

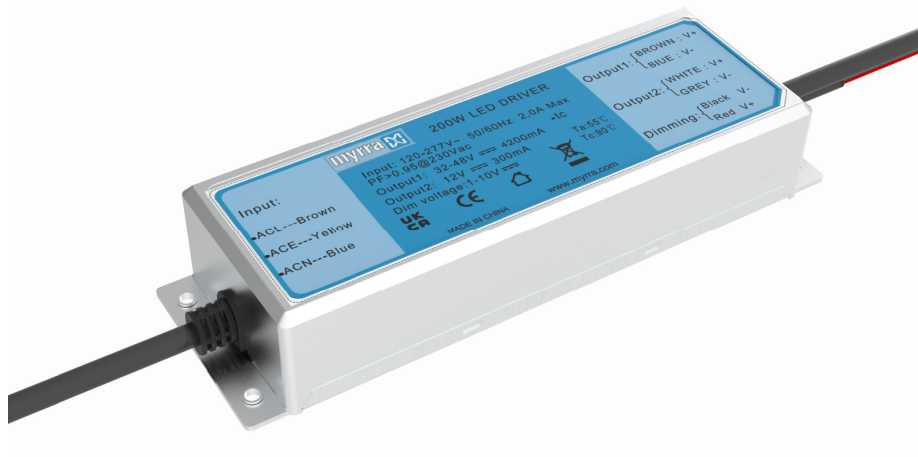
LED DRIVER - 200W

IP65 design for indoor or outdoor installations



Power Supplies

5402x SERIES



MAIN FEATURES

- 200W Small Compact Size – Metal housing design
- Constant Current Mode Output
- Built-in active PFC function: >0.95@230Vac Full Load
- Output Range : 12VDC - 48VDC
- Input Range : 100VAC - 305VAC/47 - 63Hz
- Very Low Standby Power Consumption < 0.5W
- IP65 rating for indoor or outdoor installations
- 3 In 1 dimming (1V to 10Vdc or 10V PWM signal or resistance)
- Safety: Meets All Requirements of IEC/EN61347-1, IEC/EN61347-2-13, UL8750 CLASS 2, CSA C22.2 No.250.13-12, CE, UKCA, IP65.
- Materials : Uses UL 94-V0 Resin
- EMC : Conform To EN55015, FCC Part15, EN/IEC61000-3-2 Class C, EN61000-3-3
- Immunity Conforms To EN61000-4-2, EN/IEC61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11

APPLICATIONS

- LED Flood Lighting
- LED Decorative Lighting
- LED Architectural Lighting
- LED Street Lighting
- LED Bay Lighting

DATA SHEET



Part No	Power Rating Watts	Output Voltage (VDC)	Output Current (A)	Ambient Temp. (°C)	Efficiency Typical	Input Range
54020	200	12~18	11.10	+80	>88%@230VAC	100VAC-305VAC
54021	200	15 ~24	8.33	+80	>88%@230VAC	
54022	200	21.5 ~36	5.56	+80	>89%@230VAC	
54023	200	25 ~42	4.76	+80	>90%@230VAC	
54024	200	32 ~48	4.20	+80	>90%@230VAC	

Note: Other output voltages are available upon request.

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Model: 200 Watt		Specifications
AC Input Characteristics	Rated AC input Voltage	120~277Vac
	AC Input Voltage Range	100~305Vac
	AC Input Frequency Range	47Hz~63Hz
	Rated AC Input Frequency	50/60Hz
	Input Current	2.5 A Max@108Vac~305Vac, at full load
	Standby Power	0.5W Max.
	Leakage Current	<0.75mA@277Vac
	Total Harmonic Distortion	≤20% @output load≥75%
	Max.No.of PSU on 16A circuit breaker	26 units(circuit breaker of type B)/26 units(circuit breaker of type C)at 230VAC.
DC Output Characteristics	Output Current Line Regulation	±5%
	Output Current Load Regulation	± 5%
	Ripple & Noise	Max. 10%Ip-p@ 120Vac ~277Vac (The measuring will be terminated with a 47uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth).
	Turn On Delay	2S max. @ 120Vac~277Vac input and DC output with full load
	Rise Time	200ms max. @ 120Vac~277Vac input and DC output with full load
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 120Vac~305Vac input, and DC with full load
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 120Vac~277Vac input and DC output with full load
	Efficiency	See table

