

Specification for Approval

Model No.: GLD040YAIL-1050U

Version: V1.0

Customer Approval

Tested by	Checked by	Approved by

LIFUD Approval

Tested by	Checked by	Approved by
Lin Kaifan	Liao Xinggao	Zhong Chunlin

Full Model Numbers Required by the Customer

Full model No.		Full model No.	
Full model No.		Full model No.	

E.C. List

Version	Description of Change	Engineer	Date
0.1	initial version	Lin Kaifan	2018-02-01
1.0	formal version	Lin Kaifan	2018-07-30

1. Product Description



Isolated LED Driver for Class I LED Luminaire

Category: AC100-277V, dimmable, flicker free, IP 65

Property: 0-10V/PWM/Rx dim, flicker coefficient $\leq 0.5\%$, IP 65, active PFC, high PF, high efficiency, low THD

Application: linear light, tri-proof light, grille light, plant-growth light, etc

Warranty: 5 years (Please refer to the warranty condition.)

Certificate: (UL, FCC, TUV certificates are in progress.)

2. Technical Data

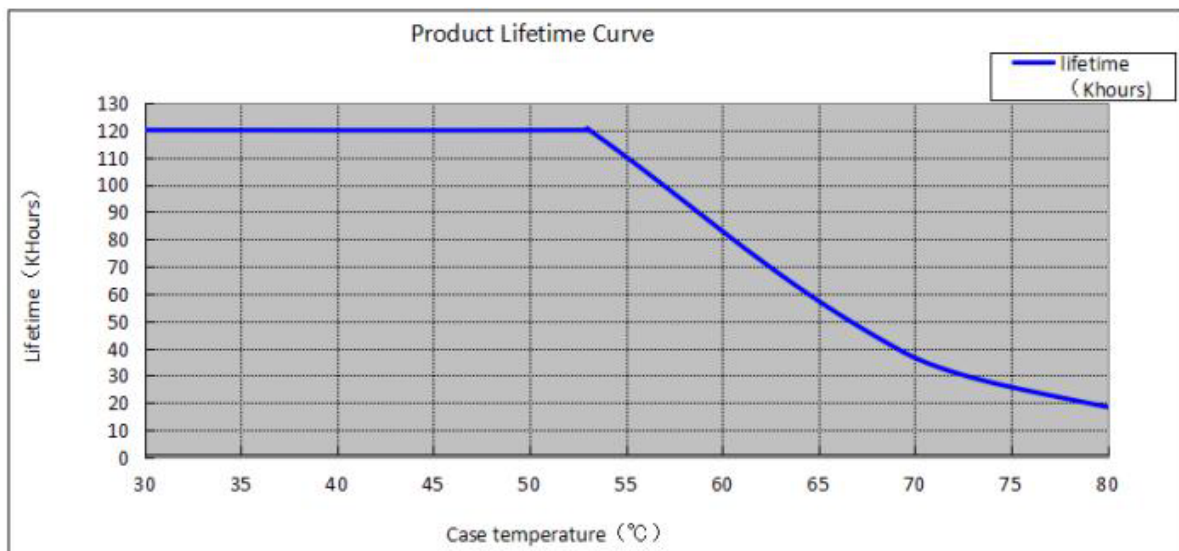
	Full Model Number	GLD040YAI-1050U
Output	Output Voltage	27-40Vdc
	Output Current	1050mA
	Ripple Voltage	< 1V
	Current Tolerance	$\pm 5\%$
	Time to Light	100Vac < 1S 230Vac < 0.5S
	Temperature Drift	$\pm 10\%$
	Line Regulation	$\pm 5\%$
Input	Line Regulation	$\pm 5\%$
	Rated Input Voltage	100-240 Vac or 277 Vac (Max. 90-305Vac)
	Frequency	47Hz-63Hz
	Input Current	0.6A Max
	Power Factor	$\geq 0.98/100\text{Vac}$
		$\geq 0.96/230\text{Vac}$
		$\geq 0.90/277\text{Vac}$
	THD	$\leq 20\%$
	Efficiency	$\geq 86\%/100\text{Vac}$
		$\geq 87\%/230\text{Vac}$
		$\geq 86\%/277\text{Vac}$
	In-Rush Current	I<60A/350uS@230Vac
	Stand-by Power	<0.5W@230Vac (DIM OFF status)
Protective Feature	No-Load	Max. output voltage (no-load voltage) 55V
	Short-Circuit	Hiccup mode (auto-recovery)
Environment Condition	Working Temperature	-30°C ~ +60°C
	Working Humidity	20-90%RH (no condensation)
	Storage Temperature/Humidity	-40°C ~ +80°C (6 months under the class I environment); 10-90%RH (no condensation)
	Atmospheric Pressure	86-106KPa
Safety & Norm	Certificate	(UL, FCC, TUV certificates are in progress.)
	Hi-Pot Test	I/P-O/P: 3.75KVac, <5mA, 60S
	Insulation Resistance	I/P-O/P: 500VDC, >100MΩ
	Surge Level	Comply with IEC61000-4-5 (L-N:1KV; L/N-PG:2KV)
	EMI	Comply with EN55015, EN61000-3-2
	EMS	Comply with EN61000-4-2,3,4,5,6,8,11; EN61547
Others	Packing (Weight)	Carton size: 39 x 29 x 21 cm (L*W*H); Net weight: 280g $\pm 5\%$ /pc; 14.5KG $\pm 5\%$ /ctn; 49pcs/ctn
	IP Level	IP65
	Warranty Condition	5 years (Max. case temperature must not exceed 67°C)

