

40Watts Single Output LED Driver



Features:

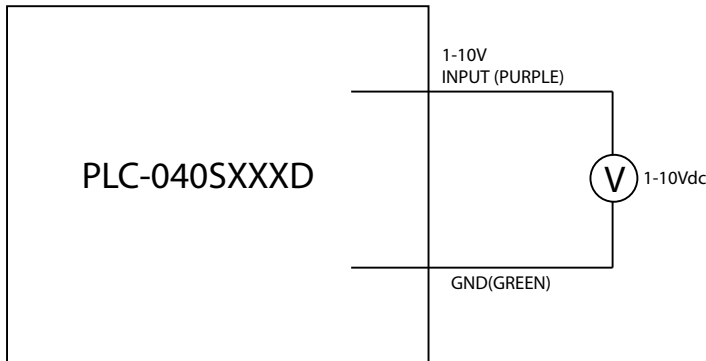
- Constant Current Design
- Dimming Control
- Universal AC input/ Full Range
- Built-in Active PFC function, PF 0.95 Typical
- High Efficiency (Up to 88%)
- Output Protections: OVP/SCP/OTP
- Lightning Protection
- Class 2 Power Unit (See Note)
- Waterproof (IP65)
- 3 Year Warranty



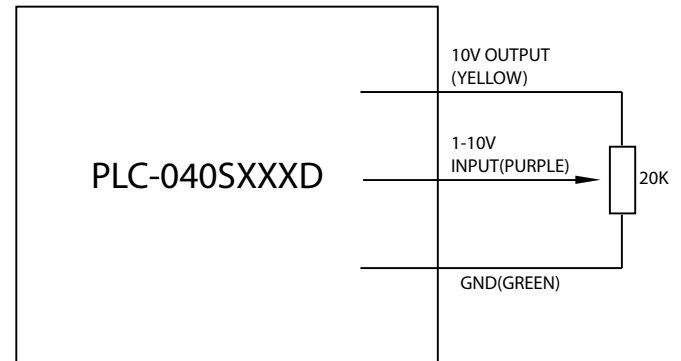
Model		PLC-040S035D	PLC-040S045D	PLC-040S070D	PLC-040S105D	PLC-040S128D	PLC-040S140D	PLC-040S166D	PLC-040S222D	PLC-040S333D
Output Characteristics										
Rated Current See Note		0.35A (1)	0.45A (1)	0.70A (2)	1.05A (3)	1.28A (3)	1.40A (3)	1.66A (3)	2.22A (3)	3.33A (3)
Voltage Range		38~114V	30~89V	18~54V	12~36V	10~29V	10~25V	8~23V	6~16V	4~11V
Ripple and Noise (max) Note 1		±10% Vo								
Voltage Accuracy		±5% Vo								
Line Regulation		±1% Vo								
Load Regulation		±5% Vo								
Rise Time		20mS Max @ Rated Load								
Hold-up Time (Typ.)		8.5mS Min (110VAC input, full load), 10mS Min (220VAC input, full load)								
Input Characteristics										
Voltage Range		90VAC~305VAC								
Frequency Range		47Hz-63Hz								
Power Factor (Typical)	110VAC	>0.95	>0.95	>0.95	>0.95	>0.95	>0.95	>0.95	>0.95	>0.95
	220VAC	>0.90	>0.90	>0.90	>0.90	>0.90	>0.90	>0.90	>0.90	>0.90
Efficiency (Typical)		88%	88%	87%	87%	87%	87%	86%	85%	84%
AC Current (max)		0.6A @ 100-277VAC Input Full Load								
Inrush Current (max)		65A @ 230VAC, 25°C								
Leakage Current		0.5mA max @ 277VAC								
Protection										
Over Temperature (OTP)		110°C (Temperature of internal components); shut down, auto recover after the temperature decreases								
Over Voltage (OVP) Note 2		1.2~1.7Vo								
Short Circuit (SCP)		Long-term mode, auto recovery								
Environmental Characteristics										
Operating Temperature		-35°C~70°C								
Operating Relative Humidity		5% RH to 95% RH								
Storage Temperature		-40°C~85°C, 5% to 100% RH non-condensing								
Vibration		10 to 300Hz sweep at constant acceleration of 1.0G(Breadth: 3.5mm) for 1 Hour for each of the perpendicular axes X, Y, Z								
Waterproof Rating		IP65								
Safety Standards		UL8750, Compliance to UL1012 UL935, IEC61347								
Withstand Voltage		L/N-GND: 4kV, L-N: 2kV								
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 EN61000-3-2, 3 EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61547								
Characteristics										
Life Time		More than 78,000Hrs (25°C, 80% Load)								
MTBF (MIL-HDBK-217F)		More than 492,000Hrs (25°C, 80% Load)								
Dimension (LxWxH)		95x70x32mm								
Note		1. Ripple & Noise: Measured by 20 MHz bandwidth oscilloscope and the output paralleled with a 0.1 uF ceramic capacitor and a 10 uF electrolytic capacitor. 2. Latch Mode: The power supply shall return to normal operation only after the power is turned on again (1) Non-Class 2 output (USR & CNR) (2) Class 2 output (USR); Non-Class 2 output (CNR) (3) Class 2 output (USR & CNR)								

DIMMING CONTROL

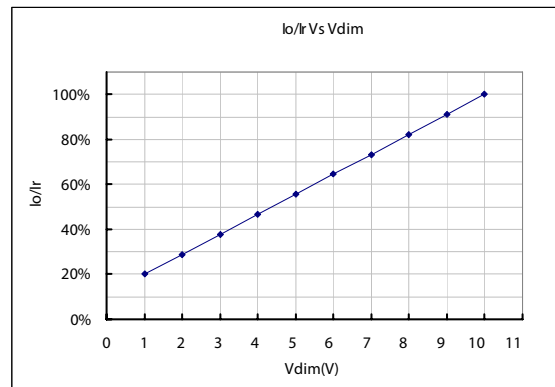
The dimmer control may be operated from either a potentiometer or from an input signal of 1 – 10 Vdc. Two recommended implementations are provided below.