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	Dimming Control	3 In 1 dimming (1V to 10Vdc or 10V PWM signal or resistance) 10%~100% (Refer to "Dimming Graph")
Protection Characteristics	Over Voltage Protection(LED Open)	The LED driver shall automatic protection(hiccup mode). The LED driver shall auto-recovery normal operation after the deformation is removed. No excessive heat, odour no safety hazard.
	Output Short Circuit Protection	The LED driver shall withstand a continuous output short without damage in 24 hours; The short may be applied before power on, or after power on; The LED driver shall resume normal operation after the short is removed, no excessive heat, odour,no safety hazard
	Over Temperature Protection	Hiccup mode, recovers automatically after fault condition is removed.
Environmental	Operation Temperature	-25°C ~+80°C (Refer to "Derating Graph")
	Operation Humidity	10~ 90% RH(No Condensing) @ DC with full load
	Storage Temperature	-40°C~ +85°C (Recommended -10°C~ +35°C)
	Storage Humidity	< 75%RH
	Cooling Method	Ordinary or thermostat
Safety & EMC Requirement	Dielectric Strength	Input to Output 3kVAC,5mA,1 min(3.75kVAC,3s @at the mass production stage) Input to Ground 1.5kVAC, 5mA,1 min Output to Ground 500VAC ,5mA,1 min.
	Radiation	Meets EN55015, FCC part 15, Class B
	Conduction	Meets EN55015, FCC part 15,Class B
	Harmonic Current Disturbance	Meets EN/IEC61000-3-2:2019, Class C
	Voltage Fluctuation And Flicker	Meets EN61000-3-3:2013
	Electrostatic Discharge	Meets EN61000-4-2:2009 Contact Discharge ±4KV,Air Discharge ±8KV
	RF Field Strength Susceptibility	Meets EN/IEC61000-4-3:2019
	Electrical Fast Transient	Meets EN61000-4-4:2012, ±4KV

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Safety & EMC Requirement	Lightning Surge	Meets EN61000-4-5:2014, ±4KV common mode, ±2KV diff.mode
	Conducted Susceptibility	Meets EN61000-4-6:2014
	Power Frequency Magnetic Field Susceptibility Test	Meets EN61000-4-8:2010
	Voltage Dips And Interruptions	Meets EN61000-4-11:2004
	Safety Standards	Meets all requirements of : IP65 UL8750 CLASS 2 CSA C22.2 No.250.13-12 IEC/EN61347-1 IEC/EN61347-2-13 CE, UKCA Mark
Reliability Requirement	MTBF	>200K Hours @230VAC input at 55deg.C; >550K Hours @230VAC input at 25deg.C <i>Calculated in accordance with MIL-HDBK-217-F2</i>
	Burn-In Test	The unit shall be burned in for 2~5 hours under 230Vac input and DC with full load at an ambient temperature of 30~45 degrees C
Net Weight	Approximately 620 grams per product unit	
Guarantee	This product is in accordance with the European RoHS & REACH directives	

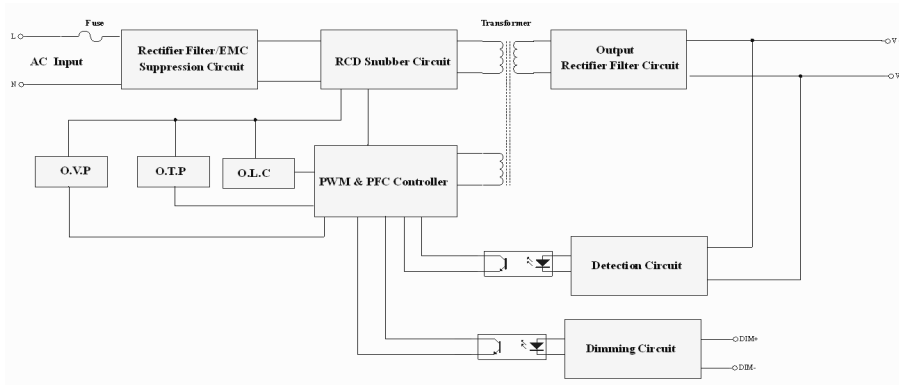
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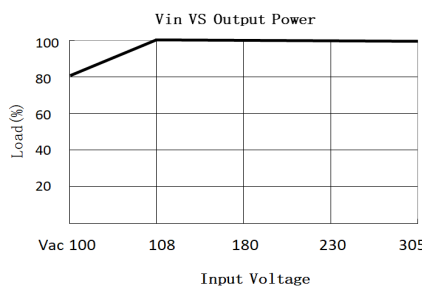
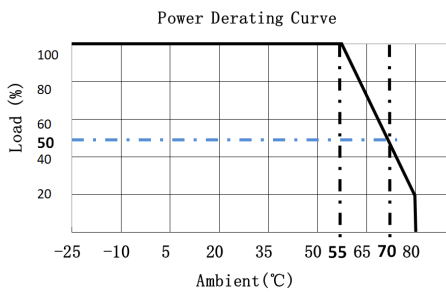


