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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50Watts Single Output LED Driver

Qualtek Electronics Corporation

PLC-050 D Series

Features:

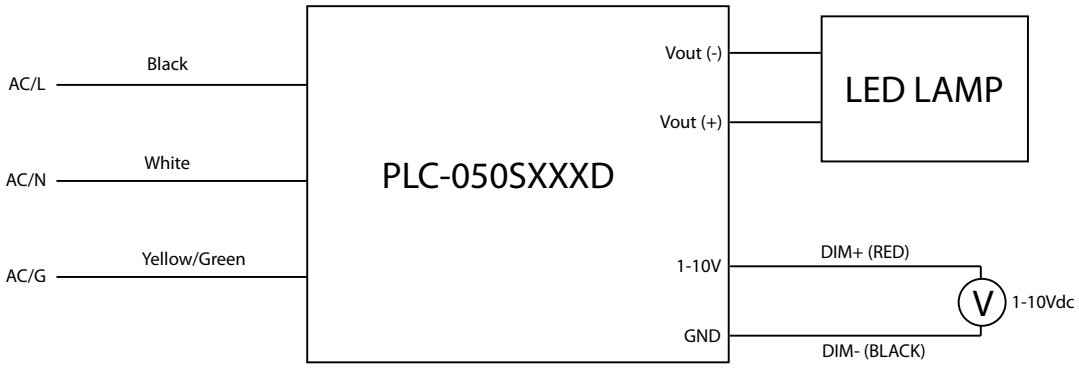
- Constant Current Design
- Dimming Control
- Universal AC input/ Full Range
- Built-in Active PFC function, PF 0.98 Typical
- High Efficiency (Up to 89%)
- Output Protections: OVP/SCP/OTP
- Lightning Protection
- Class 2 Power Unit (See Note)
- Waterproof (IP67)
- 5 Year Warranty

CE cULus RoHS Compliant

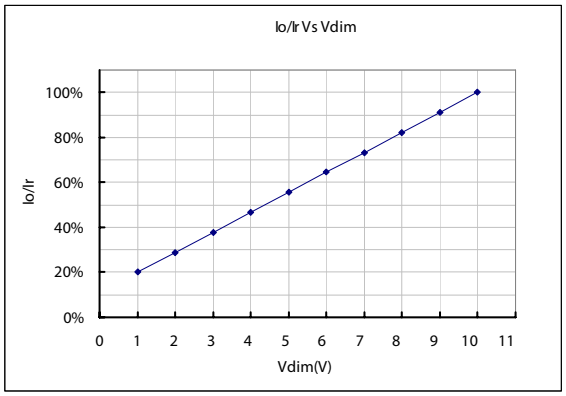
Model		PLC-050S035D	PLC-050S045D	PLC-050S070D	PLC-050S110D	PLC-050S140D	PLC-050S175D	PLC-050S210D	PLC-050S280D	PLC-050S330D	PLC-050S420D
Output Characteristics											
Rated Current See Note		0.35A (1)	0.45A (1)	0.70A (1)	1.10A (2)	1.40A (3)	1.75A (3)	2.10A (3)	2.80A (3)	3.30A (1)	4.20A (1)
Voltage Range		47~142V	37~110V	24~72V	16~48V	12~36V	10~29V	8~24V	6~18V	5~15V	4~12V
Ripple and Noise (max) Note 1		±10% Vo									
Voltage Accuracy		±5% Vo									
Line Regulation		±1% Vo									
Load Regulation		±3% 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	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98	>0.98
	220VAC	>0.92	>0.92	>0.92	>0.92	>0.92	>0.92	>0.92	>0.92	>0.92	>0.92
Efficiency (Typical)		89%	88%	87%	87%	87%	87%	86%	84%	84%	83%
AC Current (max)		0.8A @ 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		1.2~1.4Vo									
Short Circuit (SCP)		Long-term mode, auto recovery									
Environmental Characteristics											
Operating Temperature		-35°C~70°C									
Operating Relative Humidity		10% RH to 100% 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		IP67									
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 50,000Hrs (25°C, 80% Load)									
MTBF (MIL-HDBK-217F)		More than 490,000Hrs (25°C, 80% Load)									
Dimension (LxWxH)		199x42.5x34mm									
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 an input signal of 1 – 10 Vdc.



Implementation: DC Input



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 (Black) and 1-10 V input pin(Red).
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. 33% 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