

LED RETROFIT KIT USA & CHINA PATENTS



Gen.5 LED Retrofit Kits

5RFK Series

LED retrofit kits are anything that replaces an old fixture with LEDs.

Green Inova®'s 5th generation LED retrofit kit is an innovative and revolutionary product. As the original designer and leading manufacturer of LED retrofit kits in China, we have one of the most efficient LED Retrofit Kit available on the market today, and also have both USA and China's Design & Utility Patents.

The 5th generation LED retrofit kits are upgraded to a more uniform and unique design with great performance enhancements. The Kits deliver over 125LPW. With best in class "Lumen per Watt Performance" one can expect maximized energy savings, it save up to 80% in electric, and eliminates your lighting maintenance for 10+ year by utilizing the highest quality LED chips, drivers, heat sinks, thermal pad, PCB boards, mounting arms, etc.

With various mounting brackets, the kits could retrofit a majority of fixtures whether it is a vertical or horizontal installation, eg: street light fixtures, shoebox fixtures, wall pack fixtures, flood light fixtures, canopy fixtures, and high bay fixtures, etc.

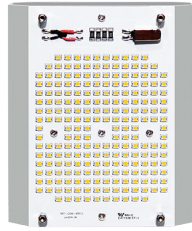




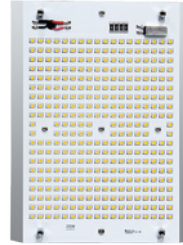
5RFK SERIES



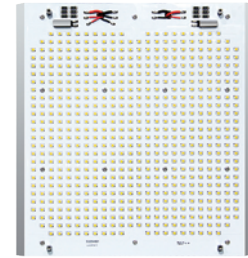
30W/ 45W/ 60W



75W/ 100W/ 120W



150W/ 200W



280W/ 320W/ 350W

Features

- High output Nichia LEDs deliver up to 132 LPW
- Top brand Mean Well driver
- Upgraded unique and uniform modular design
- Light weight, more durable
- AL 6063 material of high structural intensity
- Unique and excellent thermal management ensures long life
- Over temperature protection system
- Various controls options meet any needs
- Adjustable and flexible brackets for retrofit a majority of fixtures
- Quick and easy installation
- Reduces energy and maintenance costs over 80%

Optics

- Beam angle: 120° standard

Electrical

- 100-277V , and 347-480V available
- System power factor >90% and THD <20%
- LED driver with non-dimming or 0-10V dimming

Controls

- 0-10V dimming optional
- Photocell sensor optional
- Motion sensor optional
- Surge protection optional

Protections

- Short Circuit
- Over Current
- Over Voltage
- Over-temperature with auto-recovery



Applications

Replaces existing metal halide and HPS lamps in street lights, wall packs, canopies, high bays and low bays fixtures, suitable for both vertical and horizontal installation

Mountings

- Horizontal Installation: Using "L" bracket
- Vertical Installation: Using "Flat Plates" bracket

Compliance

- DLC Premium
- ETL/cETL listed (UL-1598-C)
- LM79, LM80 test ports
- CE & RoHS
- Design & Utility Patents

Ratings

- L70 ≥200,000 hours at 40°C (Tc), compliant with IESNA TM-21
- Operating Temperature Rated at -35°C to 55°C
- Storage Temperature Rated at -55°C to 65°C

