Project : _____   Firm : _____   Type : _____   Quantity: _____
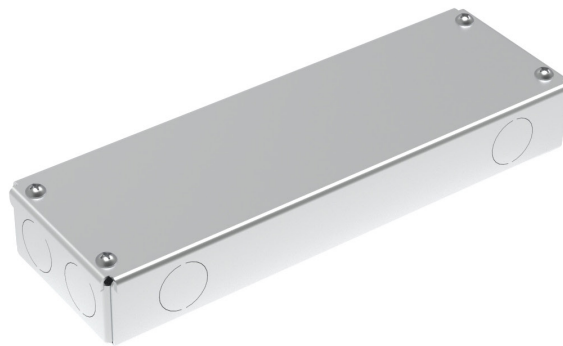
Quick Specs

Driver Type	Constant Current
Dimming Control	0-10 : 0.1%
# of Channels	1
DC Voltage Range	30-50 VDC
AC Input Voltage	120 - 277
Class	2
mA	1400
Wattage	60
Warranty	5 years
Efficency	>90%

Max Load (1400mA)

Super Low (50mA)	28 Feet
Low (89mA)	15 Feet
Medium (149mA)	9 Feet
High (250mA)	5 Feet
Super High (300mA)	4 Feet

Max Distance

20 AWG	20 Feet
18 AWG	40 Feet
16 AWG	60 Feet
14 AWG	100 Feet
12 AWG	150 Feet

Scout Lighting reserves the right to modify this specification without prior notice. Updated 10/02/21.

Driver Anatomy

0-10 Driver

DC Junction Box

AC Junction Box

Top access removable driver lid

Knock Outs

Dimensions

0-10 DRIVER

2.97"

9.09"

2.97"

