

LUMEN+

HIGH LUMEN APPLICATIONS

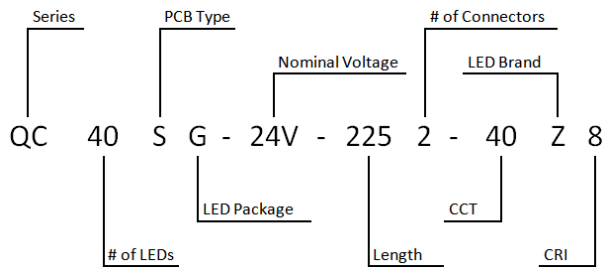


Features:

- > Design focused on achieving industry leading lm/\$ and lm/W
- > High efficacy: 4000 lm, 6000 lm, and 8000 lm packages tested at 170 lm/W
- > Aluminium core PCB in all light engines for excellent heat dissipation
- > CCT options from 3000K – 6500K, up to 3-step MacAdam available



LUMEN+ Light Engine Order Code



Legend		
Series	QC: 2' Linear, Centered QF: 2' Linear, Wide	U: High Output Array SC: 1' Linear, Centered
PCB Type	F: FR4	S: Aluminum
Length	In inches, ex: 220=22.0"	
LED Brand	M: Samsung L: LG	S: Seoul P: Lumileds Z: OSRAM

Board	Dimensions [Inch]	Specified Current [mA]	Voltage Range [V]	Light Output @ Specified Current [lm]	Efficacy	Max Light Output [lm]
SC20SG	11.5 x 1.0	500	22.7 - 25.8	2,000	170	3,575
QC40SG	22.5 x 1.0	1,000	22.7 - 25.8	4,000	170	7,150
QF80SG	22.0 x 1.574	2,000	22.7 - 25.8	8,000	170	14,300
U80SG	11.5 x 2.5	2,000	22.7 - 25.8	8,000	170	14,300

Release: 2016-LUMEN+1.0

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Warranty Operation Range

Board	Maximum Current [mA]	Operating Temperature Range [°C]	Control Range ¹
SC20SG	1,400	-40.0 to +95.0	100% to 0.01%
QC40SG	2,000		
QF80SG	4,000 @ 24V 2,000 @ 48V		
U80SG	4,000		

CCT: Lumen Multiplication Factor

3000K	3500K	4000K	5000K
0.93	0.93	1.00	1.00

Junction Temperature (T_j): Lumen Multiplication Factor

25°C	45°C	65°C	85°C
1.03	1.00	0.96	0.93

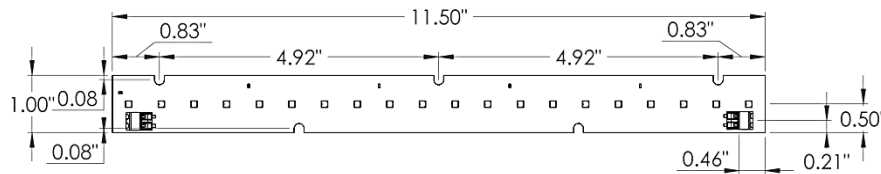
Single Row Strips

Electrical Characteristics ($T_j = 45\text{ }^\circ\text{C}$)

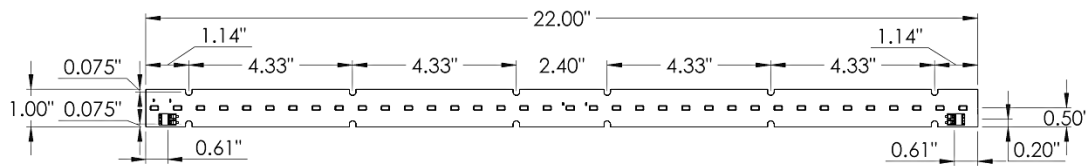
Board	# of LEDs	Current [mA]	Voltage [V]	Power [W]	Luminous Flux [lm]		
					Min	Typ.	Max
SC20SG	20	325	22.3	7.3	1,200	1,245	1,335
		500	23.1	11.6	1,805	1,875	2,000
		1,000	24.8	24.8	3,315	3,435	3,685
QC40SG	40	650	22.3	14.5	2,400	2,490	2,670
		1,000	23.1	23.1	3,610	3,750	4,000
		2000	24.8	49.6	6,630	6,870	7,370

