EUM-100SxxxDx

Rev.D

Features

- Compact Metal Case with Excellent Thermal Performance
- Full Power at Wide Output Current Range (Constant Power)
- Adjustable Output Current (AOC) with Programmability
- Isolated 1-5V/1-10V/10V PWM/3-Timer-Modes Dimmable
- Output Lumen Compensation
- Input Surge Protection: DM 6kV, CM 10kV
- All-Around Protection: OVP, SCP, OTP
- IP66/IP67 and UL Dry/Damp/Wet Location
- Class 2 & SELV Output
- TYPE HL, for use in a Class I, Division 2 hazardous (Classified) location
- 5 Years Warranty



Description

The *EUM-100SxxxDx* series is a 100W, constant-current, programmable and IP66/IP67 rated LED driver that operates from 90-305Vac input with excellent power factor. It is created for many lighting applications including high bay, tunnel and roadway, etc. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

Models

Adjustable Output	Full-Power	Default	Input	Output	Max.	Typical	Typical Power Factor		Model Number	
Current Range	Current Range (1)	Output Current	Voltage Range(2)	Voltage Range	Output Power			220Vac	(6)	
35-530mA	350-530mA		90~305 Vac/ 127~300 Vdc			94.0%	0.99	0.96	EUM-100S053Dx ⁽⁷⁾	
70-1050mA	700-1050mA	700 mA	90~305 Vac/ 127~300 Vdc	48~143 Vdc	100W	93.0%	0.99	0.96	EUM-100S105Dx	
105-1500mA	1050-1500mA	1050 mA	90~305 Vac/ 127~300 Vdc	34~45 Vac	100W	93.0%	0.99	0.96	EUM-100S150Dx ⁽⁴⁾	
175-2800mA	1750-2800mA	2100 mA	90~305 Vac/ 127~300 Vdc	1/~54 Vac	96W	92.0%	0.99	0.96	EUM-100S280Dx ⁽⁵⁾	

Notes: (1) Output current range with constant power at 100W

(2) Certified input voltage range: UL, FCC 100-277Vac; otherwise 100-240Vac.

(3) Measured at 100% load and 220Vac input (see below "General Specifications" for details).

(4) SELV Output.

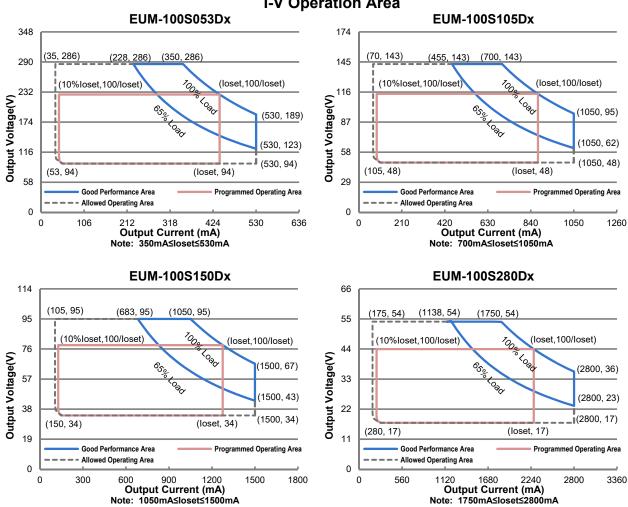
(5) Class 2 & SELV output.

(6) x = G are UL Recognized, ENEC and CCC, etc. models; x = T are UL Class P models; x = B are BIS models.

(7) Only available with x = G, and only with ENEC, CE, CB and CCC certificates.

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EUM-100SxxxDx



I-V Operation Area

Input Specifications

Parameter	Min.	Тур.	Max.	Notes
Input AC Voltage	90 Vac	-	305 Vac	
Input DC Voltage	127 Vdc	-	300 Vdc	
Input Frequency	47 Hz	-	63 Hz	
Lookago Current	-	-	0.75 MIU	UL 8750; 277Vac/60Hz
Leakage Current	-	-	0.70 mA	IEC 60598-1; 240Vac/60Hz
	-	-	1.0 A	Measured at 100% load and 120 Vac input.
Input AC Current	-	-	0.54 A	Measured at 100% load and 220 Vac input.
Inrush Current(I ² t)	-	-	2.07 A ² s	At 220Vac input, 25°C cold start, duration=224 μs, 10%lpk-10%lpk. See Inrush Current Waveform for the details.