1.34"
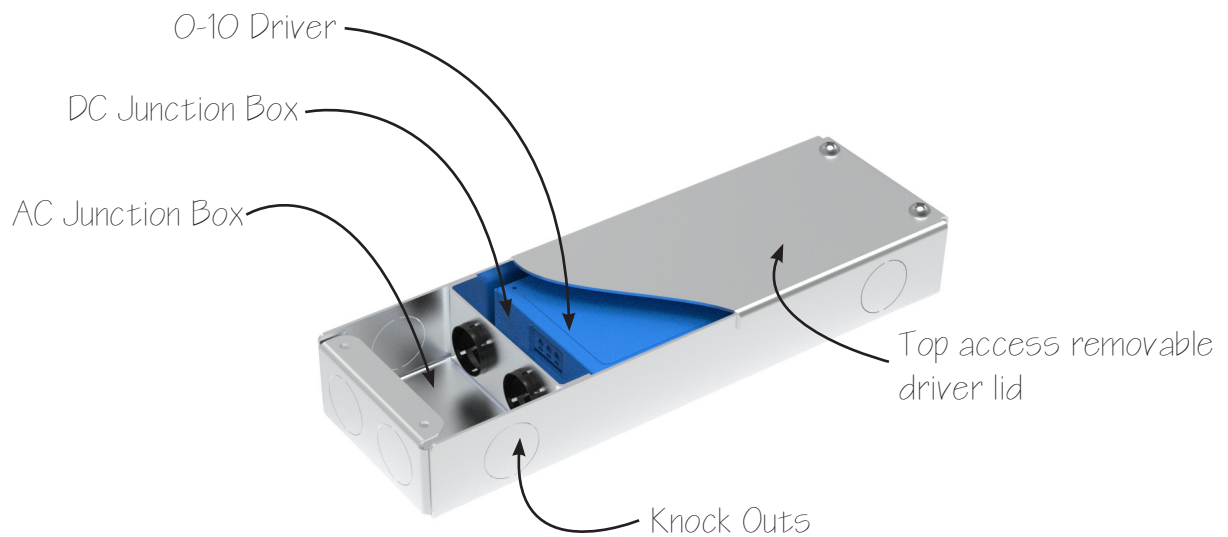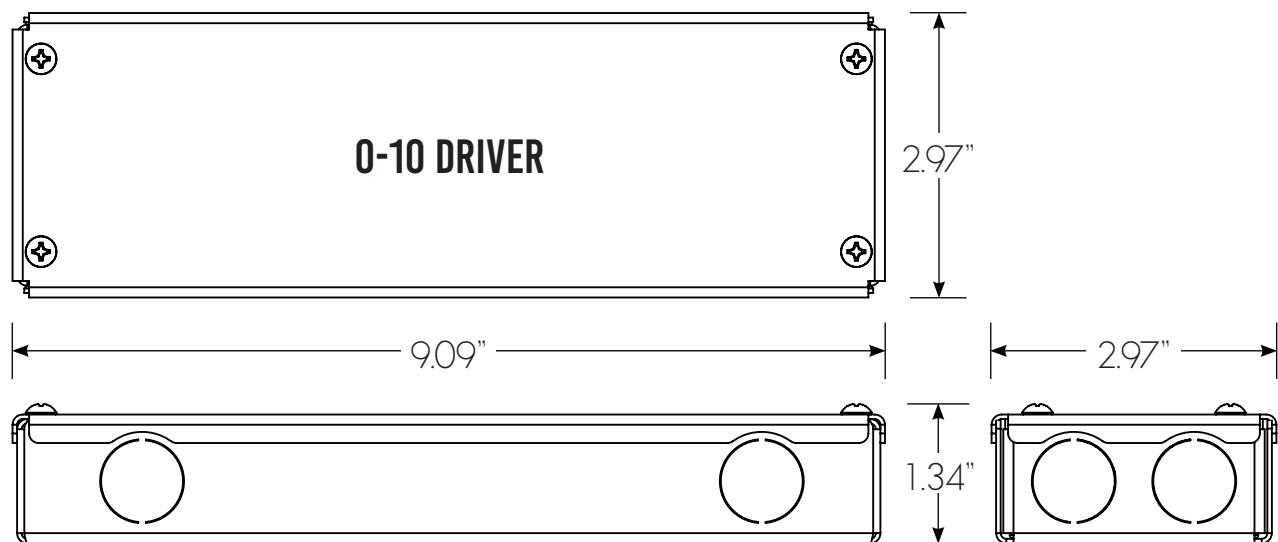
Scout Lighting reserves the right to modify this specification without prior notice. Updated 10/02/21.
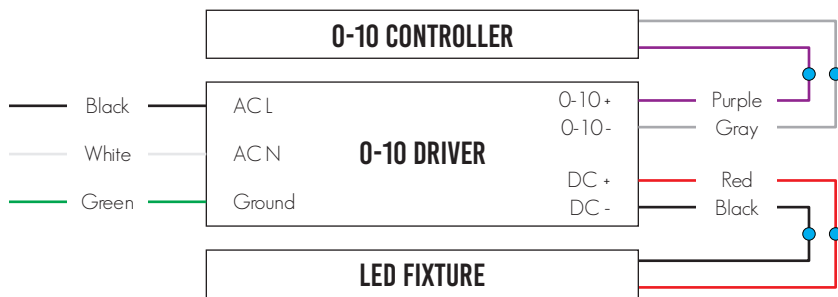
Wiring

