

LED Driver

High-bay 96 W Programmable Driver SI-CA2029601US



Constant Current LED Driver Wide Operating Range up to 2.0A – Programmable



Features & Benefits

- Output Current Range: Max 2.0 A (adjustable via programmer)
- Output Voltage Range: 24 ~ 48 Vdc
- Output Power Range: Max 96 W
- Dimming Control: 0-10 V
- Input Voltage: 110 ~ 277 Vac, 50/60 Hz
- Safety: UL / cUL (UL 8750, UL Class 2), EN61347
- EMI: FCC Part 15 Class B
- Protections: Short Circuit, Over Temperature, Over Voltage (No Load Protection)
- t_a Range: -40 ~ +60 °C
- Expected lifetime: 50,000 hours at $t_c = 75$ °C
- Long lasting & high reliability
- Slim metal housing
- Easy setting current

Applications

- Indoor High-bay lighting
- Parking lot lighting

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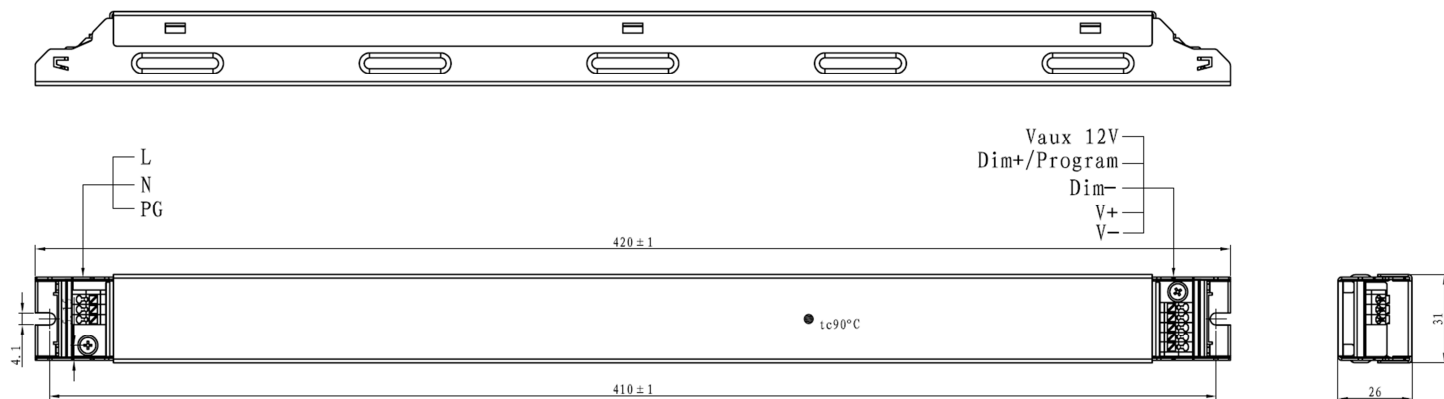
1. Characteristics

Article	Symbol	Specification			Unit	Note
		Min.	Typ.	Max.		
INPUT SPECIFICATIONS						
Nominal Voltage	V _{in}	100 ~ 277			Vac	Full input range, no range switching
Voltage Range		90		304	Vac	
Nominal Frequency	F _{in}	50 / 60			Hz	
Frequency Range		47		63	Hz	
Input Current	At 110 Vac	I _{in}		1.3	A	At full load
	At 277 Vac	I _{in}		0.45	A	At full load
Total Harmonic Distortion	THD			0	%	At 120-277 Vac
Power Factor	PF	0.9			-	At 120-277 Vac
Efficiency			85		%	At full load, 110 Vac, 60 Hz
			88		%	At full load, 277 Vac, 60 Hz
Protection Class			2		-	
In-rush Current				65	A _{pk}	@ 277Vac input, 25°C Cold start.
OUTPUT SPECIFICATIONS						
Nominal Voltage	V _o	24 ~ 48			Vdc	at I _o = Max 2.0 A
Max. Voltage				60	Vdc	Open circuit, No-load protection
Nominal Current	I _o			2.0	A	±5 %, Can be programmable
Nominal Power	P _o			96	W	At I _o = Max 2.0 A, V _o = 48 V
Turn-on Delay Time	T _d			1	s	At full load, 100 Vac input