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Input Specifications (Continued)

Parameter	Min.	Тур.	Max.	Notes	
PF	0.9	-	-	At 100-277Vac, 50-60Hz, 65%-100% Load	
THD	-	-	20%	(65-100W)	
THD	-	-	10%	At 220-240Vac, 50-60Hz, 75%-100% Load (75-100W)	

Output Specifications

Parameter	Min.	Тур.	Max.	Notes
Output Current Tolerance	-5%loset	-	5%loset	At 100% load condition
Output Current Setting(loset) Range				
EUM-100S053Dx	35 mA	-	530 mA	
EUM-100S105Dx	70 mA	-	1050 mA	
EUM-100S150Dx	105 mA	-	1500 mA	
EUM-100S280Dx	175 mA	-	2800 mA	
Output Current Setting Range with Constant Power				
EUM-100S053Dx	350 mA	-	530 mA	
EUM-100S105Dx	700 mA	-	1050 mA	
EUM-100S150Dx	1050 mA	-	1500 mA	
EUM-100S280Dx	1750 mA	-	2800 mA	
Total Output Current Ripple (pk-pk)	-	5%Iomax	10%Iomax	At 100% load condition. 20 MHz BW
Output Current Ripple at < 200 Hz (pk-pk)	-	2%lomax	-	At 100% load condition. Only this component of ripple is associated with visible flicker.
Startup Overshoot Current	-	-	10%Iomax	At 100% load condition
No Load Output Voltage				
EUM-100S053Dx	-	-	320 V	
EUM-100S105Dx	-	-	170 V	
EUM-100S150Dx	-	-	120 V	
EUM-100S280Dx	-	-	60 V	
Line Regulation	-	-	±0.5%	Measured at 100% load
Load Regulation	-	-	±1.5%	
Turn-on Delay Time	-	-	0.5 s	Measured at 120-277Vac input, 65%-100% Load
Temperature Coefficient of loset	-	0.03%/°C	-	Case temperature = 0°C ~Tc max