Single 0-10 wiring
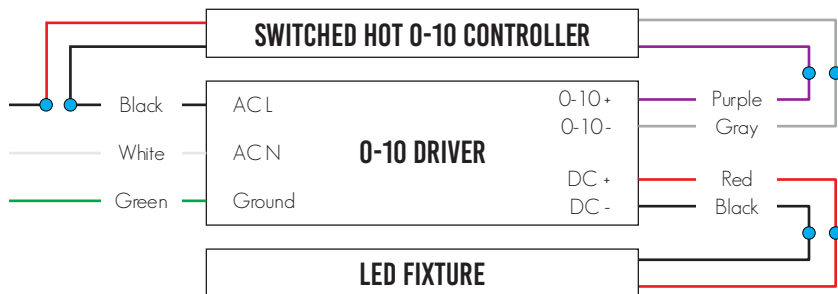
Switched Hot 0-10 Wiring
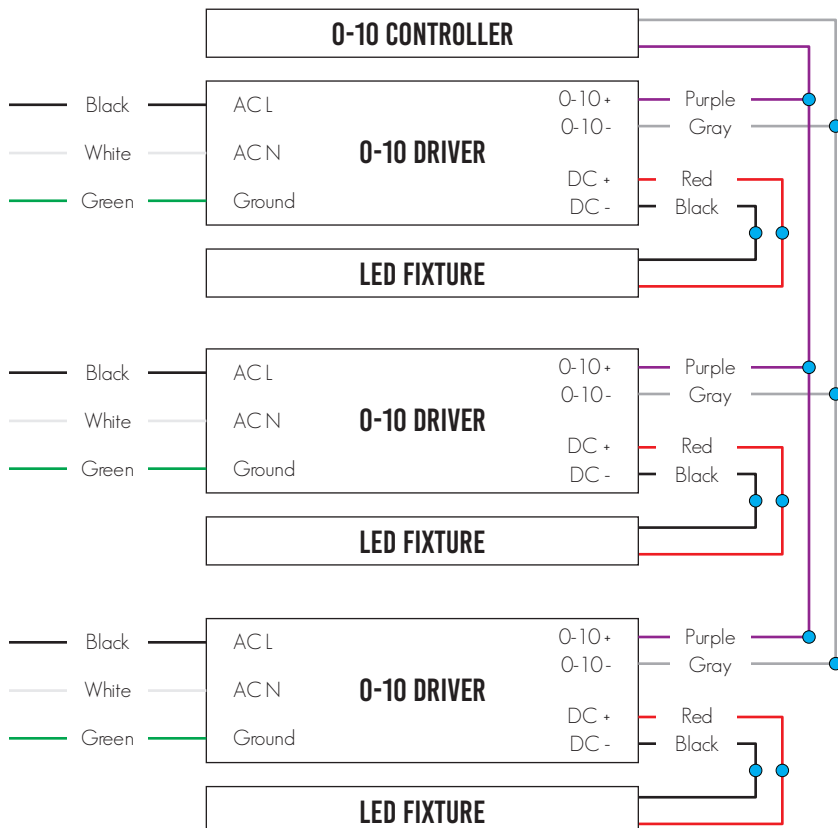
Multiple fixture wiring to single 0-10 Dimmer

MAGNITUDE LIGHTING

AFLEX SERIES
COMPACT

Constant Current Electronic
0-10V Dimmable Programmable LED Driver

P/N: AFLEX-[   ]

The AFLEX Compact platform offers the unparalleled ability to program the drivers power in addition to the output current, dimming curve, dim-to-off functionality, NTC settings and more all while maintaining high efficiency over the programmable range. This unique technological advancement enables both ultimate design flexibility and significant SKU elimination. Programming the driver does not require any power and can be done in less than one second. The available auxiliary output provides a power source for sensors and/or cooling devices, eliminating the need for an additional power supply. The AFLEX driver is dimmable down to 0.1% with a 0-10V dimmer. Unequaled flexibility and performance along with Class P approval and Title 24 compliance makes the AFLEX driver the perfect choice for commercial lighting fixture application. Title 24 compliance is dependant on dimmer luminaire combination.

