GPF-40D series

40W single output constant voltage/current power supply with 3 in 1 dimming function

■ **Features:**

- CV + CC mode power supply
- Built-in active PFC function
- Universal AC input / Full range
- Protections: Short-circuit / Over current / Over voltage
- Built-in 3 in 1 dimming function: 0-10V or PWM or resistance
- Cooling by free air convection
- 100% full load burn-in test
- Isolation class II
- Fully encapsulated with IP67 level

IP67 CE SELV

ELECTRICAL SPECIFICATION

MODEL	GPF-40D-350	GPF-40D-700	GPF-40D-1050	GPF-40D-1400	GPF-40D-1750
OUTPUT					
NO OUTPUT DC VOLTAGE (max.)	126V	61V	41V	31V	26V
VOLTAGE RANGE [2]	72 ÷ 120V	36 ÷ 60V	24 ÷ 40V	18 ÷ 30V	15 ÷ 24V
RATED CURRENT	350mA	700mA	1050mA	1400mA	1750mA
RATED POWER	42W	42W	42W	42W	42W
LINE REGULATION	± 1%				
LOAD REGULATION	± 2%				
TOLERANCE [4]	± 3%				
CURRENT ACCURACY	± 3%				
RIPPLE & NOISE (max.) [3]	$5V_{P-P}$	$3V_{P-P}$	$3V_{P-P}$	$2V_{P-P}$	$2V_{P-P}$
SETUP, RISE, HOLD UP TIME [5]	1000ms, 80ms, 60ms / 230VAC; 1000ms, 80ms, 30ms / 115VAC at full load				
INPUT					
VOLTAGE RANGE	85 ÷ 277VAC				
FREQUENCY RANGE	47 ÷ 63Hz				
EFFICIENCY (typ.)	88%	88%	88%	87%	86%
AC CURRENT (typ.)	0.65A/115VAC, 0.35A / 230VAC				
POWER FACTOR	PF > 0.95 / 230VAC; PF > 0.98 / 115VAC at full load				
INRUSH CURRENT (typ.)	65A / 230VAC				
LEAKAGE CURRENT(max.)	2mA / 240VAC				
PROTECTIONS					
OVER CURRENT	Range: 95 ÷ 108% rated output current				
	Type: constant current limiting – CC mode. Auto-recovery.				
SHORT CIRCUIT	Type: hiccup mode, recovers automatically after fault conditions is removed.				
OVER VOLTAGE	150 ÷ 180V	75 ÷ 95V	52 ÷ 65V	37.5 ÷ 52V	30 ÷ 40V
	Type: hiccup mode, recovers automatically after fault conditions is removed.				