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General Specifications

Efficiency at 120 Vac input: B8.5% 90.5% - EUM-1005050Dx lo= 350 mA 88.5% 90.5% - EUM-1005105Dx lo= 700 mA 88.5% 90.5% - EUM-100515Dx lo= 1050 mA 88.5% 90.5% - EUM-100515Dx lo=1050 mA 88.0% 90.0% - EUM-1005280Dx lo=1500 mA 88.0% 90.0% - EUM-1005280Dx lo=1500 mA 88.0% 90.0% - Efficiency at 220 Vac input: lo=2300 mA 90.5% 92.5% - EUM-1005050Dx lo= 350 mA 90.0% 92.0% - Measured at 100% load and steady-state temperature in 25°C ambient: (Efficiency will be about 2.0% lower if measured immediately after startup.) - EUM-1005150Dx lo= 1500 mA 90.0% 92.0% - EUM-1005280Dx lo=1500 mA 90.0% 92.0% - lo=1500 mA 90.0% 92.0% - - EUM-1005280Dx lo=1500 mA 90.0% 9	Parame	ter	Min.	Тур.	Max.	Notes		
Io 350 mA 88.5% 90.5% - EUM-100S105Dx Io 700 mA 87.5% 88.5% 90.5% - EUM-100S150Dx Io 10 700 mA 87.5% 88.5% 90.5% - EUM-100S150Dx Io 10 88.0% 90.0% - measured immediately after startup.) EUM-100S280Dx Io 87.5% 89.5% - measured immediately after startup.) EUM-100S0S0Dx Io 30.0% 90.0% - measured immediately after startup.) EUM-100S150Dx Io 500 mA 90.0% 92.0% - measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S150Dx Io 700 mA 90.0% 92.0% - measured immediately after startup.) Io 91.0% 93.0% - - measured immediately after startup.) Io< <td>=1050 mA 90.0% 92.0% - - measured immediately after startup.) EUM-100S150Dx Io<<td>91.0% 93.0% - <</td></td>	=1050 mA 90.0% 92.0% - - measured immediately after startup.) EUM-100S150Dx Io< <td>91.0% 93.0% - <</td>	91.0% 93.0% - <	Efficiency at 120 V	ac input:				
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Ior 100 mA 89.5% - temperature in 25°C ambient: EUM-100S150Dx Ior 1050 mA 88.6% 90.0% - (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S280Dx Ior 1750 mA 88.0% 90.0% - measured immediately after startup.) EUM-100S280Dx Ior 350 mA 90.5% 92.5% - ior 350 mA 90.0% - EUM-100S105Dx Ior 350 mA 90.0% 92.5% - ior 300 mA 92.6% - ior 300 mA 92.0% - temperature in 25°C ambient; ior 300 mA 90.0% 92.0% - temperature in 25°C ambient; ior 300 mA 90.0% 92.0% - temperature in 25°C ambient; ior 300 mA 90.0% 92.0% - temperature in 25°C ambient; ior 300 mA 90.0% 92.0% - measured at 100% load and steady-state EUM-100S105Dx Ior 1050 mA 90.0% 92.0% - measured at 100% load and steady-state ior 300 mA 90.0% - ior 300 mA 90.5% 92.5% -	EUM-100S105Dx					Measured at 100% load and steady-state		
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Low 1003130UA Io=1050 mA 88.0% 90.0% - measured immediately after startup.) EUM-100S280Dx io=1750 mA 89.0% 91.0% - io=1050 mA 89.0% - EUM-100S280Dx io=2500 mA 88.0% 92.5% - io=1050 mA 92.0% - Lo=350 mA 90.0% 92.0% 92.0% - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S150Dx io=1050 mA 91.0% 93.0% - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S150Dx io=1050 mA 91.0% 93.0% - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S105Dx io=1050 mA 91.0% 93.0% - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S105Dx io=350 mA 92.0% - Measured at 100% load and steady-state temperature in 25°C ambient; io=1050 mA 91.5% 93.5% - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S105Dx io=350 mA 92.0% -		lo=1050 mA	88.5%	90.5%	-			
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EUM-100S280Dx Image: Constraint of the second					-	measured inimediately after startup.)		
Io=750 mA 87.5% 88.0% 90.0% 90.0% - Efficiency at 220 Vac input: EUM-100S053DX Io 350 mA 90.5% 92.5% - Io 350 mA 92.0% - Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S150DX 10=700 mA 90.0% 92.0% - EUM-100S150DX 10=750 mA 90.0% 92.0% - EUM-100S280DX 10=1050 mA 90.0% 92.0% - EUM-100S280DX 10=1750 mA 99.0% - - Io=1750 mA 90.0% 92.0% - - EUM-100S280DX 10=350 mA 90.0% 92.0% - Io=350 mA 91.0% 93.0% - - EUM-100S15DX 10=300 mA 90.5% 92.5% - - Io=1050 mA 90.5% 92.5% - - (Efficiency will be about 2.0% lower if measured immediately after startup.) Io=1050 mA 90.5% 92.5% - -		lo=1500 mA	89.0%	91.0%	-			
Io=2800 mA 88.0% 90.0% - Efficiency at 220 Vac input: EUM-100S053DX Io= 350 mA 90.5% 92.5% - Io= 350 mA 92.0% 94.0% - Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S150Dx Io=1050 mA 90.0% 92.0% - Io=1500 mA 91.0% 93.0% - Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S280Dx Io=1500 mA 91.0% 93.0% - Io=1200 mA 91.0% 93.0% - - EUM-100S15DX Io=350 mA 91.0% 93.0% - Io=2800 mA 91.0% 93.0% - - EUM-100S15DX Io=350 mA 92.0% - - EUM-100S15DX Io=1050 mA 91.5% - - EUM-100S15DX Io=1050 mA 90.5% 92.5% - - EUM-100S280DX Io=1750 mA 99.5% </td <td>EUM-100S280Dx</td> <td></td> <td>07 50/</td> <td>00.5%</td> <td></td> <td></td>	EUM-100S280Dx		07 50/	00.5%				
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Io= 700 mA 90.0% 92.0% - temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S150Dx Io=1050 mA 90.0% 92.0% - measured immediately after startup.) EUM-100S280Dx Io=1750 mA 89.5% 91.5% - measured immediately after startup.) EUM-100S280Dx Io=1750 mA 89.5% 91.5% - measured immediately after startup.) Efficiency at 277 Vac input: Io=300 mA 90.0% 92.0% - measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S105Dx Io= 700 mA 90.5% 92.5% - measured immediately after startup.) EUM-100S150Dx Io=1050 mA 91.0% 93.0% - measured immediately after startup.) EUM-100S280Dx Io=1750 mA 99.5% 92.5% - measured immediately after startup.) EUM-100S280Dx Io=1750 mA 99.5% 91.5% - measured immediately after startup.) EUM-100S280Dx Io=1750 mA 99.5% 91.5% - measured at 220Vac input, 80%Load and 70°C	EUM-100S105Dx		<u> </u>	00.00V		Measured at 100% load and steady-state		