Installation: Terminal Blocks with Side Feed or Dual (Side and Back) Feed Options
Driver Type: Class 2 Single Channel
Dimming: 0-10V Dimmable Down to 0.1% with Dim-to-Off Capability
Input Voltage: Universal 120VAC to 277VAC, 50/60Hz
Output Voltage: 3 - 57VDC
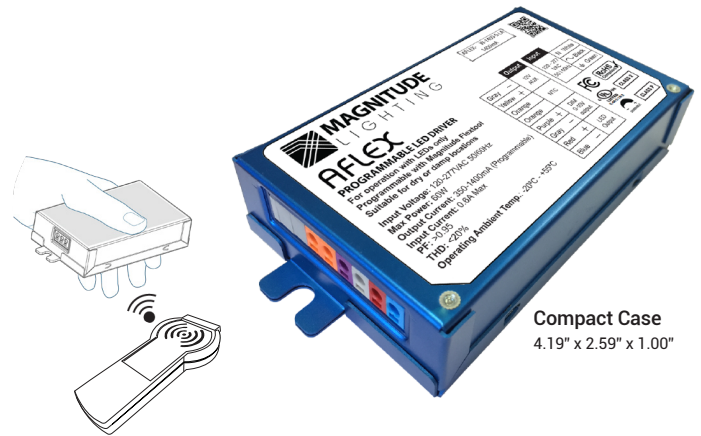**Output Current:** 100 - 1400mA (1mA Step Programmable)
Environmental: Dry
IP Rating: IP40
Listing: UL Listed, Class P, Class 2
Certifications: UL8750 | CSA C22.2 No. 250.13-14
Warranty: 5-Year Warranty

Compact Case
4.19" x 2.59" x 1.00"

DIM DOWN TO 0.1% | 120 - 277VAC | 100 - 1400mA

CLASS 2 | IP40 | c UL us LISTED | CLASS P | PROGRAMMABLE | RoHS Compliant | TITLE 24 CA Compliant

Wireless Programmable Features
- Programmable Power 30 to 60W
- Output Current (1mA Step Programmable)
- Dimming Curve (Linear / Logarithmic)
- Dim-to-Off (On / Off)
- NTC Settings

PROGRAMMABLE

AFLEX SERIES is also available in:
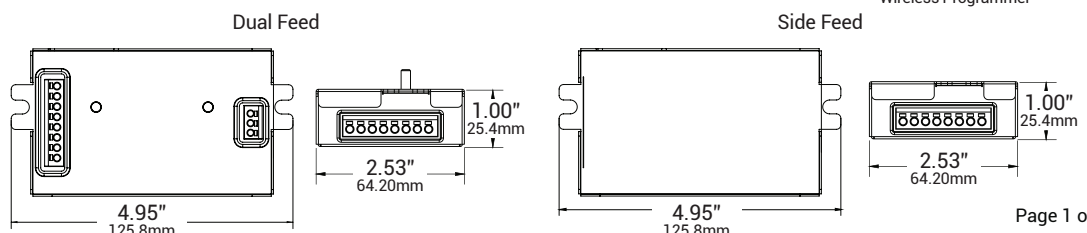- AFLEX Linear
- JB SERIES

Refer to Magnitudeinc.com for more details.

Ordering Guide Default: AFLEX-60W-1400-S-LA

| AFLEX | — | W | — | 1400 | — | — |

TYPE	MAX POWER		OUTPUT CURRENT	CASE STYLE	DIMMING CURVE	AUX POWER (OPTION)	[1]Default Setting Unless Specified Otherwise
AFLEX — *AFLEX*	*30 to 60W*	*30 to 60W Programmable*	*100 to 1400mA*	S — *Side Feed (Std)*	L — *Linear Curve (Std)*	A — *12V PS (Std)*	
AFLEX — AFLEX	**30W** — 30W		**100-1400** — 100-1400mA	S[1] — Side Feed	G — Logarithmic	— Leave Blank For No Aux Power	
	40W — 40W		(3-57VDC)	D — Dual Feed	L[1] — Linear	A[1] — 12V PS	
	50W — 50W						
	60W — 60W						

PROGRAMMABLE
Pre-Programmed per Chosen Specification

Programming Requires FlexTool Wireless Programmer

DIMENSIONS	
LENGTH	4.95" (125.8mm)
WIDTH	2.53" (64.20mm)
HEIGHT	1.00" (25.4mm)