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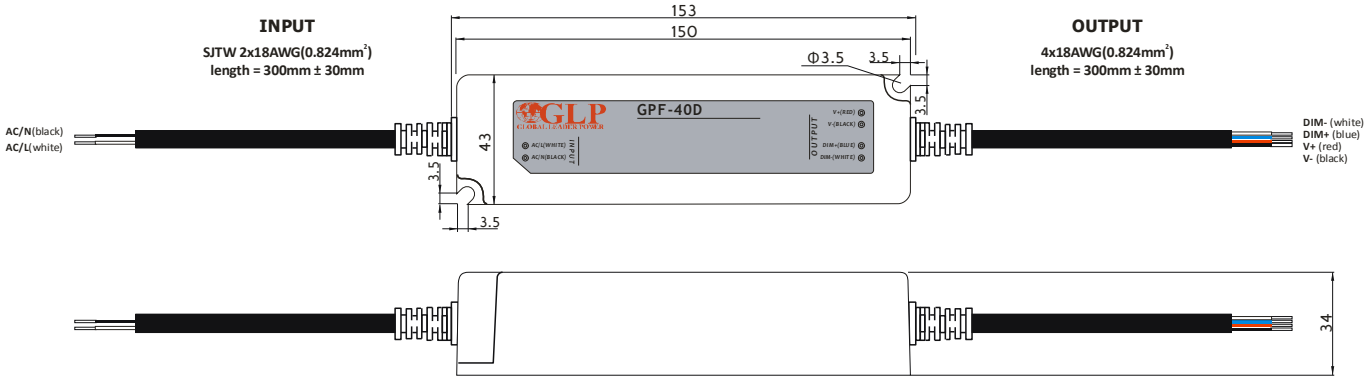
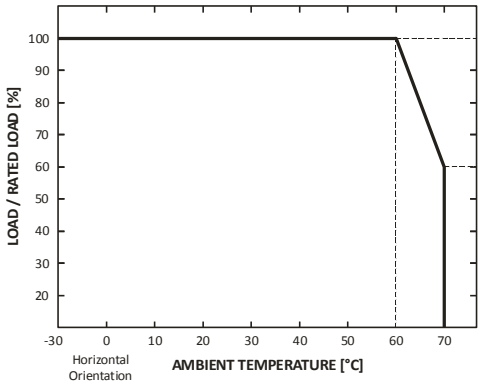
ENVIRONMENT	
WORKING TEMPERATURE	-30°C ÷ 70°C (Refer to Derating Curve)
WORKING HUMIDITY	20 ÷ 95% RH non-condensing
STORAGE TEMPERATURE AND HUMIDITY	-40°C ÷ 80°C, 10 ÷ 95% RH non-condensing
TEMPERATURE COEFFICIENT	± 0.03% / °C (0°C ÷ 50°C)
VIBRATION	10 ÷ 500Hz, 5G, 10min / cycle, period for 72min. each along X, Y, Z axes
SAFETY & EMC REGULATIONS	
SAFETY STANDARDS	Compliance to EN61347-1, EN61347-2-13, IP67
WITHSTAND VOLTAGE	I-P/O-P: 3kVAC
ISOLATION RESISTANCE	I-P/O-P: 100MΩ/500VDC/25°C/70%
EMC EMISSION	Compliance to EN55015
EMC IMMUNITY	Compliande to EN61547; EN61000-4-2, -3, -4, -5, -6, -8, -11
HARMONIC CURRENT	Compliance to EN61000-3-3; EN61000-3-2 class C(≥ 60% load)
OTHERS	
DIMENSIONS	153 x 43 x 34mm
WEIGHT AND PACKING	0.4kg; 40pcs./box; box weight and dimensions: 17kg, 34 x 25 x 32cm

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Constant current operation region is suitable for rated current (if dimming function is not used, refer to section "Dimming operation"). This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF i 47μF parallel capacitor.
4. Tolerance incudes set up tolerance, line regulation and load regulation.
5. Setup and rise time is measured from 0 to 90% rated output voltage.
6. Power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment must be re-qualify to comply with EMC Directives.

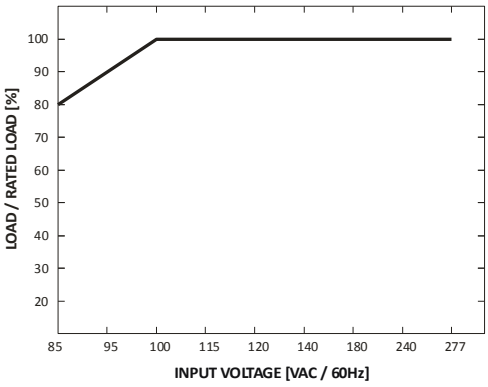
MECHANICAL SPECIFICATION



DERATING CURVE



STATIC CHARACTERISTICS



DIMMING OPERATION

For use dimming function connect dimmer to DIM+ and DIM- terminals. You can use dimming function by one of three ways:

1. *By variable resistance 10kΩ÷100kΩ.*

Resistance	0kΩ	10kΩ	20kΩ	30kΩ	40kΩ	50kΩ	60kΩ	70kΩ	80kΩ	90kΩ	100kΩ	Przerwa
Output current [±3%]	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%

2. *By variable DC voltage 1÷10V.*

DC Voltage	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	Przerwa
Output current [±3%]	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%

3. *By variable PWM signal 10%÷100%, f > 1kHz, U = 10V.*

PWM	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	Przerwa
Output current [±3%]	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%

Through dimming function output current is adjusted within range 0% ÷ 100% of rated current and this is constant current mode.