

# GEHC-026 series

26W Constant Current LED Driver

## Features:

- AC input voltage range: 108-305VAC
- Built-in active PFC function
- Protections: Short Circuit / Over Voltage / Over Temperature
- Cooling by free air convection
- Surge immunity: Differential Mode - 4kV, Common Mode - 6kV
- IP67 design for indoor and outdoor applications
- Suitable for dry/damp/wet locations

## Application:

- LED street
- Industrial lighting
- Landscape lighting



## DESCRIPTION

The GEHC-026 is a 26W, constant-current, IP67 LED driver that operates from 108-305Vac input with excellent power factor and low THD. It is created for industrial lights, tunnel and street lights. The high efficiency of these drivers and compact metal case enable them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

## MODEL INFORMATION

MODEL NUMBER	INPUT VOLTAGE RANGE [VAC]	OUTPUT POWER [W]	OUTPUT VOLTAGE RANGE [VDC]	OUTPUT CURRENT [A]	TYPICAL EFFICIENCY	POWER FACTOR	
						115VAC	230VAC
GEHC-026B074	108 ÷ 305	26	37 ÷ 74	0.35	88%	0.99	0.96
GEHC-026B037	108 ÷ 305	26	20 ÷ 37	0.70	87%	0.99	0.96
GEHC-026B030	108 ÷ 305	26	20 ÷ 30	0.86	86%	0.99	0.96
GEHC-026B025	108 ÷ 305	26	18 ÷ 25	1.05	86%	0.99	0.96

### Notes:

1. All specifications are measured at 25°C ambient temperature if no specific note.

## INPUT SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
INPUT VOLTAGE	108VAC	-	305VAC	Refer to derating curve for more details
INPUT FREQUENCY	47Hz	-	63Hz	-
LEAKAGE CURRENT	-	-	0.75mA	240VAC/60Hz
INPUT AC CURRENT	-	-	0.35A	108VAC, full load
INRUSH CURRENT	-	-	50A	230VAC, full load
POWER FACTOR	0.95	0.96	-	230VAC, full load
THD	-	-	15%	120 ÷ 277VAC, 75 ÷ 100% load
	-	-	10%	120 ÷ 230VAC, 75 ÷ 100% load

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## Ⓢ OUTPUT SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
<b>OUTPUT CURRENT TOLERANCE</b>	-8% I <sub>SET</sub>	-	+8% I <sub>SET</sub>	Full load
<b>TOTAL OUTPUT CURRENT RIPPLE (PK-PK)</b>	-	100%	150%	Full load and LED load, ripple is different with difference LED load. 20MHz BW.
<b>STARTUP OVERTHOOT CURRENT</b>	-	-	10% I <sub>o</sub>	120 ÷ 277VAC, full load and LED load
<b>NO LOAD OUTPUT VOLTAGE</b> GEHC-026B074 GEHC-026B037 GEHC-026B030 GEHC-026B025	-	-	100V 60V 50V 50V	-
<b>LINE REGULATION</b>	-	-	±5%	25°C ± 10°C ambient temperature, input voltage changes from 115VAC to 277VAC
<b>LOAD REGULATION</b>	-	-	±5%	25°C ± 10°C ambient temperature, 230 VAC input load changes from 70% to 100%
<b>TURN-ON DELAY TIME</b>	-	-	3s	115VAC, full load
	-	0.5s	1s	230VAC, full load