Warranty

- 10-year limited on LED head, 5-year limited on driver



5RFK SERIES



DLC Items Information

Item Code	Voltage (V)	Wattage (W)	CCT (K)	Lumen (lm)	Efficacy (lm/w)	Beam Angle	CRI	DLC
GI-5RFK-30-50	100-277	30	5000	3865	128	120°	73	Premium
GI-5RFK-45-50	100-277	45	5000	5714	128	120°	73	Premium
GI-5RFK-60-50	100-277	52	5000	6728	128	120°	73	Premium
GI-5RFK-75-50	100-277	72	5000	9112	126	120°	73	Premium
GI-5RFK-100-50	100-277	100	5000	13123	131	120°	73	Premium
GI-5RFK-120-50	100-277	116	5000	15236	132	120°	73	Premium
GI-5RFK-150-50	100-277	144	5000	18913	132	120°	73	Premium
GI-5RFK-200-50	100-277	186	5000	23578	127	120°	73	Premium
GI-5RFK-280-50	100-277	280	5000	35133	126	120°	73	Premium
GI-5RFK-320-50	100-277	306	5000	40021	131	120°	73	Premium
GI-5RFK-350-50	100-277	349	5000	43514	125	120°	73	Premium
GI-5RFK-75-HV-50	347-480	75	5000	9585	128	120°	73	Premium
GI-5RFK-100-HV-50	347-480	97	5000	12793	132	120°	73	Premium
GI-5RFK-120-HV-50	347-480	116	5000	15236	132	120°	73	Premium
GI-5RFK-150-HV-50	347-480	150	5000	19704	132	120°	73	Premium
GI-5RFK-200-HV-50	347-480	188	5000	23590	126	120°	73	Premium
GI-5RFK-280-HV-50	347-480	270	5000	35339	131	120°	73	Premium
GI-5RFK-320-HV-50	347-480	306	5000	40021	131	120°	73	Premium
GI-5RFK-350-HV-50	347-480	336	5000	41753	124	120°	73	Premium

*Here only shows some popular DLC items, please refer to the DLC QPL website for the latest and most complete information. www.designlights.org/QPL

Specification Summary

(Part A: 30W ~ 120W)

Typical Model	GI-5RFK-30-50	GI-5RFK-45-50	GI-5RFK-60-50	GI-5RFK-75-50	GI-5RFK-100-50	GI-5RFK-120-50
Power (W)	30W	45W	60W	75W	100W	120W
Lumen Output (LM)	3,865 lm	5,714 lm	6,728 lm	9,112 lm	13,123 lm	15,236 lm
Efficacy (lm/w)	128 lm/w	128 lm/w	128 lm/w	126 lm/w	131 lm/w	132 lm/w
Color Temperature (CCT)	5000K	5000K	5000K	5000K	5000K	5000K
Voltage (V)	120-277V	120-277V	120-277V	120-277V	120-277V	120-277V
Power Factor	>90%	>90%	>90%	>90%	>90%	>90%
THD	<20%	<20%	<19%	<18%	<17%	<17%
CRI	73	73	73	73	73	73
Beam Angle (°)	120°	120°	120°	120°	120°	120°
Dimensions (in)	4.72" x 4.72" x 1.97"			6.10" x 5.12" x 1.97"		
LED	Nichia, UL Listed: LM80					
Driver	Meanwell, UL Listed: Class II					
Operating Temperature (°C)	-35°C to 55°C					
Certifications	DLC Premium, cETLus, LM79, LM80					
Controls	Dimming, Photocell, Motion sensor, Surge protection available					
Life Span (L70,H)	L70 ≥200,000 hours at 40°C (Tc), compliant with IESNA TM-21					
Warranty	10-year limited on LED head, 5-year limited on driver					



5RFK SERIES

(Part B: 150W ~ 350W)

Typical Model	GI-5RFK-150-50	GI-5RFK-200-50	GI-5RFK-280-50	GI-5RFK-320-50	GI-5RFK-350-50
Power (W)	150W	200W	280W	320W	350W
Lumen Output (LM)	18,913 lm	23,578 lm	35,133 lm	40,020 lm	43,514 lm
Efficacy (lm/W)	132 lm/w	127 lm/w	126 lm/w	131 lm/w	125 lm/w
Color Temperature (CCT)	5000K	5000K	5000K	5000K	5000K
Voltage (V)	120-277V	120-277V	120-277V	120-277V	120-277V
Power Factor	>90%	>90%	>90%	>90%	>90%
THD	<17%	<17%	<17%	<17%	<17%
CRI	73	73	73	73	73
Beam Angle (°)	120°	120°	120°	120°	120°
Dimensions (in)	7.87"x 5.91"x1.97"		10.63"x10.00"x2.91"		
LED	Nichia, UL Listed: LM80				
Driver	Meanwell, UL Listed: Class II				
Operating Temperature (°C)	-35°C to 55°C				
Certifications	DLC Premium, cETLus, LM79, LM80				
Controls	Dimming, Photocell, Motion sensor, Surge protection available				
Life Span (L70,H)	L70 ≥200,000 hours at 40 C (Tc), compliant with IESNA TM-21				
Warranty	10-year limited on LED head, 5-year limited on driver				

