

75 Watt — PYG75W Series V3.0

Constant current&constant voltage LED driver with 0-10V or PWM dimming

Product family features

- Drive Mode: Constant Current, Constant Voltage, Dimming
- Technology: Active PFC Corrected 2-Stage Switch Mode
- Input Voltage: 100 to 277Vac (UL). 100 to 240Vac (ENEC)
- Output Power: 75Watt Max
- Dimming: Smooth & Continuous Dimming from 10% to 100%. LEDs turn on to any dimmed level without going to full brightness.
Constant Current Reduction (CCR) dimming methods.
0-10V: 2-wire Analog / PWM Control Dimming
- Efficiency: Up to 92%
- Warranty: 5 years
- Continuous, dimming from 10% to 100%. Set maximum output current
Set minimum dim
- The programming cable and the dimming cable are combined to simplify the user's operation
- Safety isolation between primary and secondary. Dimming control is isolated from AC input and DC output
- A rated lifetime of 50,000 hours @ Tc = 80°C
- Safety: UL8750, UL1310 Class 2, CSA22.2, EN61347, GB19510
- EMC: FCC 47CFR Part 15, Class B @120V & Class A @277V, EN55015, GB17625
- Inrush Current Limiting Circuitry: AC Power Line: line to line 6KV, line to earth 10KV eliminates circuit breaker tripping, switch arcing and relay failure
- Metal shell, Used with silicone potting. Meet the RoHS directive
- IP67, NEMA4 compliant for Dry, Damp, Wet Locations. Type HL



Technical data

Electrical data

75W 0-10V & PWM Dimming & Constant Current Part List

Product Model	US & CN Class 2	Output Voltage Range(Vdc)	Programable Current Range (mA)	Programable Current Range at Full Power(mA)	Output Power max (W)	Efficiency% @ Max Load				Uout max (V)
						Vout(V)	@120V	@230	@277	
PYG75W-56-C2100-RP-P-W	Yes	28-56	350-2100	1340 - 2100	75	36	89.7	90.8	91.5	59.0
PYG75W-107-C1050-RP-P-W	No	53-107	350-1050	700 - 1050	75	72	90.8	92.3	92.3	115.0
PYG75W-56-C2100-RP-P	Yes	28-56	350-2100	1340 - 2100	75	36	89.7	90.8	91.5	59.0
PYG75W-107-C1050-RP-P	No	53-107	350-1050	700 - 1050	75	72	90.8	92.3	92.3	115.0

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75W Constant Voltage Part List

Product Model	US & CN Class 2	Output Voltage (Vdc)	Output Current Range(mA)	Voltage Accuracy	Power Output max(W)	Efficiency% @ Max Load		
						@120V	@230	@277
PYG75W-24-P-W	Yes	24	312-3125	±5%	75	88	90	90
PYG75W-48-P-W	Yes	48	156-1560	±5%	75	90.5	92.3	92.5
PYG75W-24-P	Yes	24	312-3125	±5%	75	88	90	90
PYG75W-48-P	Yes	48	156-1560	±5%	75	90.5	92.5	92.5

Note: Maximum efficiency measured at 230VAC input

Product may be suffixed by "-P", which means suitable for UL listed & class P models, without suffix "-P" are suitable UL component use only

Product may be suffixed by "-W", which means suitable for EU or UL wet location use models, without suffix "-W" are suitable dry/damp location use only

