Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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40Watts Single Output LED Driver

Qualtek Electronics Corporation

PLC-040 D Series

Features:

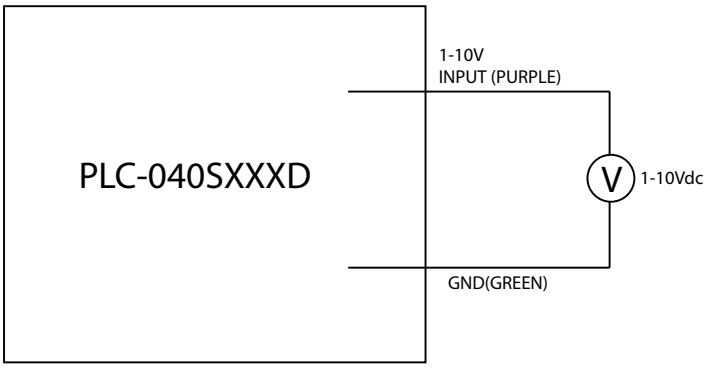
- Constant Current Design
- Dimming Control
- Universal AC input/ Full Range
- Built-in Active PFC function, PF 0.95 Typical
- High Efficiency (Up to 88%)
- Output Protections: OVP/SCP/OTP
- Lightning Protection
- Class 2 Power Unit (See Note)
- Waterproof (IP65)
- 3 Year Warranty

CE c UL us RoHS Compliant

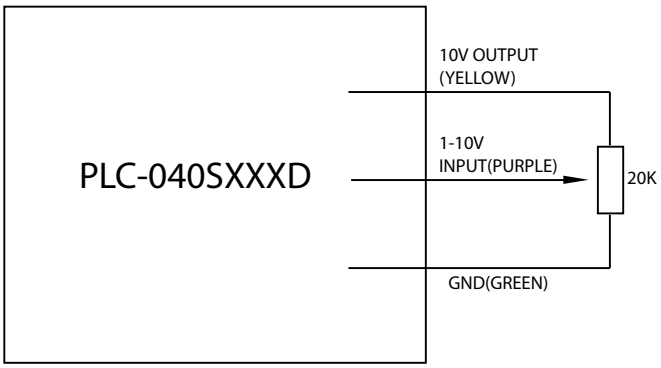
Model	PLC-040S035D	PLC-040S045D	PLC-040S070D	PLC-040S105D	PLC-040S128D	PLC-040S140D	PLC-040S166D	PLC-040S222D	PLC-040S333D
Output Characteristics									
Rated Current See Note	0.35A (1)	0.45A (1)	0.70A (2)	1.05A (3)	1.28A (3)	1.40A (3)	1.66A (3)	2.22A (3)	3.33A (3)
Voltage Range	38~114V	30~89V	18~54V	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
Power Factor (Typical) 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	-25°C~50°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

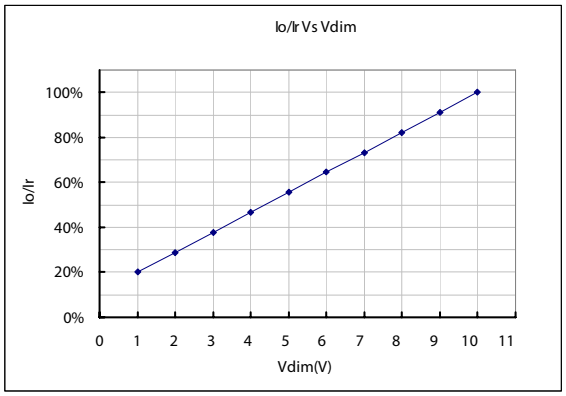
The dimmer control may be operated from either a potentiometer or from an input signal of 1 – 10 Vdc. Two recommended implementations are provided below.