Model	GLD040YAI-1050U	Series	AC100-277V, IP65, Dimmable & Flicker-Free
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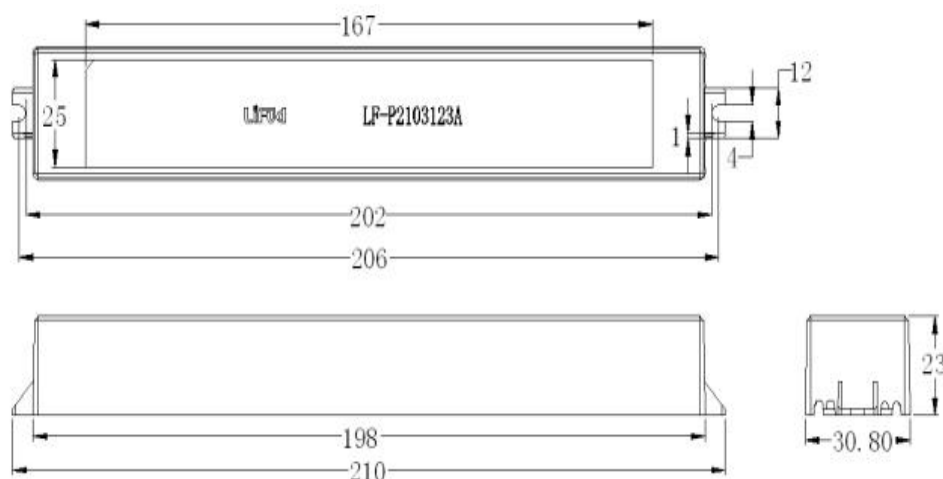
Testing Equipment	AC power source: CHROMA6530, digital power meter: CHROMA66202, Oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectroanalyzer: KH3935, hi-pot tester: TH9201B, stroboscope (flicker coefficient tester) 60N-01, etc.
Testing Condition	If there's no special statement, the parameters above, including the power factor, THD and efficiency, are the test results under the ambient temperature 25°C and humidity 50%, AC input 230V and 90% DC load.
Additional Remark	<ol style="list-style-type: none"> 1. It is recommended that the customer should install an over-under-voltage protection and surge protection device in the power supply circuit to ensure the safety while using electricity. 2. The PC cover, housing, end caps and other parts of the LED driver inside the LED luminaire must meet the UL94-V0 fire rating level or above. 3. As an accessory, the LED driver is not the only factor determining the EMC performance of the LED luminaire. The structure and the wire routing of the light fixture are also relevant. Thus it's strongly recommended the LED luminaire manufacturer should re-confirm the EMC of the whole LED luminaire.

3. Product Lifetime Curve

The curve below illustrates the driver's lifetime data when the LED driver's Max. case temperature reaches 40°C, 50°C, 60°C, 70°C, 80°C and 90°C.



4. Dimensional Drawing (unit: mm)



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5. Wiring Diagram:



Remarks:

AC_L: PVC UL 1015 lead wire AWG#18, multiconductor cable, black, 280mm

AC_N: PVC UL 1015 lead wire AWG#18, multiconductor cable, white, 280mm

LED+: PVC UL 1015 lead wire AWG#18, multiconductor cable, red, 280mm

LED-: PVC UL 1015 lead wire AWG#18, multiconductor cable, blue, 280mm

DIM+: PVC UL 1015 lead wire AWG#22, multiconductor cable, purple, 280mm

DIM-: PVC UL 1015 lead wire AWG#22, multiconductor cable, gray, 280mm

6. Dimming Feature

Three dimming modes in one driver (The test data below are for your reference only).

1) 0-10V dim: dimming range 10%~100%. (Tested with LIFUD 0-10V dimmer.)

Voltage Signal	0V	0.5V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Output Current Percentage	OFF	ON	9%	20%	32%	42%	53%	64%	75%	87%	98%	100%	95%-105%

2) PWM dim: dimming range 10%~100%. The voltage amplitude is 10V. The frequency of PWM signal is 300Hz~3KHz. (Tested with PWM signal generator: RIGOL.)

Resistance Value	0-5%	6%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Output Current Percentage	OFF	ON	10%	24%	36%	48%	59%	70%	80%	88%	96%	100%	95%-105%

3) Resistance dim: dimming range 10%~100%. The resistance range: 1kΩ~100kΩ. (Tested with LEVITON dimmer.)

PWM Signal	0-5K	6K	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K	OPEN
Output Current Percentage	OFF	ON	15%	27%	38%	49%	60%	71%	82%	94%	99%	99%	95%-105%

Remark: The output current percentages above are typical values.

Distributor:

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