Electrical Specifications

	Parameter	Min	Typ	Max	Notes / Conditions
Input	Input Voltage	90V		305V	
	Input Frequency	47Hz	50/60Hz	63Hz	
	Input AC Current			0.78A	Measured at 120 Vac / 60Hz Input, Output Full Load
				0.44A	Measured at 230 Vac / 50Hz Input, Output Full Load
				0.38A	Measured at 277 Vac / 60Hz Input, Output Full Load
	Inrush Current (Peak)			50A	Measured at 120 Vac / 60Hz Input, Output Full Load
				95A	Measured at 277 Vac / 60Hz Input, Output Full Load
	No-load Power			5.0W	No-load
	Leakage Current			400μA	Measured at 120 Vac / 60Hz Input, Output Full Load
			750μA	Measured at 277 Vac / 60Hz Input, Output Full Load	
THD			20%	Measured at 120, 230, 277 Vac Input, Output ≥ 60% Load (Output >45W)	
Power Factor (PF)	0.90				
Output	DC Output Voltage	Per Table	Per Table	Per Table	Per Tables on Page 1,2
	Output Constant Current	-5%	Per Table	+5%	Per Tables on Page 1,2
	Output Power			Per Table	Per Tables on Page 1,2
	Output LF Current Ripple(<120Hz)		5%	10%	20MHz BW, Full load output Ripple Index is defined as [(Ymax-Ymin)/(Ymax+Ymin)] * 100%. Y may be V or I
	Line Regulation	-2%		+2%	Measured at 120, 230, 277 Vac / 60Hz Input, Output Full Load
	Load Regulation	-5%		+5%	Measured at 120, 230, 277 Vac / 60Hz Input
	Start-up Time			500ms	Measured at 120, 230 Vac / 60Hz Input, Output Full Load
				450ms	Measured at 277 Vac / 50Hz Input, Output Full Load
	Output Overshoot	-2%		+10%	Measured at 120, 230, 277 Vac Input, When power on or off
Hold-up Time		10ms		Typical @ 277 Vac Input, Output Full Load	

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Technical data

Electrical Specifications

Protection	Input undervoltage protection	70V 75V	80V 85V	90V 95V	The input voltage is lower than the protection voltage, and the output is turned off
	Output Short Circuit (SCP)	No Damage			
	Output Over Current (OCP)	+10% Io Constant Current Limiting circuit			
	Output Over Voltage (OVP)	120% Vo No Damage			
General	Cooling	Convection			
	MTBF	480,000 hours Measured at 230 Vac input, 100% Load and Tc=25°C			
	Life Time	50,000 hours @ Tc = 80°C			
Environmental	Case Temperature (Tc)	-30 °C +90 °C			Measured at location specified on case
	Operating Temperature (Ta)	-40 °C +55 °C			This is a reference range. Tc controls temperature range
	Storage Temperature (Ts)	-40°C +85 °C			Non operating temperature range
	Operating Humidity	5% RH 95% RH			Relative Humidity. Non-condensing
	Vibration	5 Hz 55 Hz			2G, 10 minutes / 1 cycle, period 30 minutes, each along X, Y, Z axis

		Parameter	Min	Typ	Max	Notes / Conditions
Dimming	0-10V Dimming	Input Absolute Voltage	-2.0V	10V	15V	Purple Wire
		Output Source Current	200uA	300uA	450uA	Purple Wire
		Output Current Range in 0-10V Dimming	10%		100%	CCR output
		Output Current in 0-10V Pin Open		Normal	15V	
		Output Current in 0-10V Pin Short Circuit		Min		CCR output
	PWM Dimming	Input Absolute Voltage	-2.0V	10V	15V	
		Input Current on PWM pin	200uA	300uA	450uA	
		PWM Frequency	200Hz	1KHz	1.5KHz	
		PWM Duty	0%		100%	
		Output Current Range in PWM Dimming	10%		100%	CCR output
		Output Current in PWM Pin Open		Normal	15V	
		Output Current in PWM Pin Short Circuit		Min	1000uA	
	Dimming output range	PYG75W-56-C2100-Y-P-W	10%loset		loset	1340 mA ≤ loiset ≤ 2100mA
		PYG75W-107-C1050-Y-P-W	10%loset		loset	700 mA ≤ loiset ≤ 1050mA
		PYG75W-56-C2100-Y-P-W	134mA		loset	350 mA ≤ loiset ≤ 1340mA
		PYG75W-107-C1050-Y-P-W	70mA		loset	350mA ≤ loiset ≤ 700mA

