Output current: 1.5 A, Power: 12.15 W)



파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
MLF-C060841000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.4 V , Output current: 1.0 A, Power: 8.40 W)
MLF-C060841500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.4 V , Output current: 1.5 A, Power: 12.60 W)
MLF-C060851000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.5 V , Output current: 1.0 A, Power: 8.5 W)
MLF-C060851500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.5 V , Output current: 1.5 A, Power: 12.75 W)
MLF-C060881000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.8 V , Output current: 1.0 A, Power: 8.80 W)
MLF-C060881500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 8.8 V , Output current: 1.5 A, Power: 13.20 W)
MLF-C060901000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.0 V , Output current: 1.0 A, Power: 9.00 W)
MLF-C060901300CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.0 V , Output current: 1.3 A, Power: 11.70 W)
MLF-C060901400CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.0 V , Output current: 1.4 A, Power: 12.60 W)
MLF-C060901500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.0 V , Output current: 1.5 A, Power: 13.50 W)
MLF-C060931000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.3 V , Output current: 1.0 A, Power: 9.30 W)
MLF-C060931500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.3 V , Output current: 1.5 A, Power: 13.95 W)
MLF-C060951000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.5 V , Output current: 1.0 A, Power: 9.50 W)
MLF-C060951500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.5 V , Output current: 1.5 A, Power: 14.25 W)
MLF-C060981000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.8 V , Output current: 1.0 A, Power: 9.80 W)



파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
MLF-C060981500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 9.8 V , Output current: 1.5 A, Power: 14.70 W)
MLF-C061001000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.0 V , Output current: 1.0 A, Power: 10.00 W)
MLF-C061001500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.0 V , Output current: 1.5 A, Power: 15.00 W)
MLF-C061031000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.3 V , Output current: 1.0 A, Power: 10.30 W)
MLF-C061031500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.3 V , Output current: 1.5 A, Power: 15.45 W)
MLF-C061051000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.5 V , Output current: 1.0 A, Power: 10.50 W)
MLF-C061051500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.5 V , Output current: 1.5 A, Power: 15.75 W)
MLF-C061081000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.8 V , Output current: 1.0 A, Power: 10.80 W)
MLF-C061081500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 10.8 V , Output current: 1.5 A, Power: 16.20 W)
MLF-C061101000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 11.0 V , Output current: 1.0 A, Power: 11.00 W)
MLF-C061101500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 11.0 V , Output current: 1.5 A, Power: 16.50 W)
MLF-C061151000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 11.5 V , Output current: 1.0 A, Power: 11.50 W)
MLF-C061151500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 11.5 V , Output current: 1.5 A, Power: 17.25 W)
MLF-C061201000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 12 V , Output current: 1.0 A, Power: 12.00 W)
MLF-C061201500CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 12.0 V , Output current: 1.5 A, Power: 18.00 W)

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
MLF-C061251000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 12.5 V , Output current: 1.0 A, Power: 12.50 W)
MLF-C061251200CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 12.5 V , Output current: 1.2 A, Power: 15.00 W)
MLF-C061301000CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 13.0 V , Output current: 1.0 A, Power: 13.00 W)
MLF-C061301200CK	The derivative model is same as basic model except output rating and without heat sink. (DC Output voltage: 13.0 V , Output current: 1.2 A, Power: 15.60 W)



제품특기사항 및 시험조건  
Remarks & Test conditions

1. Test Report Ref. No. : 16-047768-01 (2016.09.05)

2. Product Description

- Measured power consumption(W): 28.47 W
- Class of equipment: Class II
- Protection against ingress of water: IP20
- Mass of equipment(kg): 0.11 kg

□ 본 제품의 검토내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다.

검토담당자 : 인증산업본부 인증심사센터 홍진표 / 055-791-3324

□ If you have any question on product reviewing, please contact the person below :

Job holder : Certification Business Division Certification Evaluation Center , jin-pyo Hong / +82 55 791-3324

FP511-05

□ 첨부 3 : 전기용품안전인증의 변경 현황  
Status of Certificate Revisions

변경발급 내용  
Contents of Certificate Revisions

1<sup>st</sup> Rev.) Addition of derivative models : 17-024965-01 (2017.04.27.)

FP511-06