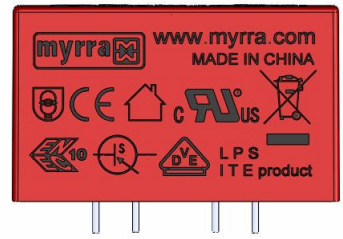
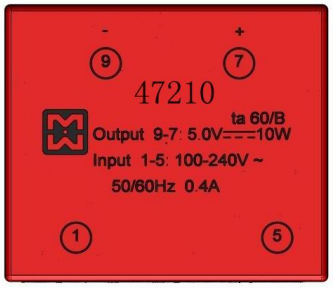
ONE OUTPUT 10W – Regulated

47000 SERIES





MAIN FEATURES:

- 10W Small Compact Size - PCB Mount
- Single Output - Regulated
- Output Range : 3.3VDC - 24VDC
- Input Range : 85VAC - 265VAC/47 - 63Hz Or 120VDC - 370VDC
- Very Low Standby Power Consumption < 0.1W
- Better Energetic Efficiency : Meet Requirements Of Energy Star And EC Code Of Conduct
- Encapsulated Design And Same Footprint As EI48 Transformer: Upgrade Your Application Without Redesign Of PCB
- Safety : IEC/EN61558-2-16,IEC/EN60950,IEC/EN60335, UL/CUL60950,CE,VDE,ENEC Mark
- Materials : Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emissions Conform To EN55014 CLASS B , EN55022 CLASS B And FCC Part 15
- Immunity Conform To EN61000-3-3,EN61000-4-2, EN61000-4-3,EN61000-4-4,EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

Part No	Power Rating Watts	Output Voltage (VDC)	Output Current（mA）	Ambient Temp.（℃）	Efficiency Typical	Input Range
47210	10	5	2000	60	>74%@230VAC	85VAC-265VAC (120VDC-370VDC)
47211	10	9	1100	60	>80%@230VAC	
47212	10	12	830	60	>82%@230VAC	
47213	10	15	670	60		
47214	10	18	560	60		
47215	10	24	420	60		
47216	10	3.3	3000	50	>72%@230VAC	

Note: Other Output Voltages Are Available Upon Request

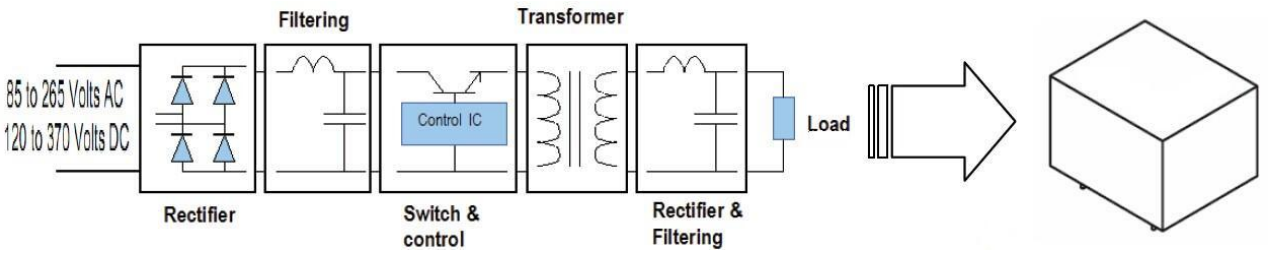
Model: 10 Watt		Specification
AC Input Characteristics	Rated AC input Voltage	100~240Vac Or 140VDC-340VDC
	AC Input Voltage Range	85~265Vac Or 120VDC-370VDC
	AC Input Frequency Range	47Hz~63Hz
	Rated AC Input Frequency	50/60Hz
	Input Current	0.4A Max@85Vac~265Vac, at full load
	Input Inrush Current	40A Max @85Vac~265Vac input, cold start, full load
	Standby Power	0.1W Max(Meet Requirements Of Energy Star And EC Code Of Conduct)
DC Output Characteristics	Output Voltage Accuracy	± 2% (9V,12V,15V,18V,24V Types) ± 3% (5V Type) ± 4%(3.3V Type)
	Output Voltage Line Regulation	± 0.5%(9V,12V,15V,18V,24V Types) ± 1%(3.3V and 5V Types)
	Output Voltage Load Regulation	± 1%(9V,12V,15V,18V,24V Types) ± 3% (5V Type) ± 4%(3.3V Type)
	Ripple & Noise	Max 150mVp-p @Rated AC input (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)
	Dynamic Response	The output voltage shall not exceed ±10% rated output voltage @ 10%←→90% Load change, 1A/uS , 1KHz 50% duty cycle
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 85Vac~265Vac input, and DC with full load
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 85Vac~265Vac input and DC

		output with full load
	Hold Up Time	5mS Min@ 100Vac ~240Vac, DC output with full load
	Turn On Delay	3S max @ 85Vac~265Vac input and DC output with full load
	Rise Time	50ms Max @ 85Vac~265Vac input and DC output with full load
	Efficiency	See table (Meet Requirements Of Energy Star And EC Code Of Conduct)
Protection Characteristics	Over Current Protection	The power supply shall automatic protection. The power supply shall auto-recovery normal operation after the deformation is removed. No excessive heat, odor, or plastic deformation shall occur, no safety hazard
	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The short may be applied before power on, or after power on; The power supply shall resume normal operation after the short is removed, no excessive heat, odor, or plastic deformation shall occur, no safety hazard
	Over temperature protection	The power supply shall shut down when the junction temperature of PWM controller exceeds the thermal shutdown temperature ,typically 140°C ±10°C.
Environmental	Operation Temperature	-25°C ~ +Ta (see table)
	Operation Humidity	10~ 90% RH(No Condensing) @ full load
	Storage Temperature	-40°C~ +85°C
	Storage Humidity	5%~95%
	Cooling Method	Ordinary or thermostat