EUM-100S150Dx Io=1050 mA 90.0% 92.0% - (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S280Dx Io=1500 mA 91.0% 93.0% - - EUM-100S280Dx Io=2800 mA 90.0% 92.0% - - Efficiency at 277 Vac input: Io=350 mA 91.0% 93.0% - - EUM-100S053Dx Io=350 mA 91.0% 93.0% - - Io=530 mA 92.0% 94.0% - - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S105Dx Io=700 mA 90.5% 92.5% - - measured immediately after startup.) EUM-100S15DDx Io=1050 mA 90.5% 92.5% - - measured immediately after startup.) EUM-100S280Dx Io=1500 mA 90.5% 92.5% - - - EUM-100S280Dx Io=1500 mA 90.5% 92.0% - - - MTBF - 473,000 - 25°C ambient temperature (MIL-HDBK-217F) - - - - - To °C case temperat					-			
EUM-100S1S0DX Io=1050 mA Io=1500 mA 90.0% 91.0% 92.0% 93.0% - measured immediately after startup.) EUM-100S280DX Io=1750 mA Io=2800 mA 90.0% 92.0% - - Efficiency at 277 Vac input: EUM-100S053Dx Io= 350 mA Io= 530 mA 91.0% 93.0% - - EUM-100S105Dx Io= 700 mA Io=1050 mA 90.5% 92.5% - Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S150Dx Io=1050 mA Io=1050 mA 90.5% 92.5% - EUM-100S280Dx Io=1500 mA Io=2800 mA 90.5% 92.5% - EUM-100S280Dx Io=1500 mA Io=2800 mA 90.5% 92.5% - EUM-100S280Dx Io=1750 mA Io=2800 mA 90.5% 92.0% - EUM-100S280Dx Io=1750 mA Io=2800 mA 90.0% 92.0% - Lifetime - 473,000 Hours - Measured at 220Vac input, 80%Load and 25°C ambient temperature; (MIL-HDBK- 217F) Lifetime - 114,000 Hours - 70°C case temperature; See lifetime		10=1050 mA	91.0%	93.0%	-			
ID=1000 IMA 91.0% 92.0% - EUM-100S280Dx Io=1750 mA 91.0% 91.5% - Io=2800 mA 90.0% 92.0% - - Efficiency at 277 Vac input: 91.0% 93.0% - - EUM-100S053Dx Io= 350 mA 91.0% 93.0% - - EUM-100S105Dx Io= 700 mA 90.5% 92.5% - temperature in 25°C ambient; EUM-100S150Dx Io=1050 mA 90.5% 92.5% - temperature in 25°C ambient; EUM-100S150Dx Io=1050 mA 90.5% 92.5% - measured immediately after startup.) EUM-100S280Dx Io=1050 mA 90.5% 92.0% - - EUM-100S280Dx Io=1750 mA 89.5% 91.5% - - MTBF - 473,000 - 25°C ambient temperature (MIL-HDBK-217F) Lifetime - 114,000 - 70°C case temperature; See lifetime vs. Tc curve for the details Operating Case Temperature -40°C -	EUM-100S150DX	1. 1050	00.0%	00.00/				
EUM-100S280Dx Io=1750 mA 89.5% 91.5% - Io=2800 mA 90.0% 92.0% - - Efficiency at 277 Vac input: Io= 350 mA 91.5% - - EUM-100S053Dx Io= 350 mA 92.0% 94.0% - - EUM-100S105Dx Io= 700 mA 90.5% 92.5% - Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S150Dx Io=1050 mA 90.5% 92.5% - Io=1050 mA 90.5% 92.5% - measured immediately after startup.) EUM-100S160Dx Io=1050 mA 90.5% 92.5% - measured immediately after startup.) EUM-100S280Dx Io=1750 mA 90.0% 92.0% - Measured at 220Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F) Lifetime - 473.000 - - Measured at 220Vac input, 80%Load and 70°C case temperature; See lifetime vs. Tc curve for the details Operating Case Temperature -40°C - +90°C Case temperature for 5 year					-	model of minoriatory and startup.)		
Io=1750 mA (o=2800 mA 89.5% 90.0% 91.5% 92.0% - Efficiency at 277 Vac input: EUM-100S053Dx Io=350 mA (o=530 mA 91.0% 92.0% 93.0% - EUM-100S105Dx Io=530 mA 92.0% 94.0% - EUM-100S105Dx Io=700 mA 90.5% 92.5% - Io=1050 mA 91.5% 92.5% - Measured at 100% load and steady-state temperature in 25°C ambient; (Efficiency will be about 2.0% lower if measured immediately after startup.) EUM-100S150Dx Io=1500 mA 90.5% 92.5% - Io=1500 mA 91.0% 93.0% - measured immediately after startup.) EUM-100S280Dx Io=1750 mA 89.5% 91.5% - EUM-100S280Dx Io=1750 mA 89.5% 91.5% - MTBF - 473,000 Hours - Measured at 220Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK- 217F) Lifetime - 114,000 Hours - Measured at 220Vac input, 80%Load and 70°C case temperature; See lifetime vs. Tc curve for the details Operating Case Temperature for Safety Tc_s -40°C - +80°C		10=1500 mA	91.0%	93.0%	-			
Io=2800 mA 90.0% 92.0% - Efficiency at 277 Vac input: EUM-100S053Dx Io= 350 mA 91.0% 93.0% - Io= 530 mA 92.0% 94.0% - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S105Dx Io= 700 mA 90.5% 92.5% - Measured at 100% load and steady-state temperature in 25°C ambient; EUM-100S150Dx Io=1050 mA 90.5% 92.5% - Measured immediately after startup.) EUM-100S280Dx Io=1500 mA 90.5% 92.5% - - Io=1500 mA 90.5% 92.5% - - - MTBF Io=1750 mA 89.5% 91.5% - - MTBF - 473,000 - 25°C ambient temperature (MIL-HDBK- 217F) Lifetime - 114,000 - 490°C - 217F) Operating Case Temperature for Safety Tc_s -40°C - +90°C Case temperature for 5 years warranty To curve for the details Operating Case Temperature for Safety Tc_s -40°C -	EUM-1005280DX		00 50/	04 50/				
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $		10-1050 MA	91.570	93.576	-	(Efficiency will be about 2.0% lower if		
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Operating Case Temperature for Warranty Tc_w -40°C - +80°C Case temperature for 5 years warranty Humidity: 10% RH to 95% RH Storage Temperature -40°C - +85°C Humidity: 5%RH to 95% RH Dimensions Inches (L × W × H) 5.16 × 2.36 × 1.44 131 × 60 × 36.5 With mounting ear 5.83 × 2.36 × 1.44 148 × 60 × 36.5			-40°C	-	+90°C			
for Warranty Tc_w -40 °C - +80 °C Humidity: 10% RH to 95% RH Storage Temperature -40 °C - +85 °C Humidity: 5% RH to 95% RH Dimensions Inches (L × W × H) 5.16 × 2.36 × 1.44 Storage Temperature 5.83 × 2.36 × 1.44 Millimeters (L × W × H) 131 × 60 × 36.5 148 × 60 × 36.5 148 × 60 × 36.5						Case temperature for 5 years warranty		
Storage Temperature -40°C - +85°C Humidity: 5%RH to 95%RH Dimensions Inches (L × W × H) 5.16 × 2.36 × 1.44 With mounting ear Millimeters (L × W × H) 131 × 60 × 36.5 148 × 60 × 36.5			-40°C	-	+80°C			
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Inches (L × W × H) 5.16 × 2.36 × 1.44 5.83 × 2.36 × 1.44 Millimeters (L × W × H) 131 × 60 × 36.5 148 × 60 × 36.5	Storage Temperature		-40°C	-	+85°C	Humidity: 5%RH to 95%RH		
Inches (L × W × H) 5.16 × 2.36 × 1.44 5.83 × 2.36 × 1.44 Millimeters (L × W × H) 131 × 60 × 36.5 148 × 60 × 36.5	Dimensions			1		With mounting ear		
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	iver weight		-	620 g	-			