Notes:

1. Product performance may vary depending on model and end user environment.
2. If need photometric and IES files, please contact your sales representative.

Ordering Information

Order Example: GI-5RFK-100-50

Generation 5 LED retrofit kits, 100W, 100-277V, 5000K, with L and Flat brackets.

GI-5RFK	100	-	50	D	-
Series	Wattage	Voltage	CCT	Controls	Beam Angle
GI-5RFK = Gen 5 LED Retrofit Kits	30 = 30W 45 = 45W 60 = 60W 75 = 75W 100 = 100W 120 = 120W 150 = 150W 200 = 200W 280 = 280W 320 = 320W 350 = 350W	[Blank] = 100-277V HV = 347-480V	40= 4000K 45= 4500K 50= 5000K	[Blank] = None D = 0-10V Dimming P = Photocell Sensor M = Motion Sensor S = Surge Protection	[Blank] = 120°

NOTES:

1. Voltage must be specified.
2. Dimming is 0-10V Dimming type.
3. Photocell Sensor running on 120-277V.
4. Microwave Motion Sensor running on 120-277V.

Special Order - Ask at your Sales Representative for Availability and Details. Other Options Not Currently DLC Listed.



5RFK SERIES

Structure Advantages

Advanced Circuit Design

Short Circuit / Over Current / Over Voltage / Over-temperature with auto-recovery



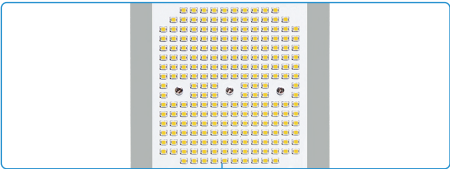
Sunon Fan Technology

Top Brand cooling fan, ensures long life



PCB

Top quality PCB, cULus qualified



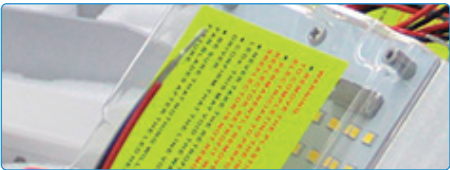
Metal Cord and Butterfly Screw

Allows for securing and durable installation



PC Protective Cover

Protect the LEDs during shipment and installation



Latest Nichia Technology Chips

Long L90 lifetime: using Nichia's latest LED technology, the L90 life is 60% longer than Philips 3030 LEDs



Mean Well Driver

Industry leader driver brand



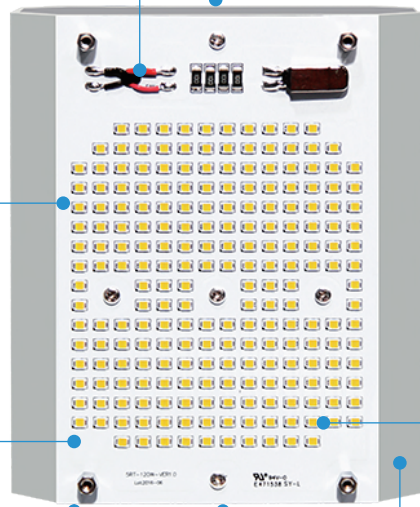
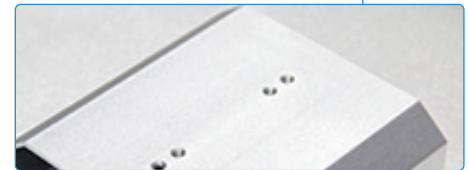
Unique Patented Heat Sink Design

