

## SPECIFICATION FOR APPROVAL

|                              | V3.0  Sichuan Ledfriend Technology  Checked by |             |
|------------------------------|--|-------------|
| stomer Approval              |  | _           |
|                              | Checked by                                     | Approved by |
|                              | Checked by                                     | Approved by |
|                              |  |             |
| Ifriend Approval             |  |             |
| Tested by                    | Checked by                                     | Approved by |
|                              |  |             |
| e full model numbers require | ed by customers                                |             |
| ull model No.                | Full model No.                                 |             |
|                              | •  |             |

### E.C. List

| Version | Description of change | Engineer  | Date      |
|---------|-----------------------|-----------|-----------|
| 3.0     | format change         | Tian Qiao | 2016-1-25 |
|         |                       |           |           |
|         |                       |           |           |
|         |                       |           |           |

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Scan the code below and read the electronic brochure online.



| Model | LF-GDE042YF | Series | 0-10V/PWM plastic case dimmable series |
|-------|-------------|--------|--|
|-------|-------------|--------|--|



# Shenzhen Ledfriend Optoelectronics Co., Ltd.

### 1. Product description



Isolated LED driver designed for class II LED luminaires.

Category: 0-10V/PWM plastic case dimmable version.

Product properties: active PFC, high PF, high efficiency, low THD, 0-10V/PWM dimmable.

Application: commercial, residential and decorative lighting. Warranty: 5 years (please refer to the warranty condition).

### Certifications:









### 2. Technical data

|             | Full model number                | LF-GDE042YF<br>0800U   | LF-GDE042YF<br>0900U    | LF-GDE042YF<br>0950U | LF-GDE042YF<br>1000U | LF-GDE042YF<br>1050U |  |  |  |  |  |
|-------------|----------------------------------|--|-------------------------|----------------------|----------------------|----------------------|--|--|--|--|--|
|             | Output voltage                   | 27-42 VDC  | 27-42 VDC               | 27-42 VDC            | 27-42 VDC            | 27-40 VDC            |  |  |  |  |  |
|             | Output current                   | 800mA  | 900mA                   | 950mA                | 1000mA               | 1050mA               |  |  |  |  |  |
|             | Ripple current                   | < 400mA  |                         |                      |                      |                      |  |  |  |  |  |
| Output      | Ripple voltage                   | < 4.2V   |                         |                      |                      |                      |  |  |  |  |  |
| Output      | Current tolerance                | ±5%  |                         |                      |                      |                      |  |  |  |  |  |
|             | Time to light                    | 100Vac<1S 230Vac<0.5S 277ac<0.5S   |                         |                      |                      |                      |  |  |  |  |  |
|             | Temperature drift                | ±10%   |                         |                      |                      |                      |  |  |  |  |  |
|             | Output Line regulation           | ±5%  |                         |                      |                      |                      |  |  |  |  |  |
|             | Input Line regulation ±5%        |  |                         |                      |                      |                      |  |  |  |  |  |
|             | Rated input voltage              | 100-240 Vac, 277   | Vac (Max input volta    | age: 90-305Vac)      |                      |                      |  |  |  |  |  |
|             | Frequency                        | 47Hz-63Hz  |                         |                      |                      |                      |  |  |  |  |  |
|             | Input current                    | 0.6A Max   |                         |                      |                      |                      |  |  |  |  |  |
|             |                                  | ≥0.98/100Vac   | ≥0.98/100Vac            | ≥0.98/100Vac         | ≥0.98/100Vac         | ≥0.98/100Vac         |  |  |  |  |  |
|             | Power factor                     | ≥0.94/230Vac   | ≥0.94/230Vac            | ≥0.95/230Vac         | ≥0.95/230Vac         | ≥0.95/230Vac         |  |  |  |  |  |
|             |                                  | ≥0.90/277Vac   | ≥0.90/277Vac            | ≥0.90/277Vac         | ≥0.90/277Vac         | ≥0.90/277Vac         |  |  |  |  |  |
| Input       | THD                              | ≤20%   | ≤20%                    | ≤20%                 | ≤20%                 | ≤20%                 |  |  |  |  |  |
|             |                                  | ≥84%/100Vac  | ≥84%/100Vac             | ≥84%/100Vac          | ≥84%/100Vac          | ≥84%/100Vac          |  |  |  |  |  |
|             | Efficiency                       | ≥85%/230Vac  | ≥85%/230Vac             | ≥86%/230Vac          | ≥86%/230Vac          | ≥86%/230Vac          |  |  |  |  |  |
|             |                                  | ≥84%/277Vac  | ≥84%/277Vac             | ≥85%/277Vac          | ≥85%/277Vac          | ≥85%/277Vac          |  |  |  |  |  |
|             | In-rush current (peak /duration) | I<60A/350uS@230Vac   |                         |                      |                      |                      |  |  |  |  |  |
|             | Typ. power input on stand-by     | Pin<1W   |                         |                      |                      |                      |  |  |  |  |  |
| Protective  | No-load                          | Max. output voltage (no-load voltage) 55V  |                         |                      |                      |                      |  |  |  |  |  |
| features    | Short-circuit                    | Hiccup mode (auto-recovery)  |                         |                      |                      |                      |  |  |  |  |  |
|             | Working temperature              | -30°C - +50°C  |                         |                      |                      |                      |  |  |  |  |  |
| Environment | Working humidity                 | 20-90%RH (no condensation)   |                         |                      |                      |                      |  |  |  |  |  |
| condition   | Storage temperature/humidity     | -40°C ~ +80°C (6 months under the class I environment); 10-90%RH (no condensation) |                         |                      |                      |                      |  |  |  |  |  |
|             | Atmospheric pressure             | 86-106KPa  |                         |                      |                      |                      |  |  |  |  |  |
|             | Certifications                   | TUV, RCM, CE, C  | CB                      |                      |                      |                      |  |  |  |  |  |
|             | Hi-pot test                      | I/P-O/P: 4KVac,  | <5mA, 60S               |                      |                      |                      |  |  |  |  |  |
| Safety and  | Insulation resistance            | I/P-O/P: 500VDC,   | >100MΩ                  |                      |                      |                      |  |  |  |  |  |
| norms       | Surge level                      | Comply with IEC6   | 1000-4-5(L/N: 1KV       | )                    |                      |                      |  |  |  |  |  |
|             | EMI                              | Comply with EN55   | 5015, EN61000-3-2.      |                      |                      |                      |  |  |  |  |  |
|             | EMS                              | Comply with EN6  | 1000-4-2, 3, 4, 5, 6, 8 | 3, 11; EN61547.      |                      |                      |  |  |  |  |  |
|             | Packing (weight)                 |  |                         | on; 6.5KG±5%/car     | ton. Carton size: 39 | 9 x 29 x 21 cm (L    |  |  |  |  |  |
| Others      | IP level                         | IP20   |                         |                      |                      |                      |  |  |  |  |  |
|             | Warranty condition               | 5 years (Max. case temperature must not exceed 70°C).                              |                         |                      |                      |                      |  |  |  |  |  |