EUM-100SxxxDx

Rev.D

Dimming Specifications

P	Parameter		Тур.	Max.	Notes
	Absolute Maximum Voltage on the Vdim (+) Pin		-	20 V	
Source Cur	rent on Vdim (+)Pin	200 µA	300 µA	450 µA	Vdim(+) = 0 V
Dimming	EUM-100S053Dx EUM-100S105Dx EUM-100S150Dx EUM-100S150Dx EUM-100S280Dx		350 mA ≤ loset ≤ 530 mA 700 mA ≤ loset ≤ 1050 mA 1050 mA ≤ loset ≤ 1500 mA 1750 mA ≤ loset ≤ 2800 mA		
Output Range	EUM-100S053Dx EUM-100S105Dx EUM-100S150Dx EUM-100S280Dx	35 mA 70 mA 105 mA 175 mA	-	loset	35 mA ≤ loset < 350 mA 70 mA ≤ loset < 700 mA 105 mA ≤ loset < 1050 mA 175 mA ≤ loset < 1750 mA
Recommen Range for 1	ded Dimming -5V	0.25 V	-	4.75 V	Dimming mode set to 1-5V in PC interface.
	Recommended Dimming Range for 1-10V		-	9 V	Default 1-10V dimming mode with positive logic.
PWM_in High Level		-	10V	-	
PWM_in Low Level		-	0V	-	
PWM_in Frequency Range		200 Hz	-	2 KHz	
PWM_in Du	ity Cycle	0%	-	100%	

Safety & EMC Compliance

Safety Category	Standard
UL/CUL	UL 8750,CAN/CSA-C22.2 No. 250.13
ENEC & CE	EN 61347-1, EN 61347-2-13
UKCA	BS EN 61347-1, BS EN 61347-2-13
СВ	IEC 61347-1, IEC 61347-2-13
CCC	GB 19510.1, GB 19510.14
PSE	J 61347-1, J 61347-2-13
KS	KS C 7655
BIS	IS 15885(Part2/Sec13)
EAC	TP TC 004, TP TC 020
NOM	NOM-058-SCFI
global-mark	AS/NZS 61347.1, AS/NZS 61347.2.13
Performance	Standard
ENEC	EN 62384
EMI Standards	Notes
BS EN/EN IEC 55015/GB/T 17743/KN 15 ⁽¹⁾	Conducted emission Test &Radiated emission Test