## Ⓢ GENERAL SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
<b>EFFICIENCY AT 115VAC</b> GEHC-026B074 GEHC-026B037 GEHC-026B030 GEHC-026B025	85.0% 84.0% 83.0% 82.0%	87.0% 86.0% 85.0% 84.0%	-	25°C ambient temperature, full load
<b>EFFICIENCY AT 230VAC</b> GEHC-026B074 GEHC-026B037 GEHC-026B030 GEHC-026B025	86.0% 85.0% 84.0% 83.0%	88.0% 87.0% 86.0% 85.0%	-	25°C ambient temperature, full load
<b>EFFICIENCY AT 277VAC</b> GEHC-026B074 GEHC-026B037 GEHC-026B030 GEHC-026B025	85.0% 84.0% 83.0% 82.0%	87.0% 86.0% 85.0% 84.0%	-	25°C ambient temperature, full load
<b>MTBF</b>	-	200 000 hours	-	230VAC, 80% load (MIL-HDBK-217F)
<b>LIFETIME</b>	-	50 000 hours	-	230VAC, 100% load, 70°C case temperature, refer to lifetime vs Tc curve for more details
<b>OPERATING CASE TEMPERATURE FOR SAFETY T<sub>c_s</sub></b>	-40°C	-	+85°C	-
<b>OPERATING CASE TEMPERATURE FOR SAFETY T<sub>c_w</sub></b>	-40°C	-	+75°C	5 years warranty Humidity: 10% to 95% RH
<b>STORAGE TEMPERATURE</b>	-40°C	-	+85°C	Humidity: 10% to 95% RH
<b>DIMENSIONS (L x W x H)</b>	79 x 64 x 33mm			-
<b>NET WEIGHT</b>	330 ± 20g / pc.			-
<b>PACKAGE (L x W x H)</b>	480 x 275 x 208mm; 24pcs/ctn; G.W.: 8.5kg			-

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## © SAFETY STANDARDS

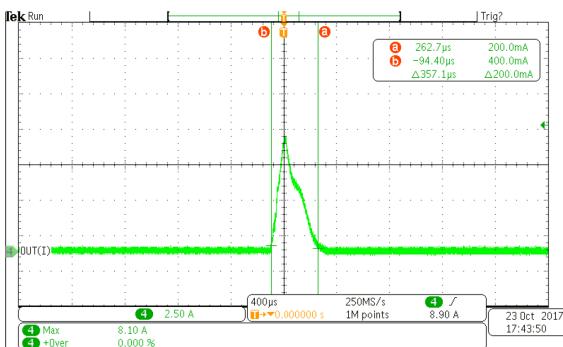
SAFETY CATEGORY	COUNTRY / TERRITORY	STANDARDS
CCC	China	GB19510.1; GB19510.14
CE	Europe	EN61347-1; EN61347-2-13
CB	CB Countries	IEC61347-1; IEC61347-2-13
UL	USA	UL8750; UL1310 (Class 2 Power Units); UL1012
CUL	Canada	CSA C22.2 No.107.1-01
		CSA C22.2 No.223-M91 (Power Supplies with Extra-Low Voltage Class 2 Outputs)
KC	South Korea	K61347-1; K61347-2-13; K62384
PSE	Japan	J61347-1; J61347-2-13
SAA	Australia	AS/NZS IEC61347-2-13; AS/NZS IEC61347.1

## © EMC STANDARDS

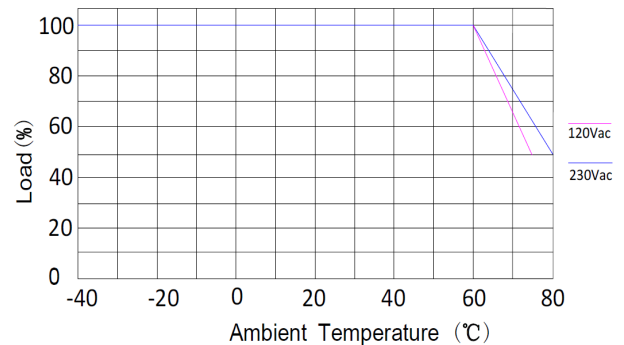
EMC CATEGORY	COUNTRY / TERRITORY	STANDARDS
CCC	China	GB17743; GB17625.1
CE	Europe	EN55015; EN61000-3-2; EN61000-3-3
		EN61000-4-2, -3, -4, -5, -6, -8, -11; IEC61547
KC	South Korea	K61547; K00015
PSE	Japan	J55015
FCC	USA	FCC part 15