Mechanical Specifications

SC20SG	11.5" x 1.0"	LED: 3030 Mid-Power	Connectors: 2x Wire to Board
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QC40SG	22.5" x 1.0"	LED: 3030 Mid-Power	Connectors: 2x Wire to Board
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Double Row Strips

Electrical Characteristics ($T_j = 45^\circ\text{C}$)

Board	# of LEDs	Current [mA]	Voltage [V]	Power [W]	Luminous Flux [lm]		
					Min	Typ.	Max
QF80SG ¹ 24V Config	80	1,300	22.3	29.0	4,800	4,980	5,340
		2,000	23.1	46.3	7,220	7,500	8,000
		4,000	24.8	99.2	13,260	13,740	14,740
QF80SG ² 48V Config	80	650	44.6	29.0	4,800	4,980	5,340
		1,000	46.3	46.3	7,220	7,500	8,000
		2,000	49.6	99.2	13,260	13,740	14,740

Notes

1. QF80SG and QF80SG-D24V in parallel configuration
2. QF80SG-D24V in series configuration

Mechanical Specifications

QF80SG	22.0" x 1.574"	LED: 3030 Mid-Power	Connectors: 2x Wire to Board
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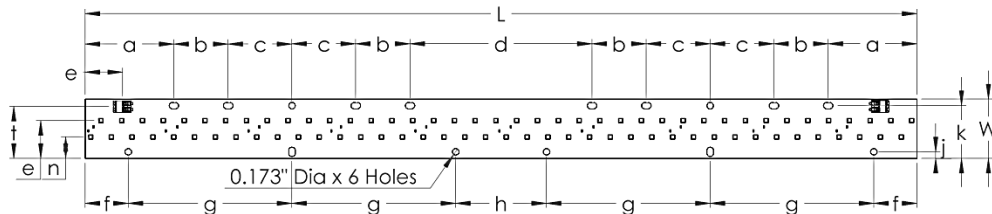


Figure 3 – QF80SG Mechanical Drawing

QF80SG-D24V	22.0" x 1.574"	LED: 3030 Mid-Power	Connectors: 2x Wire to Board
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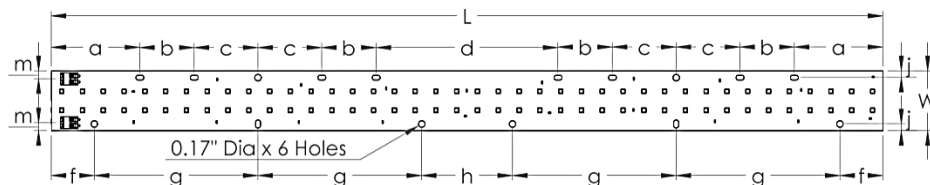


Figure 4 – QF80SG-D24V Mechanical Drawing

Dimensions Reference Table (Inches)

a = 2.344	b = 1.4375	c = 1.688	d = 4.8125	e = 1.000	f = 1.138	g = 4.33	h = 2.40
j = 0.178	k = 1.397	L = 22.0	W = 1.574	t = 1.375	n = 0.57	m = 0.21	

QF80SG-D24V Voltage Configurations



Electrical Characteristics ($T_j = 45\text{ }^\circ\text{C}$)

Board	# of LEDs	Current [mA]	Voltage [V]	Power [W]	Luminous Flux [lm]		
					Min	Typ.	Max
U80SG	80	1,300	22.3	29.0	4,800	4,980	5,340
		2,000	23.1	46.3	7,220	7,500	8,000
		4,000	24.8	99.2	13,260	13,740	14,740

Mechanical Specifications

U80SG	11.5" x 2.5"	LED: 3030 Mid-Power	Connectors: 2x Wire to Board
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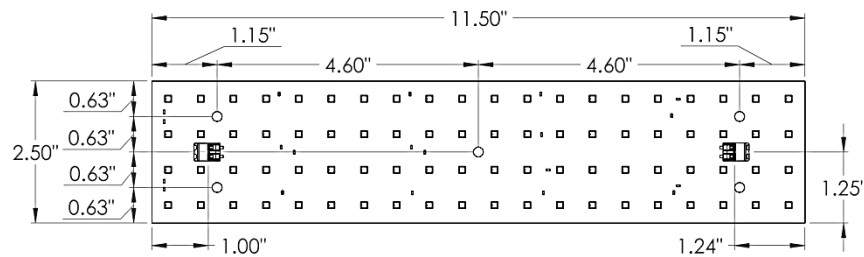


Figure 5 – U80SG Mechanical Drawing