EUM-100SxxxDx

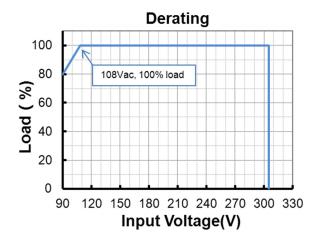
Rev.D

Safety & EMC Compliance (Continued)

EMI Standards	Notes
BS EN/EN IEC 61000-3-2/GB 17625.1	Harmonic current emissions
BS EN/EN 61000-3-3	Voltage fluctuations & flicker
	ANSI C63.4 Class B
FCC Part 15 ⁽¹⁾	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: [1] this device may not cause harmful interference, and [2] this device must accept any interference received, including interference that may cause undesired Operation.
EMS Standards	Notes
BS EN/EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
BS EN/EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
BS EN/EN 61000-4-4	Electrical Fast Transient / Burst-EFT
BS EN/EN 61000-4-5	Surge Immunity Test: AC Power Line: Differential Mode 6 kV, Common Mode 10 kV
BS EN/EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
BS EN/EN 61000-4-8	Power Frequency Magnetic Field Test
BS EN/EN 61000-4-11	Voltage Dips
	S .

Note: (1) This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

Derating

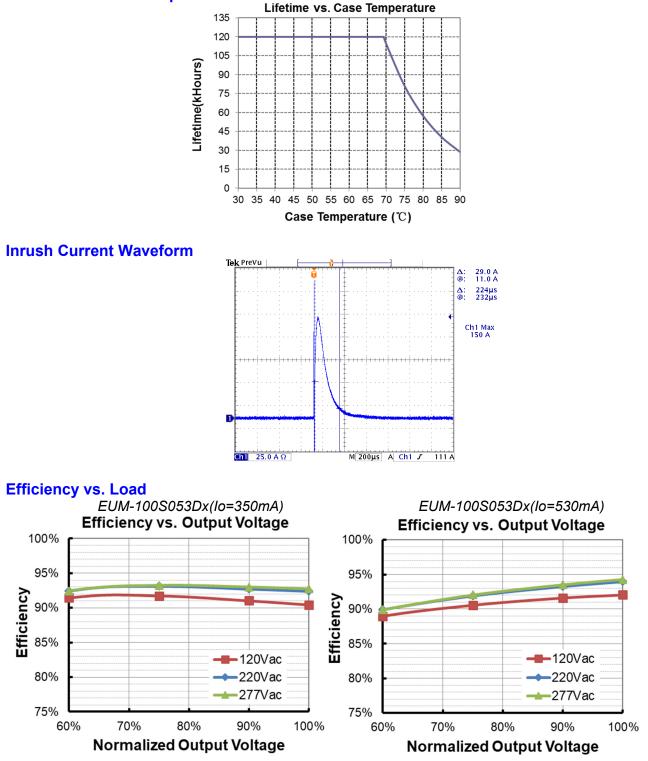


www.inventronics-co.com

Tel: 86-571-56565800

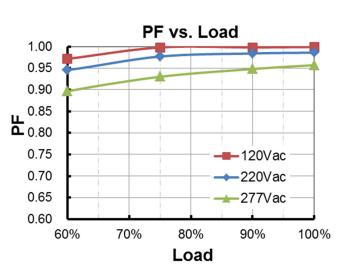
Rev.D

Lifetime vs. Case Temperature

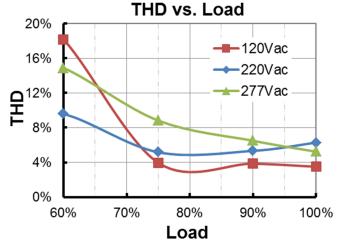


100W Programmable IP66/IP67 Driver EUM-100SxxxDx Rev.D EUM-100S105Dx(lo=700mA) EUM-100S105Dx(lo=1050mA) Efficiency vs. Output Voltage Efficiency vs. Output Voltage 100% 100% 95% 95% Efficiency Efficiency 90% 90% 85% 85% 120Vac -120Vac -220Vac 80% 220Vac 80% 277Vac -277Vac 75% 75% 60% 70% 80% 90% 100% 60% 70% 80% 90% 100% Normalized Output Voltage Normalized Output Voltage EUM-100S150Dx(lo=1050mA) EUM-100S150Dx(lo=1500mA) Efficiency vs. Output Voltage Efficiency vs. Output Voltage 100% 100% 95% 95% Efficiency Efficiency 90% 90% 85% 85% 120Vac -120Vac 220Vac 80% 80% 220Vac -277Vac 277Vac 75% 75% 60% 70% 80% 90% 100% 60% 70% 80% 90% 100% Normalized Output Voltage Normalized Output Voltage EUM-100S280Dx(lo=2800mA) EUM-100S280Dx(Io=1750mA) Efficiency vs. Output Voltage Efficiency vs. Output Voltage 100% 100% 95% 95% Efficiency Efficiency 90% 90% 85% 85% -120Vac 120Vac 80% 80% -220Vac 220Vac 277Vac -277Vac 75% 75% 60% 70% 80% 90% 100% 60% 70% 80% 90% 100% Normalized Output Voltage Normalized Output Voltage

Power Factor



Total Harmonic Distortion



Protection Functions

Parameter	Notes					
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed.					
Short Circuit Protection	Auto Recovery. No damage will occur when any output is short circuited. The output shall return to normal when the fault condition is removed.					
Over Voltage Protection	Limits output voltage at no load and in case the normal voltage limit fails.					