**Note:** This LED driver meets the EMC specifications above, but EMC performance of luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

## © INRUSH CURRENT WAVEFORM



## © DERATING CURVE

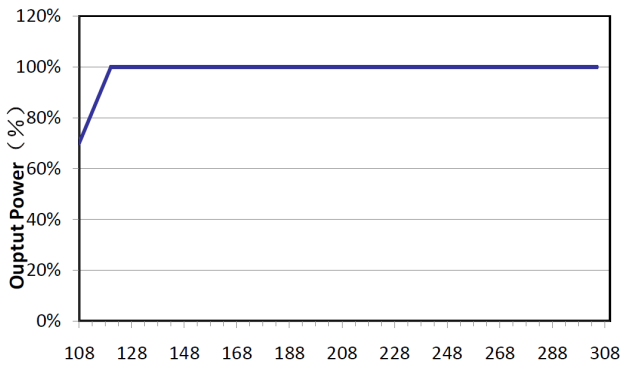


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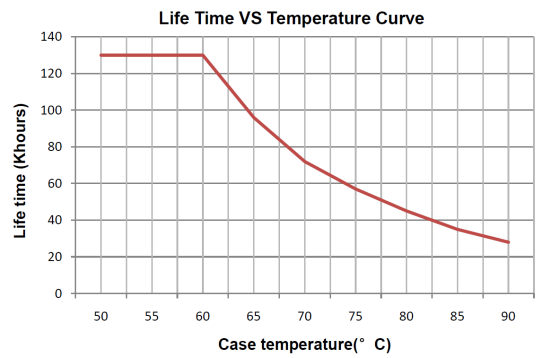
26W Constant Current LED Driver



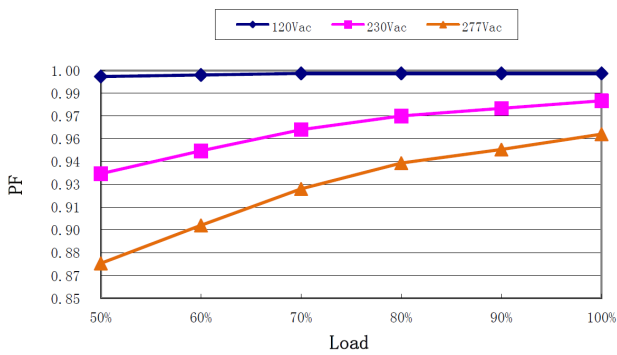
©  $P_O / P_{MAX}$  vs. INPUT VOLTAGE CURVE