Dual Feed

4.95" / 125.8mm

1.00" / 25.4mm

2.53" / 64.20mm

2.53" / 64.20mm

Side Feed

4.95" / 125.8mm

1.00" / 25.4mm

2.53" / 64.20mm

MAGNITUDE LIGHTING

Specifications subject to change without notice

AFLEX Series Compact rev 1.0

14711 Bentley Circle. Tustin, CA 92780
Customer Service: (714) 312-5080 Fax: (714) 312-5070
Customercare@magnitudeinc.com
www.MagnitudeInc.com
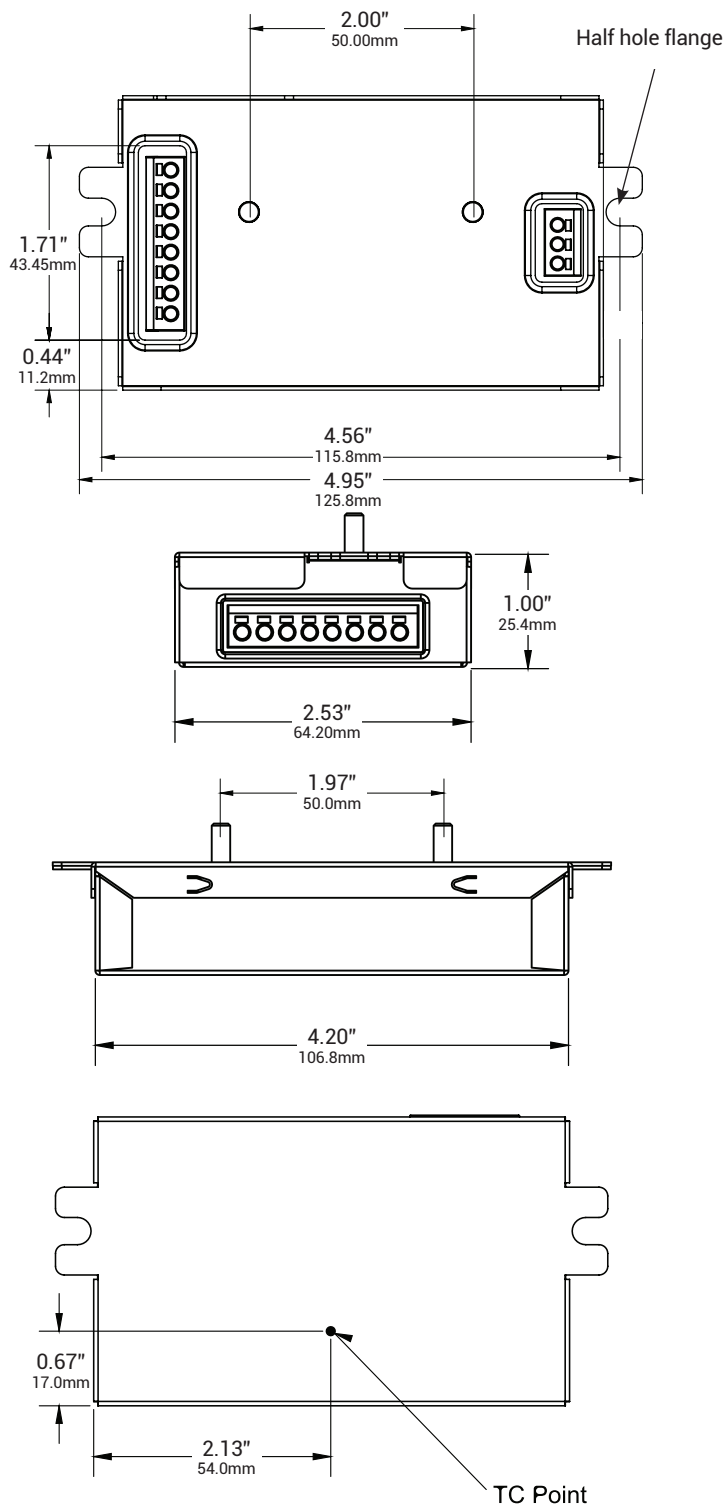
WE DRIVE LIGHT