Dimming

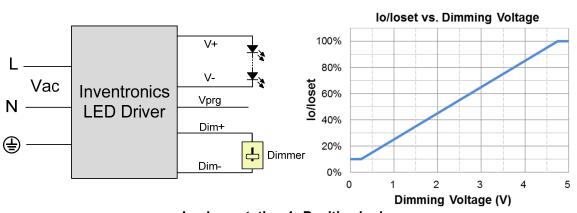
• 1-5V Dimming

The recommended implementation of the dimming control is provided below.

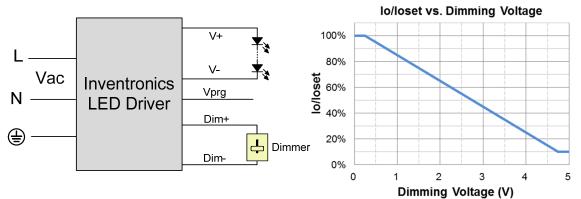
Rev.D

EUM-100SxxxDx

100W Programmable IP66/IP67 Driver



Implementation 1: Positive logic



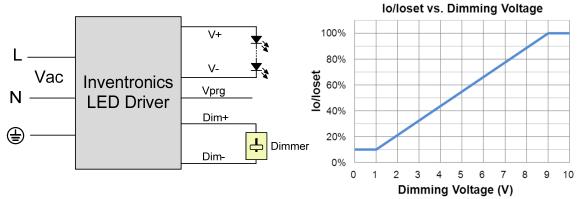
Implementation 2: Negative logic

Notes:

- 1. Do NOT connect Dim- to the output V- or V+, otherwise the driver will not work properly.
- 2. The dimmer can also be replaced by an active 1-5V voltage source signal or passive components like zener.
- 3. When 1-5V negative logic dimming mode and Dim+ is open, the driver will output maximum current.

• 1-10V Dimming

The recommended implementation of the dimming control is provided below.

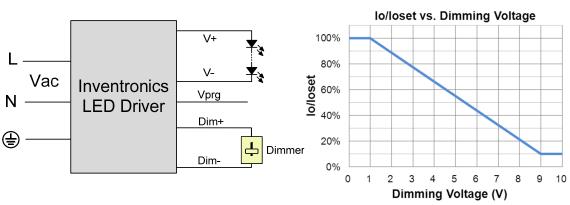


Implementation 3: Positive logic

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100W Programmable IP66/IP67 Driver



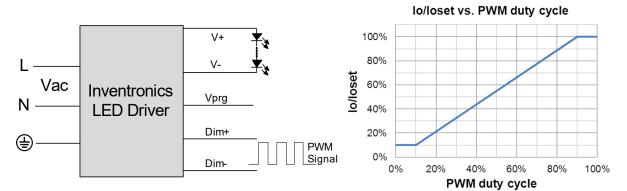
Implementation 4: Negative logic

Notes:

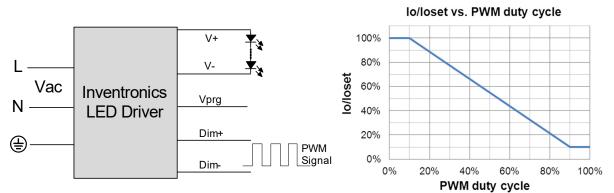
- 1. Do NOT connect Dim- to the output V- or V+, otherwise the driver will not work properly.
- 2. The dimmer can also be replaced by an active 1-10V voltage source signal or passive components like zener.
- 3. When 1-10V negative logic dimming mode and Dim+ is open, the driver will output minimum current.

• 10V PWM Dimming

The recommended implementation of the dimming control is provided below.



Implementation 5: Positive logic



Implementation 6: Negative logic

Notes:

- 1. Do NOT connect Dim- to the output V- or V+, otherwise the driver will not work properly.
- 2. When 10V PWM negative logic dimming mode and Dim+ is open, the driver will output minimum current.

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Time Dimming

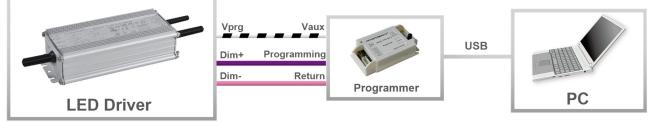
Time dimming control includes 3 kinds of modes, they are Self Adapting-Midnight, Self Adapting-Percentage and Traditional Timer.