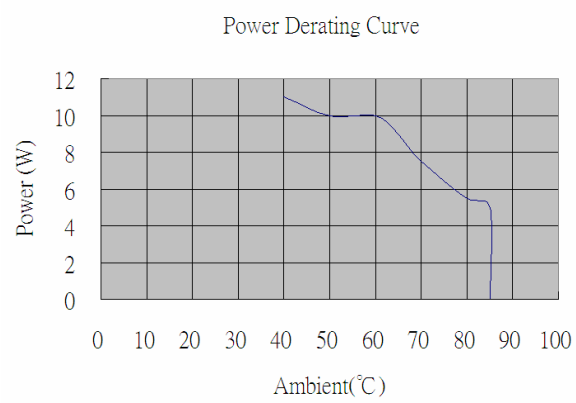
Safety & EMC Requirement	Dielectric Strength	Primary to Secondary: 4000Vac 5mA, 3 sec .
	Radiation	Meeting EN55022,EN55014,FCC, part 15, Class B. under 3dB margin
	Conduction	Meeting EN55022,EN55014, FCC, part 15,Class B. under 3dB margin
	Power Clamp Radiation	Meeting EN 55014-1: 2006+A1: 2009+A2:2011
	Lightning Surge	Meeting EN61000-4-5:2006, Level II. ±2KV
	Electric Fast Transient	Meeting EN61000-4-4:2012, ±4KV
	Voltage Dips And Interruptions	Meeting EN61000-4-11:2004
	Voltage Fluctuation And Flicker	Meeting EN61000-3-3:2013
	Electrostatic Discharge	Meeting EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV
	RF Field Strength Susceptibility	Meeting EN61000-4-3:2006+A1:2008+A2:2010
	Conducted Susceptibility	Meeting EN61000-4-6:2014
	Power Frequency Magnetic Field Susceptibility	Meeting EN61000-4-8:2010
	Safety Standards	Meet all requirements of UL/CUL60950 IEC/EN60950 IEC/EN60335 IEC/EN61558-2-16 CE,VDE,And ENEC Mark
Reliability Requirement	MTBF	Calculated by MIL-HDBK-217-F2 5V ,9V,12V,15V,18V,24V Types: 200K Hours Min. @230VAC input, 60deg.C 3.3V type:200K Hours Min. @230VAC input, 50deg.C
	Burn-In Test	The unit shall be burned in for 2~ 5hours under 230Vac input and DC with full load at an ambient temperature

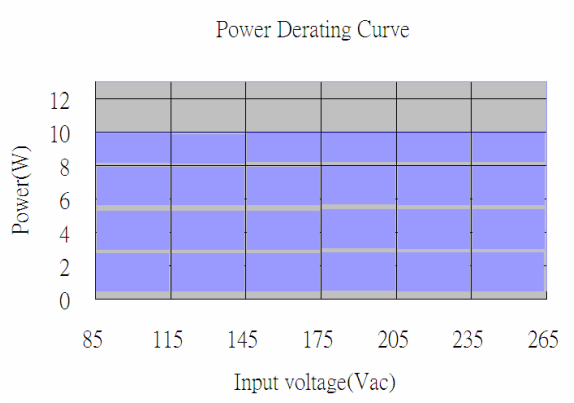
		of 30~45 degrees C
Mechanical	Physical Size	The units do not including PINs of input and output, and dimension is (L)48.0*(W)40.0*(H)26.0± 0.5mm (see appearance drawing)
	Net Weight	About 80.2 grams per product unit.
Guarantee	This product meet to RoHS standard	

SCHEMATIC



DERATING GRAPH





DIMENSIONS And PINOUT

4 PINS

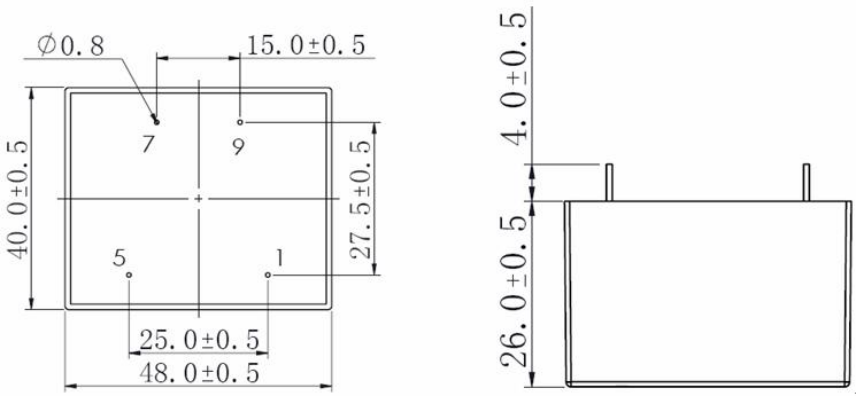
PRI:

Pins 1 – 5: AC Or DC Input

SEC:

Pin 7 : DC Output +V

Pin 9 : DC Output 0V



(View From Pins Side)