Implementation 1: DC Input



Implementation 2: Potentiometer Control

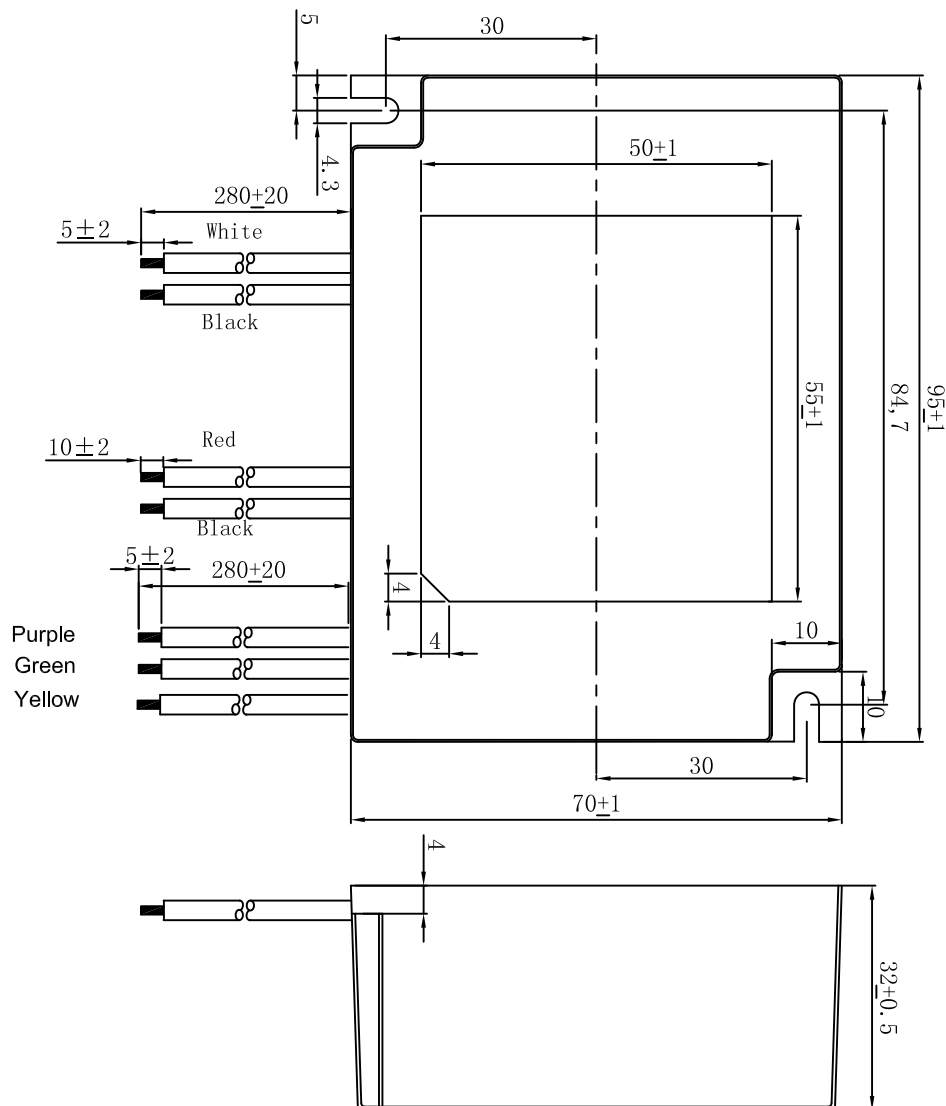


Notes:

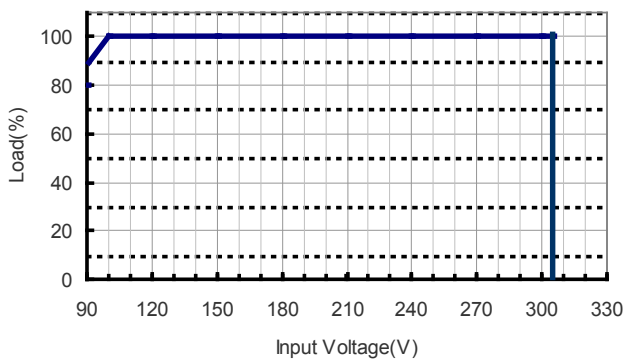
1. I_o is actual output current and I_r is rated current.
2. If the dimming function is not used, please short 10V output pin (yellow) and 1-10V input pin (purple). The output current is about 92% I_r when the 1-10V input pin is floating.
3. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold (approx. 50% of the max. output voltage for any given model).
4. The dimming voltage can be tuned down to less than 1V, and the output current will be decreased to about 10% I_r ; but the connected LEDs may flicker. Keeping dimming voltage greater than 1V is strongly recommended.
5. Do not connect the GND of dimming to the output; otherwise, the LED driver will not work normally.

MECHANICAL SPECIFICATIONS

UNIT: mm



Derating Curve



Ambient Temperature vs. Load