Product datasheet

Technical data

Electrical Specifications

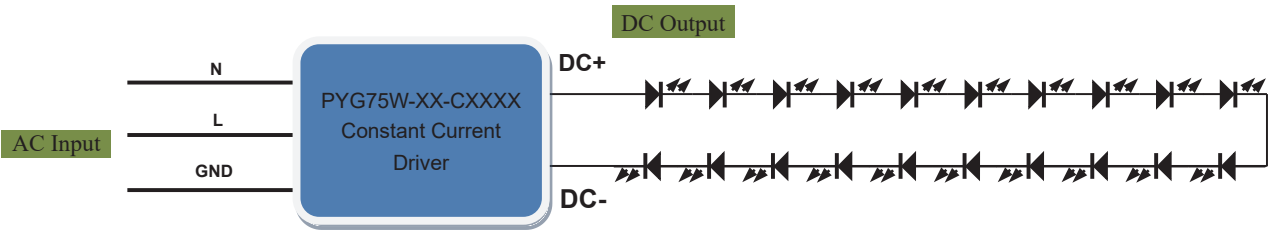
	Category	Standards / Notes	
Safety Compliance	UL / cUL	UL8750, CAN/CSA-C22.2 No. 250.13	
	CCC	GB 19510.1, GB 19510.14	
	ENEC & CE	EN 61347-1, EN 61347-2-13	
	Withstand Voltage	Input to Output: 2000 Vac (UL), 3750 Vac (CE, TUV, ENEC); PE to Input:1500 Vac; Dim to Input: 2500 Vac, Dim to Output: 2500 Vac	
	Isolation Resistance	Input to Output: >10MΩ, 500Vdc @ 25°C, 70% RH	
	Dimming	DIM+ (Purple) / DIM- (Pink) are Class 2 Isolated from AC Input and DC Output	
EMC Compliance	EMI	FCC	FCC 47CFR Part 15, ANSI C63.4
		CCC	GB17743, GB17625.1
		CE	EN55015
			EN 61000-3-2, EN 61000-3-3
		Energy Star	Energy Star transient protection: Ballast or driver shall comply with ANSI/IEEE C62.41.1-2002 and ANSI/IEEE C62.41.2-2002, Category A operation. The line transient shall consist of seven strikes of a 100KHZ ring wave,2.5KV level, for both common mode and differential mode
	EMS	EN 61000-4-2	Electrostatic Discharge (ESD): 8KV air discharge, 4KV contact discharge
		EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
		EN 61000-4-4	Electrical Fast Transient / Burst-EFT
		EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 6KV, line to earth 10KV
		EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
		EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

Note: The above test data are in the condition of 25 °C ambient temperature, except for the marked temperature