- Self Adapting-Midnight: Automatically adjusts the dimming curve based on the on-time of past two days (if difference <15 minutes), assuming that the center point of the dimming curve is midnight local time.
- Self Adapting-Percentage: Automatically adjusts the on-time of each step by a constant percentage = (actual on-time for the past 2 days if difference <15 min) / (programmed on-time from the dimming curve).
- Traditional Timer: Follows the programmed timing curve after power on with no changes.

Output Lumen Compensation

Output Lumen Compensation (OLC) may be used to maintain constant light output over the life of the LEDs by driving them at a reduced current when new, then gradually increasing the drive current over time to counteract LED lumen degradation.

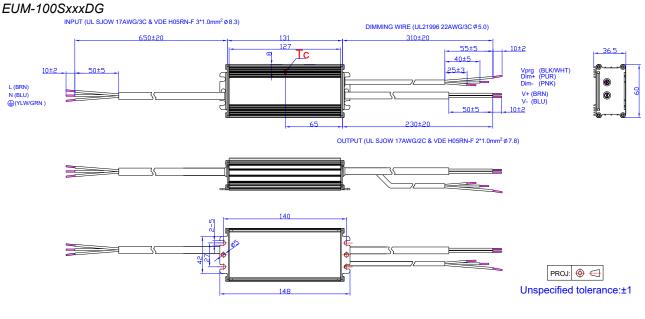
Programming Connection Diagram



Note: The driver does not need to be powered on during the programming process.

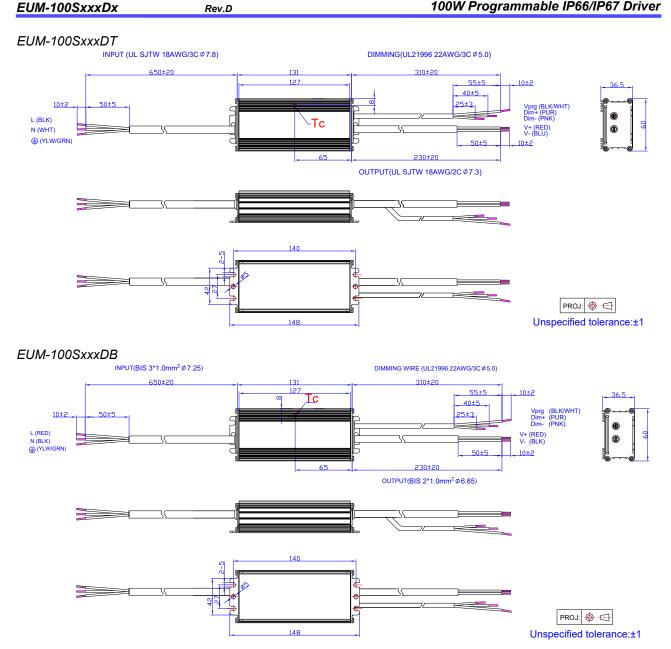
Please refer to PRG-MUL2 (Programmer) datasheet for details.

Mechanical Outline



Specifications are subject to changes without notice.

100W Programmable IP66/IP67 Driver



RoHS Compliance

Our products comply with reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU, calling for the elimination of lead and other hazardous substances from electronic products.

EUM-100SxxxDx

Rev.D

Revision History

Change		Description of Change						
Date	Rev.	Item	From	То				
2021-03-09	А	Datasheets Release	/	/				
		Models	EUM-100S053Dx	Added				
		Models	Note (7)	Added				
		I-V Operation Area	EUM-100S053Dx	Added				
		Output Current Setting(loset) Range	EUM-100S053Dx	Added				
		Output Current Setting Range with Constant Power	EUM-100S053Dx	Added				
2021-09-29	В	No Load Output Voltage	EUM-100S053Dx	Added				
		Efficiency at 120 Vac input:	EUM-100S053Dx	Added				
		Efficiency at 220 Vac input:	EUM-100S053Dx	Added				
		Efficiency at 277 Vac input:	EUM-100S053Dx	Added				
		Dimming Output Range	EUM-100S053Dx	Added				
		Efficiency vs. Load	EUM-100S053Dx	Added				
		UKCA logo	/	Added				
2021-12-13	С	Safety &EMC Compliance	UKCA	Added				
2021-12-13	C	Programming Connection Diagram	EUM-100SxxxDT	Updated				
		Mechanical Outline	EUM-100SxxxDT	Updated				
		Product Photograph	1	Updated				
		global-mark	/	Added				
2023-06-05	D	Safety &EMC Compliance	/	Updated				
2023-00-05	U	Dimming	/	Updated				
		Programming Connection Diagram	/	Updated				
		Mechanical Outline	1	Updated				