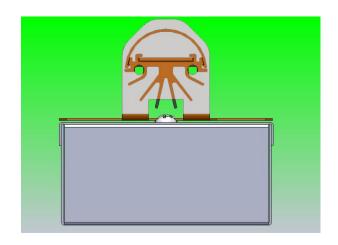


THE HIGH

PERFORMANCE

LED Fixture Series (surfacemount or hung) for Passageway, Stairwells, General, Direct and Indirect Illumination



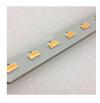


KEY FEATURES INCLUDE:



Advanced Thermal Management

Industry Leading Deep Fin Heat Sinks with Aircraft Grade Aluminum and 9" (23cm) [min] of perimeter conductive surface.



Long Lasting LED Chips

Calculated $L_{90}(10k) = 102kHrs$



Multiple Color Options

Three color options ensure that the new lighting will match your current aesthetics, and allows for custom color options.



Modular Design

Modular PC Boards allow for a wide range of sizes to be cost-effectively manufactured.



10 Year Warranty

Industry Leading 10 Year Warranty of operation on all LED Tubes and external drivers.

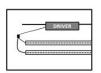


High Color Rendering Colors are enhanced due to the use of LEDs selected directly on the black body curve.



Manufactured in America

With domestic and imported components. Factory: Southeastern PA. Higher quality control, faster delivery times, and new domestic job creation.

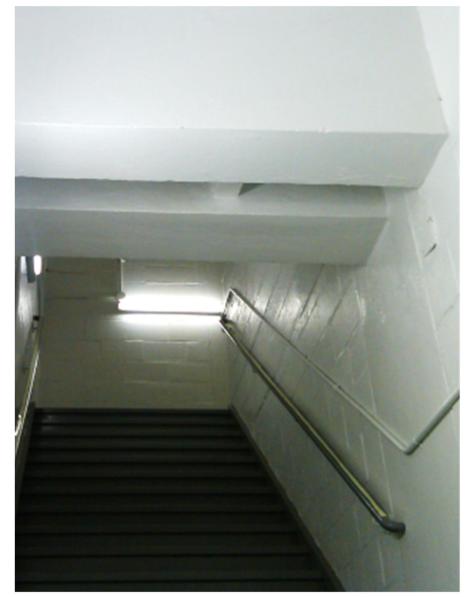


Independent Class II Driver

Safety, improved thermal management, and extended lifetime are gained by locating the driver remote from the LED Engine.

























Specification Table				
Environmental Ambient Operation Storage	Dry or damp locations only IP2X per EN60529 -25°F to 140°F/(-31°C to 60°C) ⁶ 25°F to +185°F/(-31°C to +85°C) ⁶			
Wattage	See chart below ¹¹ (±10%)			
Input Voltage (nominal)	100-277VAC 50/60Hz .3218A [120-300VDC] ⁸ +24VDC			
Power Factor (PF)	>0.9			
Total Harmonic Distortion (ATHD)	<20%			
Life Time Fixture Rated Life LED TM-21	>100KHrs Calculated L70(10k) > 355kHrs ¹⁶ (5630) Calculated L70(10k) > 100kHrs ¹⁶ (3030) Reported L70(10k) >60kHrs			
LED Driver MTBF ² -	>100khrs, Full load, 25°C			
LM80 Data	NVLap Accreditation			
LED Type	SMD 5630 SMD 3030 (54W)			
Efficiency	>120lm/W ¹⁰ (See table below)			
Normal Narrow	160°FW, 120°FWHM 120°FW, 80°FWHM			
Energy Consumption [nominal]	16 kWh/1000 h			
Certifications	cUL, UL, FCC, DLC			
Warranty ¹⁷ LED Driver - LED Tube - Fixture -	10 years 10 years 10 years			
Dimming	<20%-100% (See table below) 0-10V			
Off State Power Consumption	<1 Watt			
On State	Instantaneous			

Norma Gamma Angles		180°		12	o°
		\			
105°		80			10
-	X			1	11
	1		1	1	9
90°					9
75°		80		1	7
"					'
		160	$\times \setminus \setminus$		
60°					6
		240	\times		
45°		320			4
X					
	1	400	1	cd/klm	
30°	15°	0°	15°	30°	
		0°		30°	
Narrow		- SF		³⁰ FN2	
		0°		30°	10
Narrow Gamma Angles		- SF		³⁰ FN2	
Narrow		0° - SF		FN2	
Gamma Angles		0° - SF		FN2	1
Narrow Gamma Angles		0° - SF		FN2	1
Gamma Angles		0° - SF		FN2	1
Gamma Angles		0° - SF 180°		FN2	1
Gamma Angles 105* 90* 75*		0° - SF 180°		FN2	1
Gamma Angles		0° - SF 180°		FN2	1
Gamma Angles 105* 90* 75*		0° - SF 180°		FN2	1
Gamma Angles 105* 90* 75*		0° - SF 180° 150 300		FN2	1
Gamma Angles 105* 90* 75*		0° - SF 180° 150 150 450		FN2	1
Gamma Angles 105* 90* 60*		0° - SF 180° 150 300		FN2	1
Gamma Angles 105* 90* 60*		0° - SF 180° 150 150 450		FN2	1

