

SPECIFICATION FOR APPROVAL

Customer: _____

Product Material No. : _____

Model No. _____ **LF-GIR040YM** _____

Version : _____ **V1.0** _____

Manufacturer: _____ **Sichuan Ledfriend Technology Co., Ltd** _____

Customer Approval

| Tested by | Checked by | Approved by |
|-----------|------------|-------------|
| | | |

Ledfriend Approval

| Tested by | Checked by | Approved by |
|-----------|------------|-------------|
| | | |

The full model numbers required by customers

| | | | |
|----------------|--|----------------|--|
| Full model No. | | Full model No. | |
| Full model No. | | Full model No. | |

E.C. List

| Version | Description of change | Engineer | Date |
|---------|-----------------------|----------|-----------|
| 1.0 | Original release | Li Long | 2016-5-30 |
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Shenzhen Ledfriend Optoelectronics Co., Ltd.

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|-------|-------------|--------|--|
| Model | LF-GIR040YM | Series | AC220-240V typical plastic case series |
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1. Product description



Isolated LED driver suitable for class II LED luminaires.

Category: typical AC220-240V plastic case series.

Product properties: active PFC, high performance, high efficiency, low THD.

Application: commercial, residential and decorative lighting.

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

Certifications:



2. Technical data (1)

| | Full model number | LF-GIR040YM 0800H | LF-GIR040YM 0850H | LF-GIR040YM 0900H | LF-GIR040YM 0950H |
|-----------------------|---|---|----------------------|----------------------|----------------------|
| Output | Output voltage | 25-42 VDC | | | |
| | Output current | 800mA | 850mA | 900mA | 950mA |
| | Ripple voltage | ≤4V | | | |
| | Current tolerance | ±5% | | | |
| | Time to light | 230Vac <0.5S | | | |
| | Temperature drift | ±10% | | | |
| | Output Line regulation | ±5% | | | |
| Input | Input Line regulation | ±5% | | | |
| | Input voltage | 220-240 Vac, (Max input voltage: 180-264Vac) | | | |
| | Frequency | 47Hz-63Hz | | | |
| | Input current | 0.3A Max | | | |
| | Power factor | ≥0.94/230Vac | ≥0.94/230Vac | ≥0.94/230Vac | ≥0.94/230Vac |
| | THD | ≤20% | | | |
| | Efficiency | ≥88%/230Vac | ≥88%/230Vac | ≥88%/230Vac | ≥88%/230Vac |
| | In-rush current (peak /duration) | I<60A/350uS@230Vac | | | |
| | Typ. power input on stand-by | Pin<1W | | | |
| Protective features | No-load | Max. output voltage (no-load voltage) 55V | | | |
| | Short-circuit | Hiccup mode (auto-recovery) | | | |
| Environment condition | Working temperature | -30℃ ~ +50℃ | | | |
| | Working humidity | 20-90%RH (no condensation) | | | |
| | Storage temperature/humidity | -40℃ ~ +80℃ (6 months under the class I environment); 10-90%RH (no condensation) | | | |
| | Atmospheric pressure | 86-106KPa | | | |
| Safety and norms | Certifications | TUV, RCM, CE, CB | | | |
| | 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) | | | |
| | EMI | Comply with EN55015, EN61000-3-2. | | | |
| | EMS | Comply with EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547. | | | |
| Others | Packing (weight) | Net weight: 90g±5%/pc; 98pcs/carton; 9.0KG±5%/carton. Carton size: 39 x 29 x 21 cm (L x WxH). | | | |
| | IP level | IP20 | | | |
| | Warranty condition | 5 years (Max. case temperature must not exceed 80℃). | | | |
| 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, 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℃ and humidity 50%, AC input 230V and 90% output load. | | | | |
| Additional 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. | | | | |