Typical Applications

LED Forward voltage: VF = 3.0V~3.5V

Constant Current Driver

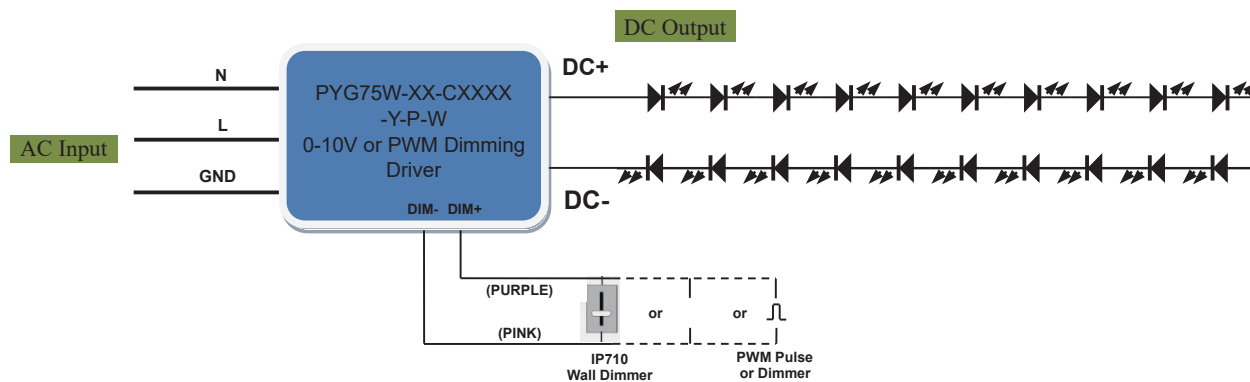


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Typical Applications

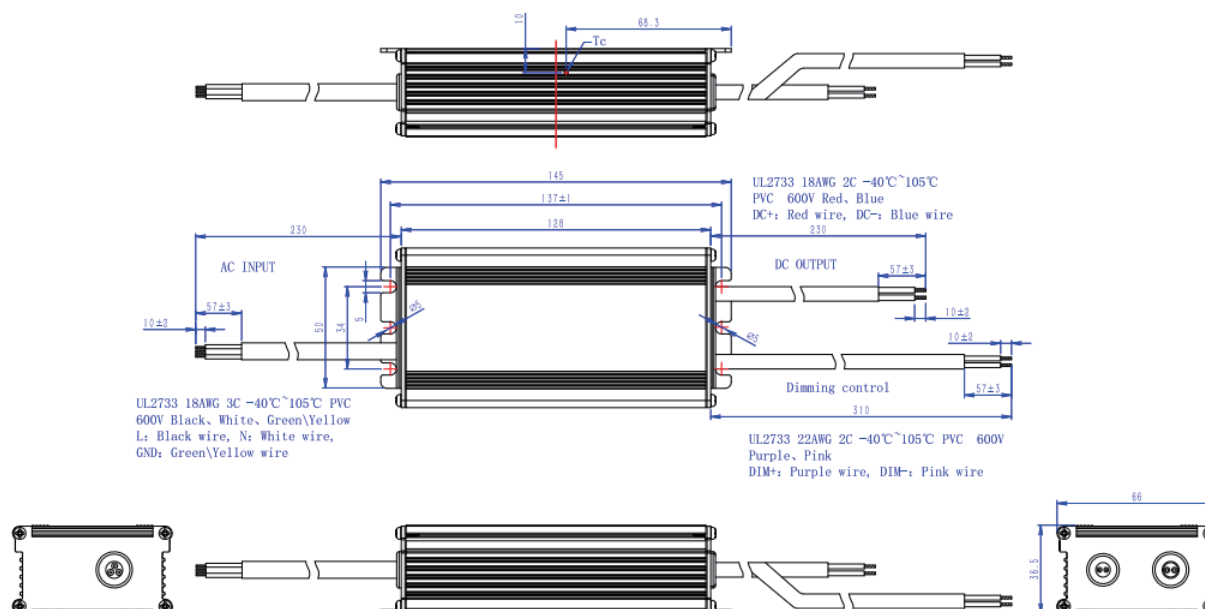
LED Forward voltage: $V_F = 3.0V \sim 3.5V$