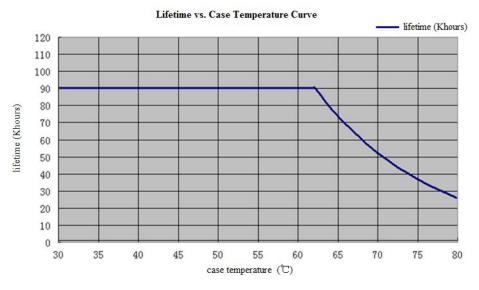
| Model LF-G | DE042YF Series | 0-10V/PWM plastic case dimmable series |
|------------|----------------|--|
|------------|----------------|--|



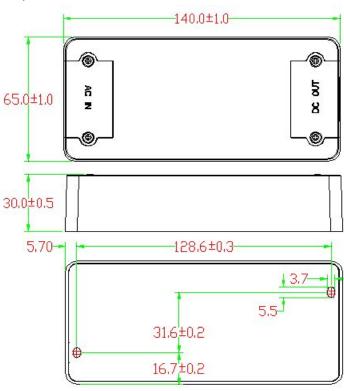
| Testing<br>equipment | AC power source: CHROMA6530, digital power meter: CHROMA66202, Oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber, lightning surge generator: Everfine EMS61000-5B, rapid group pulse generator: Everfine EMS61000-4A, spectroanalyzer: KH3935, hi-pot tester: TH9201B, flicker-free tester (flicker-free coefficient tester) 60N-01, etc.   |
|----------------------|---|
| Test conditions      | The parameters above including the power factor, THD, efficiency are all tested under the ambient temperature 25°C and humidity 50%, AC input 230V and 90% output load.   |
| Additional<br>Remark | 1. In the power supply circuit, it is recommended that the customer should install an over-under-voltage protection and surge protection device to ensure the safety of using electricity.      2. The PC cover, shell, end caps used together with the LED driver inside the LED lamp must meet the UL94V-0 fire rating level or above.      3. As a part of the LED lamp, the LED driver is not the only factor determining the EMC performance of the LED lamp. And the EMC performance is also related to the LED lamp's structure and the wire routing. Thus we strongly recommend the manufacturer of the finished LED lamp must re-confirm the EMC of the LED lamps. |

### 3. Product Referenced 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 and 80°C.



### 4. Dimensional Drawing (unit: mm)

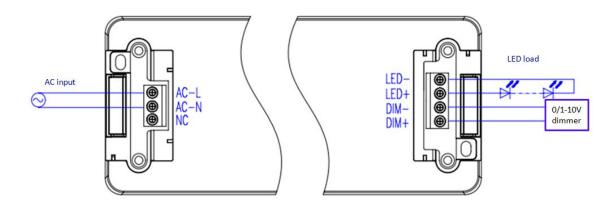


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### **5. Wire Connection Diagram:**



### 6. Dimmable feature

1) 0-10V dimmable, dimming range 10%~100% (the LED lights might flicker when the voltage signal is with the 0-1V range).

| voltage signal | 0  | 1  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10   | OPEN     |
|----------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| output current | 3% | 5% | 10% | 25% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%-105% |
| percentage     |    |    |     |     |     |     |     |     |     |     |      |          |

2) PWM dimmable, dimming range 10~100%, the voltage amplitude is 10V and the frequency of PWM signal is 500Hz~5KHz.

| PWM signal     | 0  | 1  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10   | OPEN     |
|----------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| output current | 3% | 5% | 10% | 25% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%-105% |
| percentage     |    |    |     |     |     |     |     |     |     |     |      |          |

Remark: the output current percentages above are typical values.