Article	Symbol	Specification			Unit	Note
		Min.	Typ.	Max.		
DIMMING SPECIFICATIONS						
Dimming Control		0-10 V				See Dimming Specification section
ENVIRONMENTAL SPECIFICATIONS						
Ambient Temperature	t_a	-40		60	°C	
Case Temperature	t_c			90	°C	Type TL 90°C / 65°C
Storage Temperature	t_s	-40		85	°C	
Ambient Humidity		10		95	%	Not condensing
Surge Transient Protection	L / N			±4	kV	According to IEC/EN 61547
	LN / GND			±6	kV	
IP Rating		20			-	Suitable for indoor environment
Expected Lifetime (e-cap)		50,000			h	At $t_c = 75$ °C, full load, 120-277 Vac
MTBF		250,000			h	At $t_a = 25$ °C, full load
Dimensions	L x W x H	16.5 x 1.2 x 1.0			inch	
		420 x 31 x 26			mm	
Net Weight		400			g	± 20 g

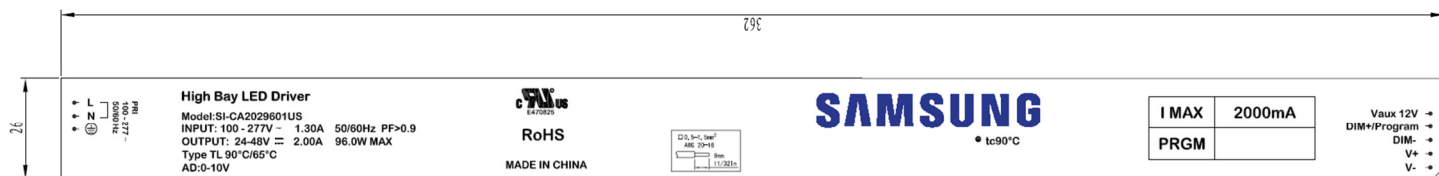
2. Outline Drawing & Dimension

Dimension (mm)



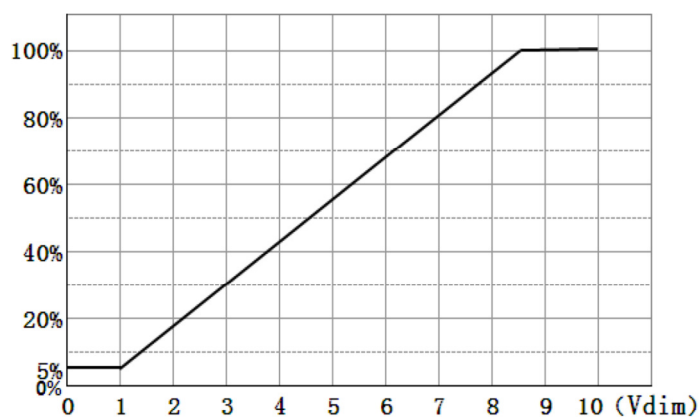
Pin	Symbol	Color	Description	Connector
INPUT CONNECTOR				
1	L	Black	Live	
2	N	White	Neutral	PHOENIX CONTACT
3	PG	Green	Ground	
OUTPUT CONNECTOR				
1	Vaux 12V	Yellow	Auxiliary 12V	
2	Dim+/Program	Purple	External Dimming Input Port(0~10V)	
3	Dim-	Grey	External Dimming Input Port(Ground)	PHOENIX CONTACT
4	V+	Red	LED output +	
5	V-	Blue	LED output -	