0-10V or PWM Dimming Driver



Appearance information

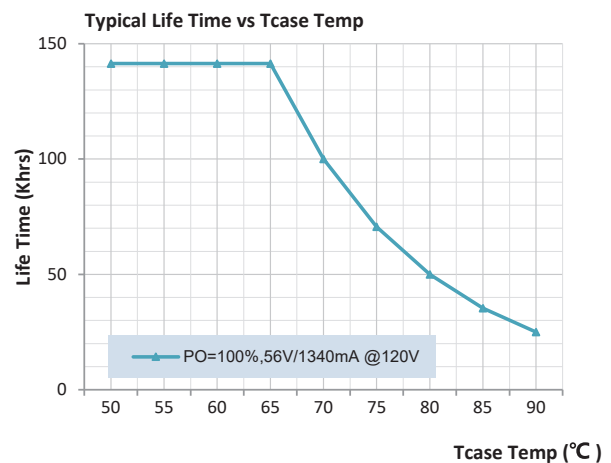
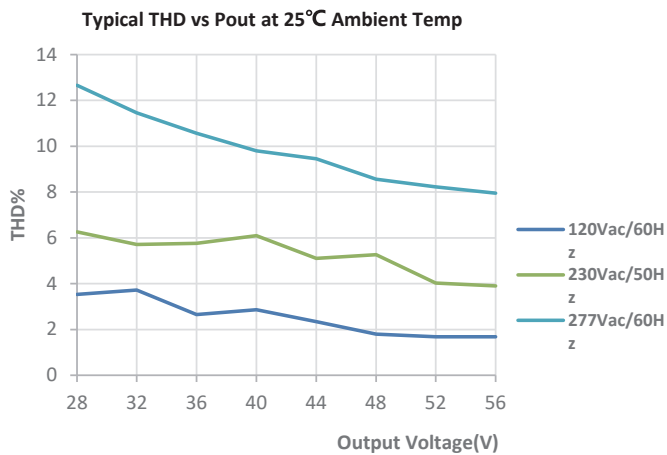
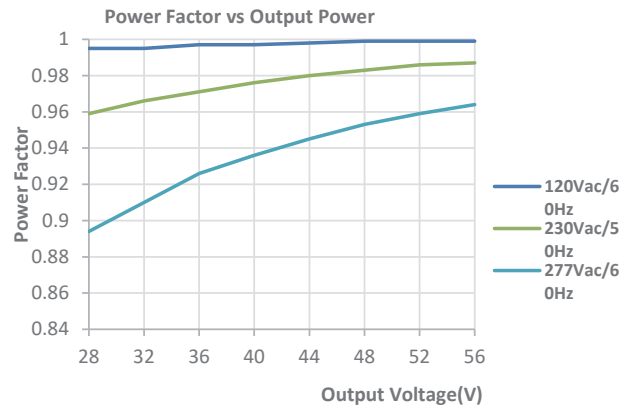
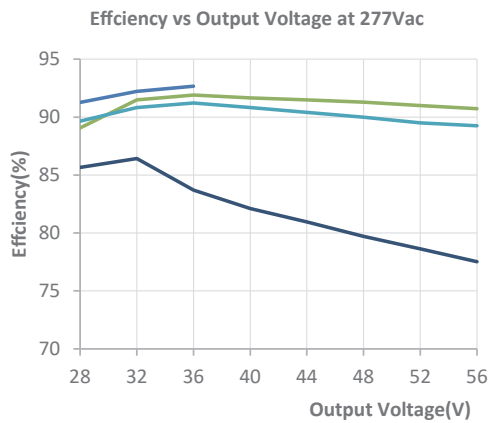
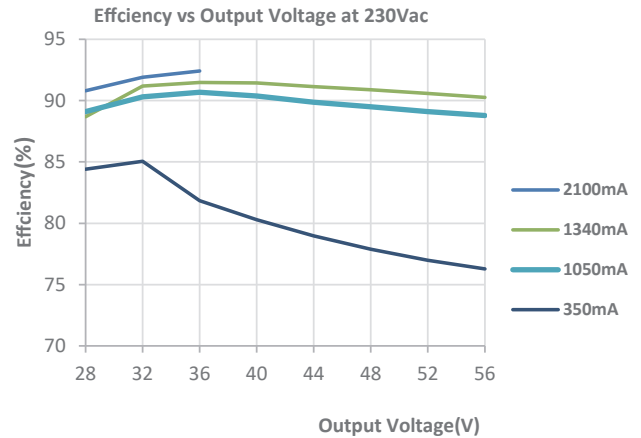
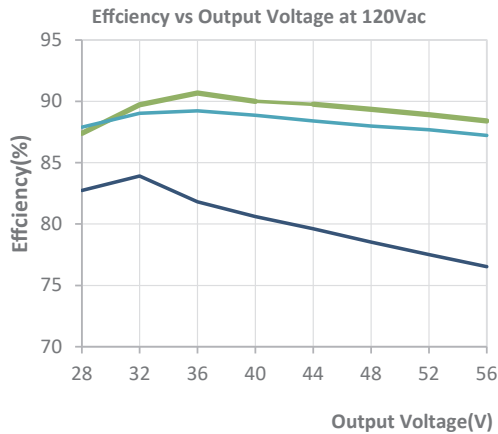
Product Size