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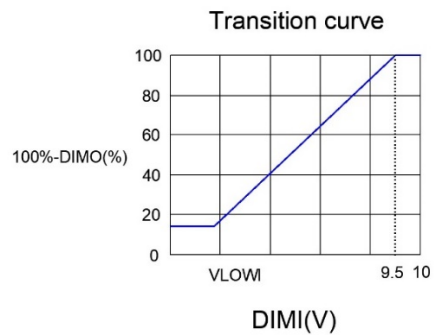
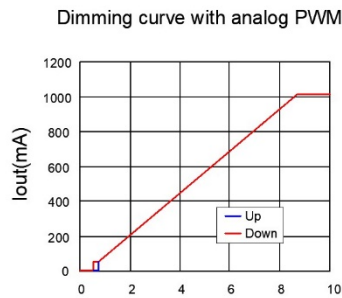
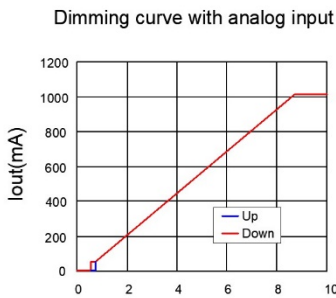
SCHEMATIC



DERATING GRAPH



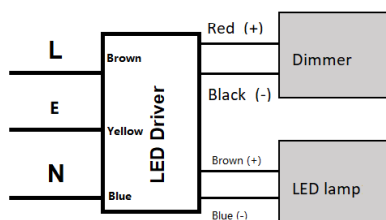
DIMMING GRAPH



Dimming curve with analog input

Dimming curve with analog PWM

WIRING DIAGRAM



Note:

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM- :0 to 10Vdc, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested, it is not suitable to be used with additional drivers.
- Dimming source current from power supply:100uA(typ.)
- DO NOT connect DIM- to Vo-
- Min.dimming level is about 8% and the output current is not defined when 0% <I_{out}<8%.
- The output current could drop down to 0% when dimming input is about 1KΩ or 0V PWM signal with 0% duty cycle.
- Product Case: protective Earth.

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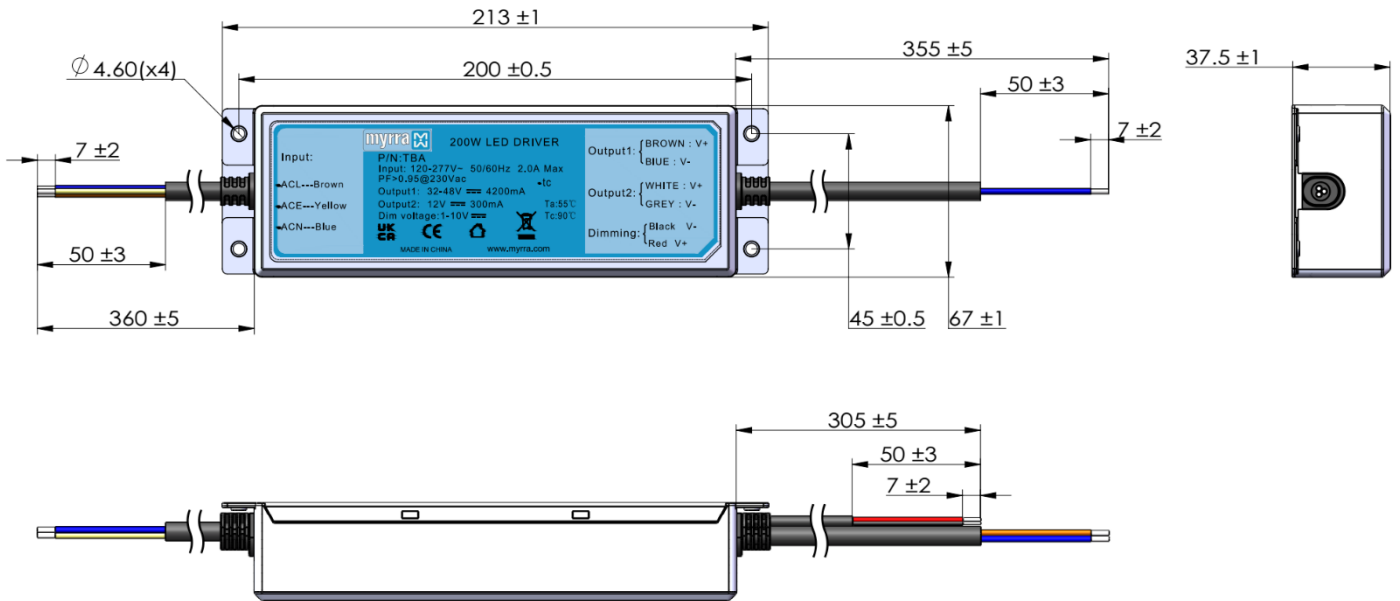
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DIMENSIONS



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