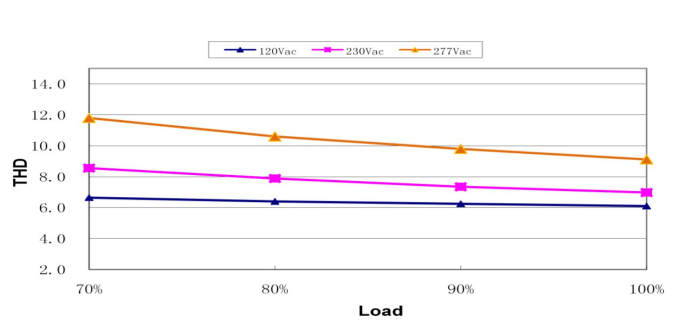
© LIFETIME vs. CASE TEMPERATURE CURVE



© POWER FACTOR vs. LOAD CURVE

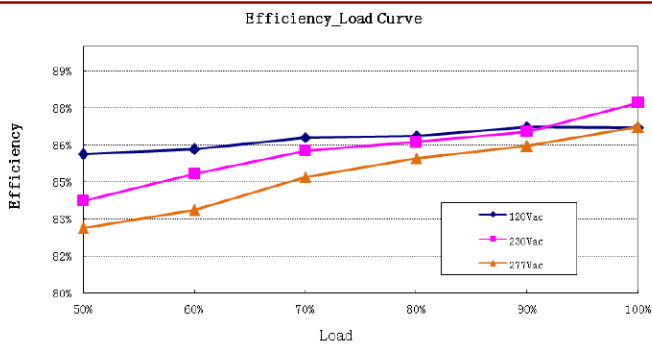


© THD vs. LOAD CURVE

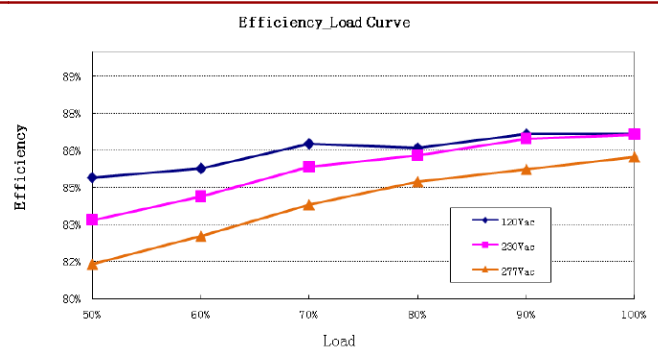


© EFFICIENCY vs. LOAD CURVE

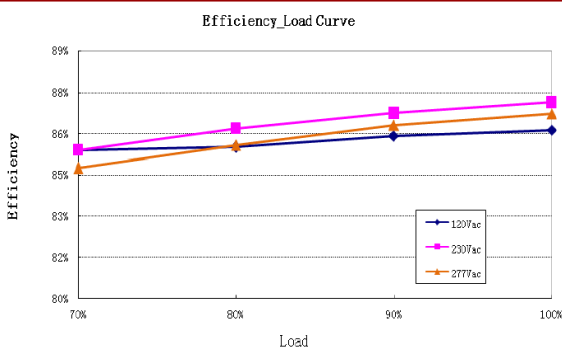
GEHC-026B074 (I = 0.35A)



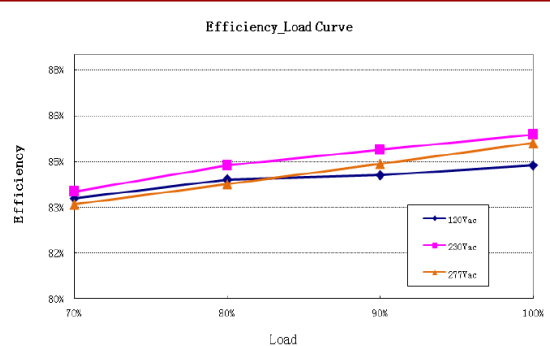
GEHC-026B037 (I = 0.70A)



GEHC-026B030 (I = 0.86A)



GEHC-026B025 (I = 1.05A)



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## © PROTECTIONS

PARAMETER	Min.	Typ.	Max.	NOTES	
<b>INPUT OVER VOLTAGE PROTECTION</b>	<b>INPUT PROTECTION VOLTAGE</b>	310VAC	330VAC	340VAC	Turn off the output when the input voltage exceeds protection voltage.
	<b>RECOVERY VOLTAGE</b>	300VAC	320VAC	340VAC	Auto recovery. The driver will restart when the input voltage falls below recovery voltage.
	<b>MAX. OF INPUT OVER VOLTAGE</b>	-	-	440VAC	The driver can survive for 48 hours with input over-voltage of 440VAC.
<b>OVER TEMPERATURE PROTECTION</b>	Decreases output current, returning to normal operation after over temperature is removed.				
<b>SHORT CIRCUIT PROTECTION</b>	Hiccup mode and auto recovery. No damage will occur when output is under short circuit condition. The output shall return to normal operation when the fault condition is removed.				
<b>OVERT VOLTAGE PROTECTION</b>	Limit output voltage at no load and in case the normal voltage limit fail.				

## © MECHANICAL SPECIFICATIONS