Implementation 1: DC Input



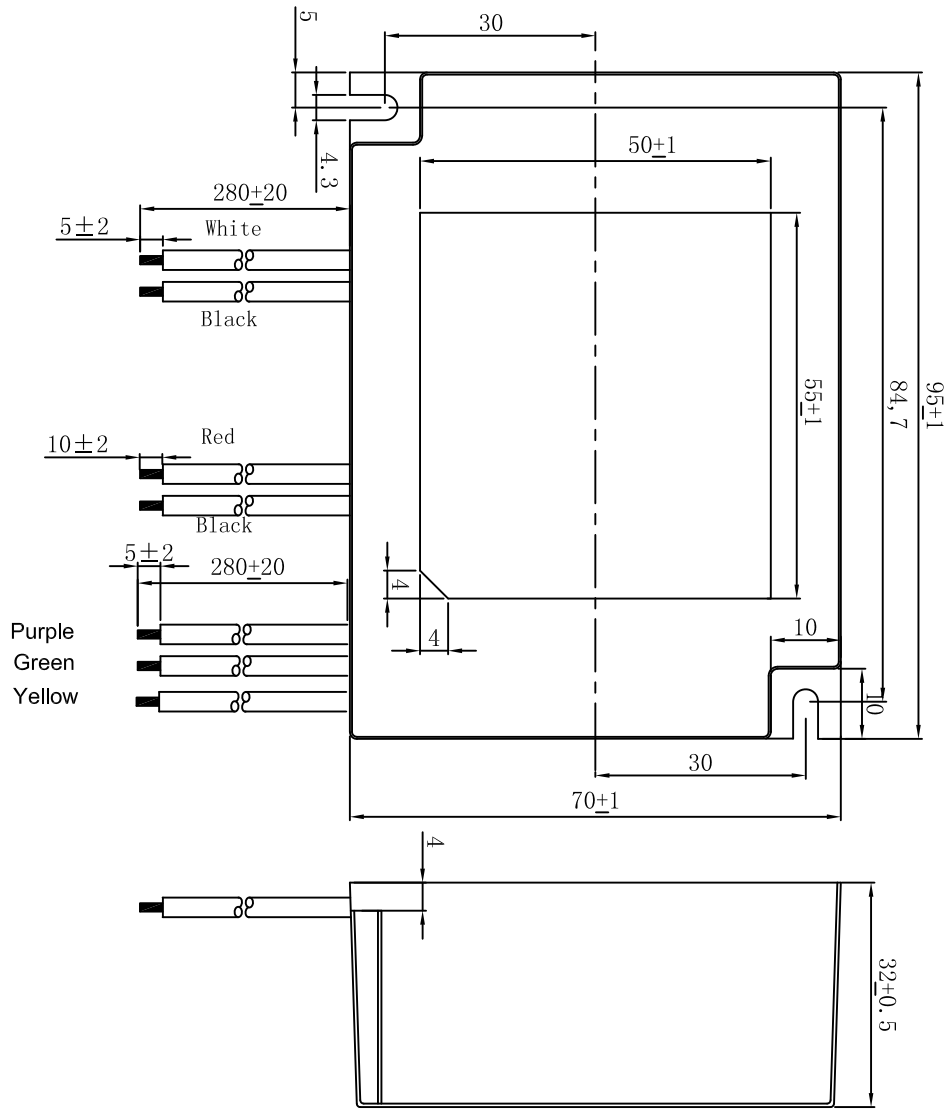
Implementation 2: Potentiometer Control



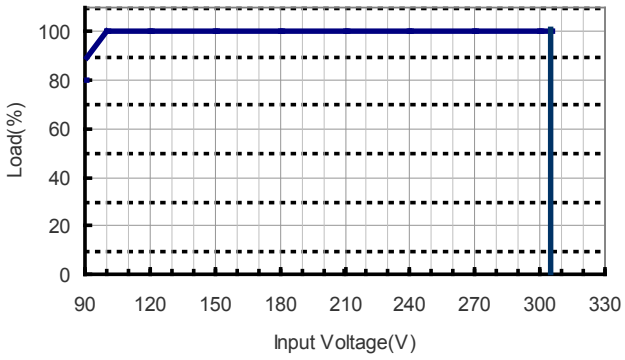
Notes:
1. Io is actual output current and Ir is rated current.
2. If the dimming function is not used, please short 10 V output pin (yellow) and 1-10 V input pin(purple). The output current is about 92% Ir when the 1-10V input pin is floating.
3. For the driver to operate properly, the load voltage must 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% Ir; 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