Package Information		
Standard Package	Case	
Quantity	1 Unit	
Sales Units	1 Unit	
Package Items	1 Unit Complete	
Weight lbs(kg) SF1 SF2	Others consult factory 9 (4) 10 (5)	



















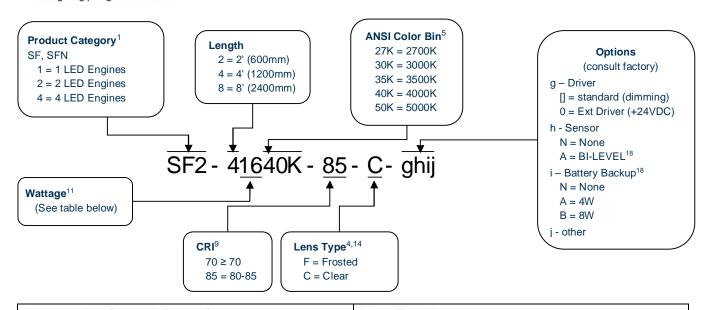












Accessories (consult factory): Hangers

SF Y-Hanger, 60" (192-0021000)

Wire Guard

Most Popular: SF1-41840K-85-F-BA SF1-20940K-85-F-BAA



Length	Light Engines - Lumens ^{1, 4, 11} @5000K @CRI – 85 (-12%/ to 2700K)			
(ft)	Qty	Wattage (W)	SFx	
2	1	9	1325	
		14	1825	
		28	3250	
4	1	9 or 12	1325	
		13 or 16	1900	
		18	2575	
		28 or 29	3875	
		36	4650	
		54	7100	
	2	44	5150	
		58	7725	
4 (DC)	1	24	3550	
		48	7000	
8	2	36	9300	
	2	54	14000	



Notes

- 1. Not all model combinations are available
- 2. MBTF per MIL-HDBK-217F
- 3. Extended lead times and minimums maybe required for some models
- 4. Frosted lens has less output than clear lens
- 5. Other ANSI Color bins available
- 6. Operation to -40°F/-40°C is available
- 7. Extended warranties are available
- 8. Non-UL applications (Some Models)
- 9. 70 and 85 are standard and can be produced with any color
- 10. Specifications and availability subject to change without notice
- 11. Varies depending on color temperature, CRI, LED driver and lens (±10%)
- 12. Patent Pending: USA +40 Countries
- 13. EPAct -179d tax incentive ready product given dimming bi-level switching requirements
- 14. Certain chemicals that may exist in end-user locations release airborne contaminants that can impact the integrity and safety of key fixture components that contain acrylic or polycarbonate material.
- 15. N/A
- 16. Worst case temperature @25°C.
- 17. Consult website for further details.
- 18. Conforms to basis of BNY Title 27/Sub-chapter 6 [C26-605.1] 27-381 when HF series specified with 150mA cable and 4 watt battery backup, when battery is charged for no less than 48hrs, emergency illumination will be greater than 120 minutes. IndependenceLED is not responsible for improper installation, maintenance, and/or specification.

Compliance Standards

UL 1993 - Self-Ballasted Lamps and Lamp Adapters, Ed. 4: 2012

UL 1598 - Luminaires

UL 1598C - Light-Emitting Diode (LED) Retrofit Luminaire Conversion Kits

UL 8750 - Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products, Ed. 1: 2009

CSA C22.2 No. 250.13 - Light emitting diode (LED) equipment for lighting applications, Ed. 1222012

EN 62471:2008 - Photo Biological Safety of Lamps and Lamp Systems

EN 62031:2008 - LED modules for general lighting. Safety specifications

EN 61347-1:2008 - Lamp controlgear. General and safety requirements

EN 55015:2006 - Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

EN 61347-2-13:2006 - Lamp controlgear. Particular requirements for d.c. or a.c. supplied electronic control gear for LED modules

EN 61000-3-2:2006 - Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions

EN 61000-3-3:2008 - Electromagnetic compatibility (EMC). Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems

EN 60598-1:2008 - Luminaires. General requirements and tests

EN 61547:2009 - Equipment for general lighting purposes. EMC immunity requirements

FCC Part 15, Subpart B, Class B -

ANSI_ANSL G C78.81-2010 - Electric Lamps-Double-Capped Fluorescent Lamps-Dimensional and Electrical Characteristics

ANS|_NEMA_ANSL G C78.377-2008 - American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products

ISO-9001:2008 Certification - The International Organization for Standardization fosters consistency in product delivery and quality assurance

IEC 60529-2004 - Degrees of Protection Provided by Enclosures (IP Code)

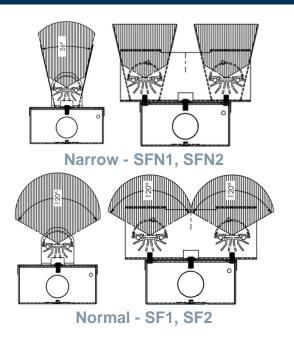
DOH Article 81.19 (b) - Lighting and ventilation

FDA Article 6-202.11 - Light Bulbs, Protective Shielding





Beam Pattern



Mechanical