3. Label Structure



4. Current Setting

1) Control Type : 0-10V



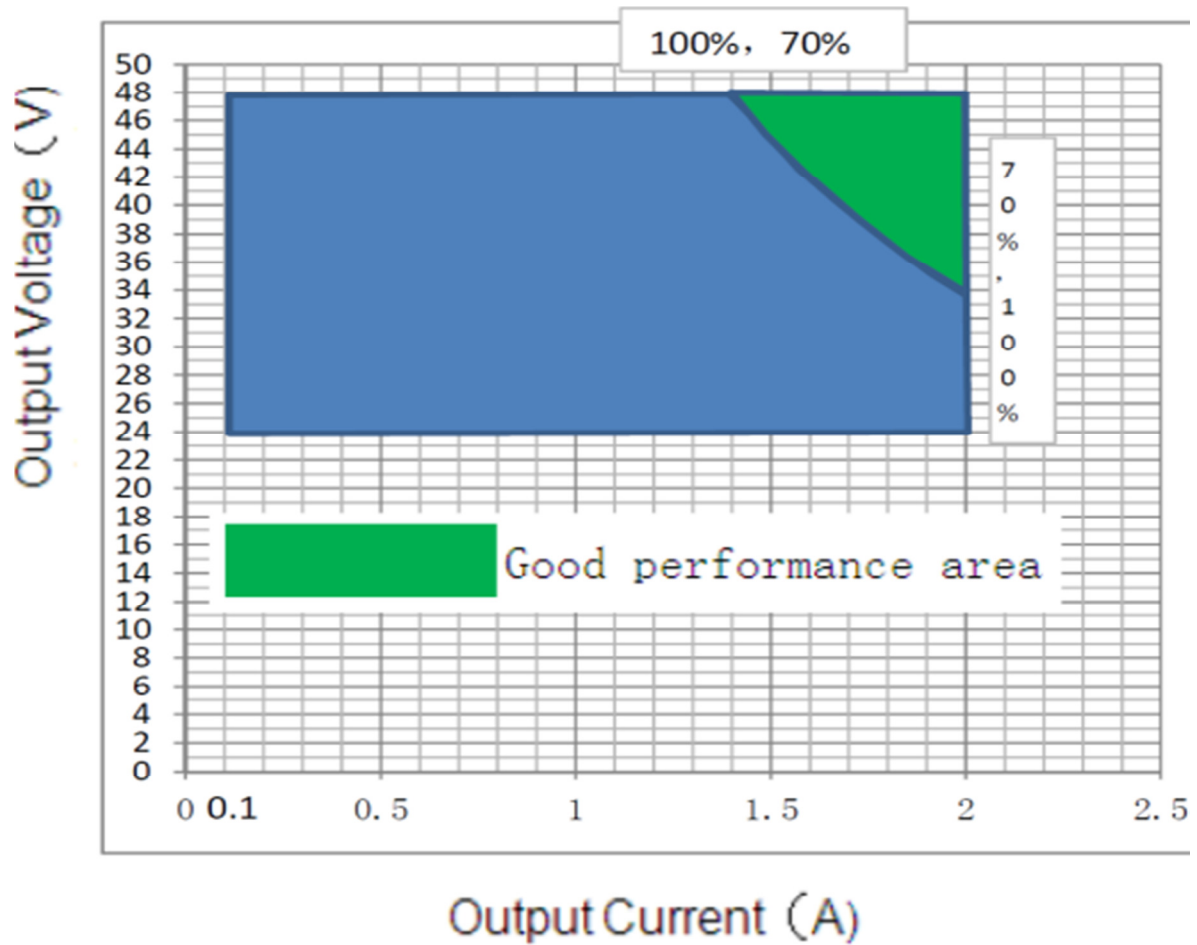
Article	Symbol	Unit	Min	Typ	Max	Remark
	Range	Vdc	0	-	10	
Dimming	Dim. MIN	Vdc	-	-	1	0~1V Constant
	Dim. MAX	Vdc	-	-	8.5	

2) Programmable current setting

The programmable driver can be programmed by using the special PC S/W and the programmer module.



3) Operating Window



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