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Technical data (2)

| | Full model number | LF-GIR040YM1000H | LF-GIR040YM1050H |
|-----------------------|---|--|------------------|
| Output | Output voltage | 25-42 VDC | 25-40 VDC |
| | Output current | 1000mA | 1050mA |
| | Ripple voltage | ≤4V | |
| | Current tolerance | ±5% | |
| | Time to light | 230Vac <0.5S | |
| | Temperature drift | ±10% | |
| | Output Line regulation | ±5% | |
| Input | Input Line regulation | ±5% | |
| | Input voltage | 220-240 Vac, (Max input voltage: 180-264Vac) | |
| | Frequency | 47Hz-63Hz | |
| | Input current | 0.3A Max | |
| | Power factor | ≥0.94/230Vac | ≥0.94/230Vac |
| | THD | ≤20% | |
| | Efficiency | ≥88%/230Vac | ≥88%/230Vac |
| | In-rush current (peak /duration) | I<60A/350uS@230Vac | |
| | Typ. power input on stand-by | Pin<1W | |
| Protective features | No-load | Max. output voltage (no-load voltage) 55V | |
| | Short-circuit | Hiccup mode (auto-recovery) | |
| Environment condition | Working temperature | -30℃ ~ +50℃ | |
| | Working humidity | 20-90%RH (no condensation) | |
| | Storage temperature/humidity | -40℃ ~ +80℃ (6 months under the class I environment); 10-90%RH (no condensation) | |
| | Atmospheric pressure | 86-106KPa | |
| Safety and norms | Certifications | TUV, RCM, CE, CB | |
| | 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) | |
| | EMI | Comply with EN55015, EN61000-3-2. | |
| | EMS | Comply with EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547. | |
| Others | Packing (weight) | Net weight: 90g±5%/pc; 98pcs/carton; 9.0KG±5%/carton. Carton size: 39 x 29 x 21 cm (L xWxH). | |
| | IP level | IP20 | |
| | Warranty condition | 2-5 years (Max. case temperature must not exceed | |
| 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, 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℃ and humidity 50%, AC input 230V and 90% output load. | | |
| Additional 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. | | |

Technical data (3)

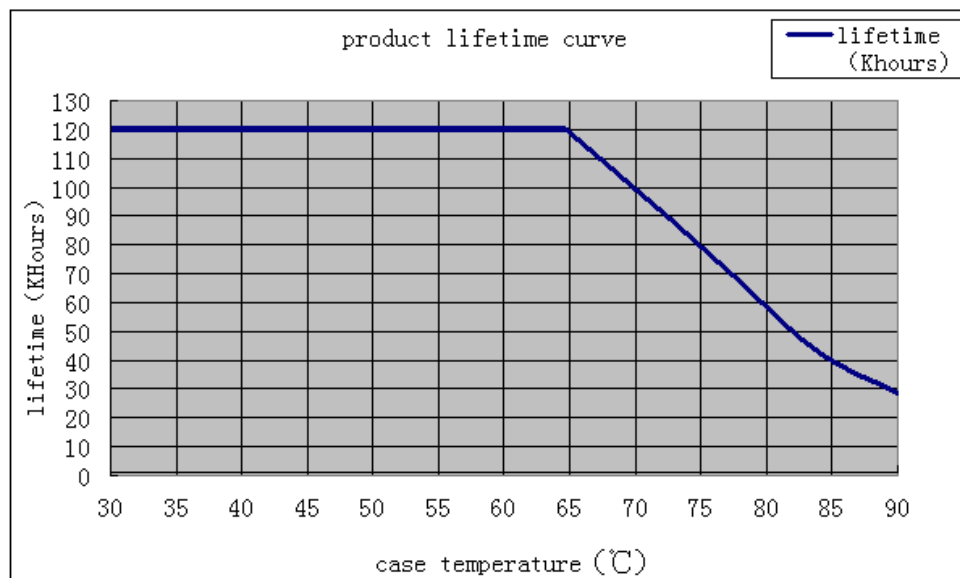
| | Full model number | LF-GIR040YM0600H | LF-GIR040YM0650H | LF-GIR040YM0700H | LF-GIR040YM0750H |
|---------------|------------------------|--|------------------|------------------|------------------|
| Output | Output voltage | 40-55 VDC | | | |
| | Output current | 600mA | 650mA | 700mA | 750mA |
| | Ripple voltage | ≤4V | | | |
| | Current tolerance | ±5% | | | |
| | Time to light | 230Vac <0.5S | | | |
| | Temperature drift | ±10% | | | |
| | Output Line regulation | ±5% | | | |
| Input | Input Line regulation | ±5% | | | |
| | Input voltage | 220-240 Vac, (Max input voltage: 180-264Vac) | | | |