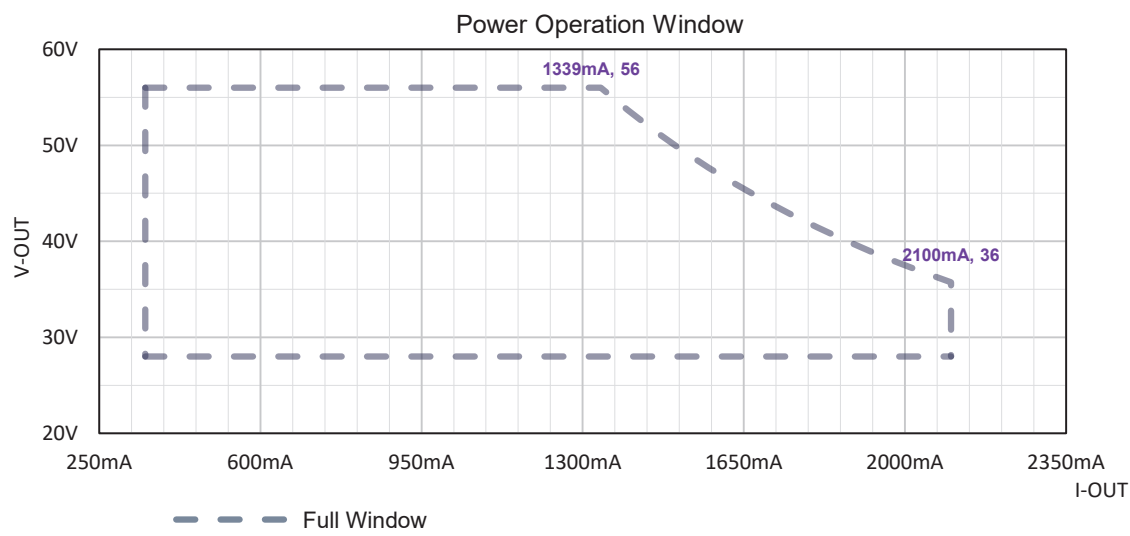
Note: The above is the UL size drawing

Product datasheet

Characteristic Curve



Operating Window (PYG75W-56-C2100)



Operating Window (PYG75W-56-C2100)



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Installation

UL Cable used in Dry & Damp Location:

AC input cable, the three cores, ANSI/UL2733 18AWG 3C -40°C ~105°C PVC 600V Black、 White、 Green\Yellow

Cable Length: 230mm, External stripping 57mm, Stripping on the tin: 10mm.

Where: L — Black wire, N — White wire, GND — Green\Yellow wire

DC output cable, the two cores, ANSI/UL2733 18AWG 2C -40°C ~105°C PVC 600V Red、 Blue

Cable Length: 230mm, External stripping 57mm, Stripping on the tin: 10mm.

Where: DC+ — Red wire, DC- — Blue wire

Dimming control cable, the two cores, ANSI/UL2733 22AWG 2C -40°C ~105°C PVC 600V Purple、 Pink

Cable Length: 310mm, External stripping 57mm, Stripping on the tin: 10mm.

Where: DIM+ (0-10V or PWM) input — Purple wire, DIM- — Pink wire

UL & CE, CCC, ENEC Standard used in Wet Location:

AC input for connection the three cores copper wire connection.

Outdoor Type : IEC 60245 /VDE 0282-4 / H05RN-F (SJOW) 17AWG 3x1.0mm2 -40°C~105°C Rubber 300V Brown、 Blue、 Green\Yellow

Cable Length: 230mm, stripping on the tin: 10mm.

Where: L — Brown wire, N — Blue wire, GND — Yellow/Green wire

DC output for connection the two core copper wire.

Outdoor Type : IEC 60245 /VDE 0282-4 / H05RN-F (SJOW) 17AWG 2x1.0mm2 -40°C~105 °C Rubber 300V Brown、 Blue

Cable Length: 230mm, stripping on the tin: 10mm.

Where: DC+ — Brown wire, DC- — Blue wire

The dimmer control input is the two copper wires. ANSI/UL21996 22AWG 2C -40°C ~105°C PVC 300V Purple、 Pink

Cable Length: 310mm, stripping on the tin: 10mm.

Where: DIM+ (0-10V or PWM) input — Purple wire, DIM- — Pink wire