40% larger heat sink allows for much higher heat dissipation than other competitors



6063 Aluminum

Allows for a lighter and thinner heat sink



USA & CHINA Design & Utility Patents

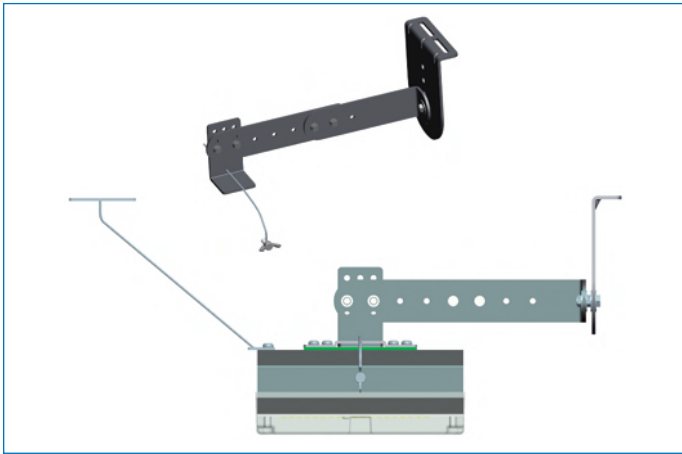


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Mounting Options

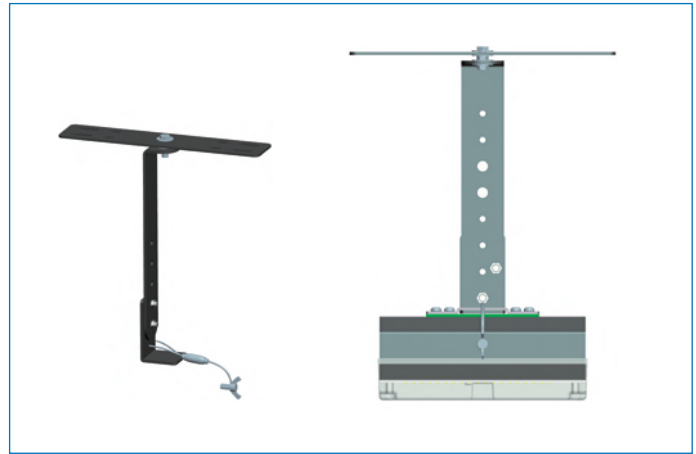
1 HORIZONTAL MOUNTING: USING "L" BRACKET

* Suitable for Shoebox/Wall Pack such type of fixtures



2 VERTICAL MOUNTING: USING "FLAT PLATES" BRACKET

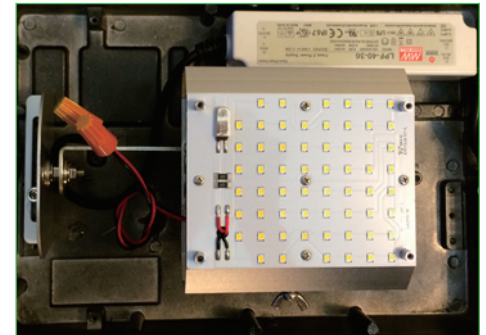
* Suitable for High Bay/Low Bay such type of fixtures.



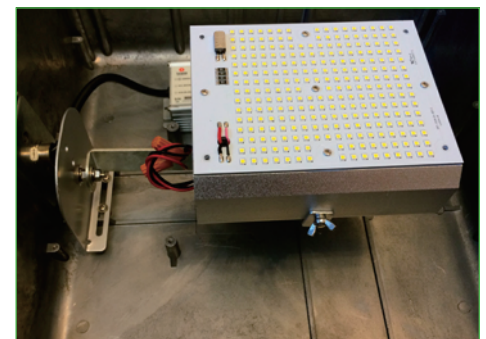
Applications



* Wall pack example



* Shoebox example



Due to our continued efforts to improve our products, product specifications are subject to change without notice.

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the quality light

www.greeninova.com