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| | | | | | |
|-----------------------|---|--|--------------|--------------|--------------|
| | Frequency | 47Hz-63Hz | | | |
| | Input current | 0.3A Max | | | |
| | Power factor | ≥0.94/230Vac | ≥0.94/230Vac | ≥0.94/230Vac | ≥0.94/230Vac |
| | THD | ≤20% | | | |
| | Efficiency | ≥88%/230Vac | ≥88%/230Vac | ≥88%/230Vac | ≥88%/230Vac |
| | In-rush current (peak /duration) | I<60A/350uS@230Vac | | | |
| | Typ. power input on stand-by | Pin<1W | | | |
| Protective features | No-load | Max. output voltage (no-load voltage) 70V | | | |
| | Short-circuit | Hiccup mode (auto-recovery) | | | |
| Environment condition | Working temperature | -30°C ~ +50°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 and norms | Certifications | TUV, RCM, CE, CB | | | |
| | 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) | | | |
| | EMI | Comply with EN55015, EN61000-3-2. | | | |
| | EMS | Comply with EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547. | | | |
| Others | Packing (weight) | Net weight: 90g±5%/pc; 98pcs/carton; 9.0KG±5%/carton. Carton size: 39 x 29 x 21 cm (L xWxH). | | | |
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| 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 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. | | | | |

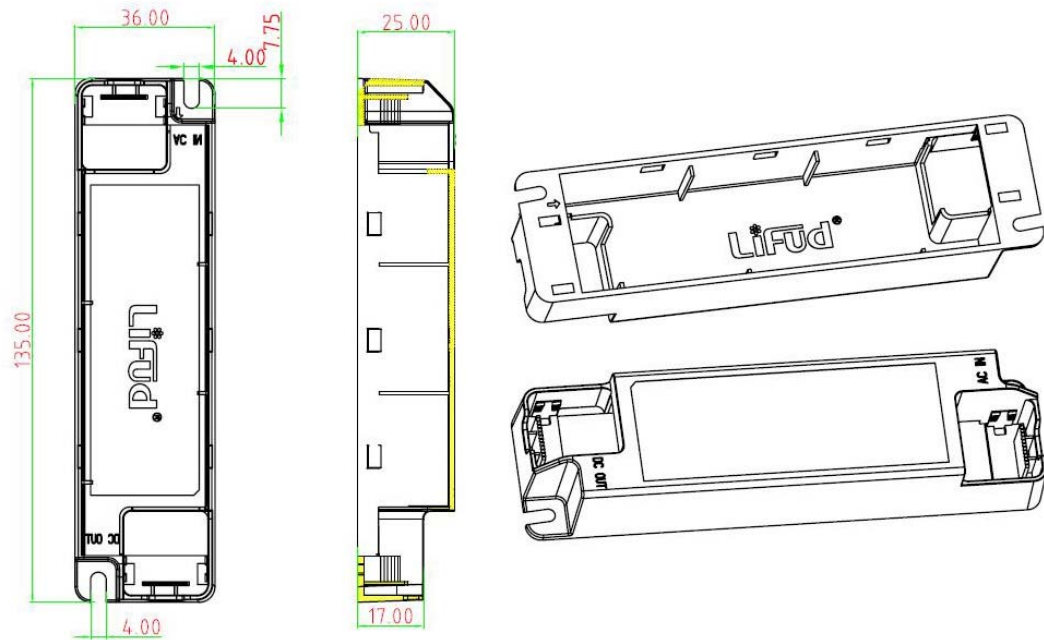
3. Product Referenced Lifetime Curve

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, 80°C, 90°C.



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|--------------|-------------|---------------|--|
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4. Dimensional Drawing (unit: mm)



5. Wire Connection Diagram:



| | | | |
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|-------|-------------|--------|--|