Specifications

INPUT	
Input Voltage Range	Universal 120 - 277VAC ± 10%
Input Frequency	50 / 60Hz
Input Current	0.29A-0.6A@120VAC / 0.15A-0.25A@277VAC*
Inrush Current	38A Max
Efficiency	> 88%
Power Factor	0.991-0.992@120VAC / 0.90-0.95@277VAC* (Refer to graph on page 5)

OUTPUT	
Output Voltage Range	3 -57VDC
Output Current Range	100 - 1400mA (1mA step programmable)
Output Current Tolarance	± 5%
Output Current Ripple	± 5% @ Max load
Line Regulation	± 0.5%
Load Regulation	± 0.5%
Turn On Delay Time	0.4 sec @ Max load
Sensor Power Supply (Aux)	12V up to 80mA
Stand-By Power	>1W

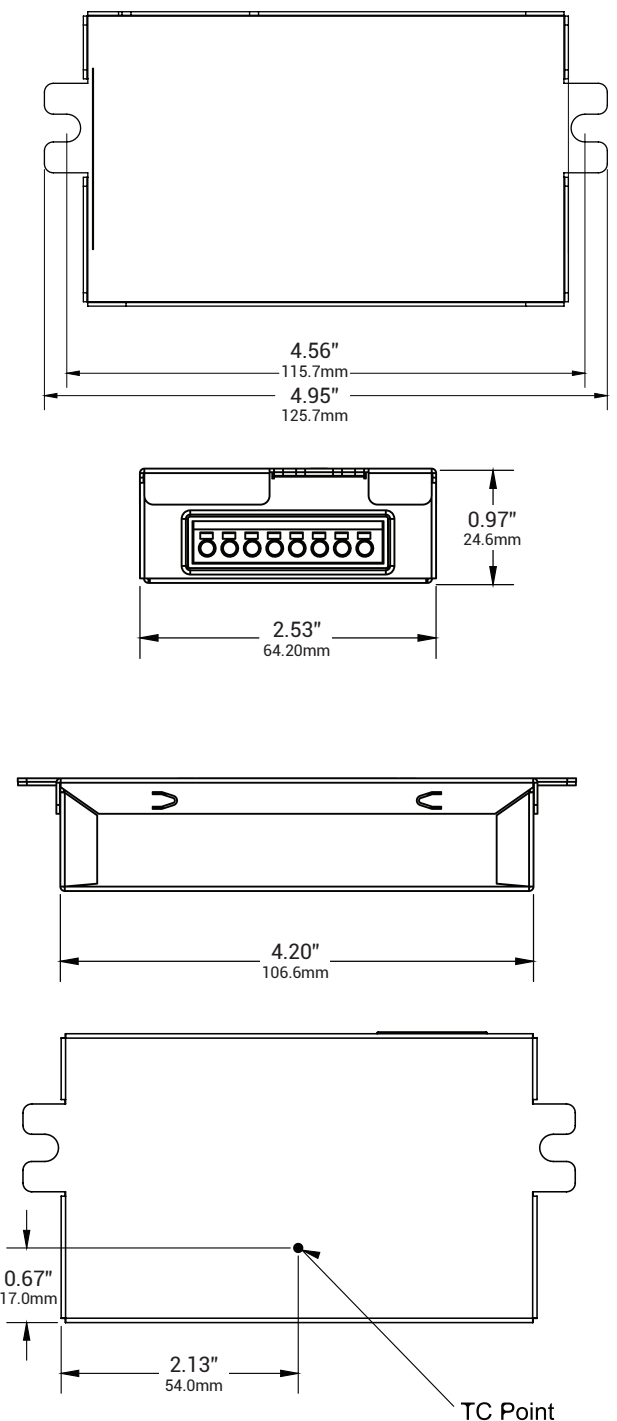| ENVIRONMENTAL	
Env. Protection Rating	IP40
Surge Protection	2.5kV
Operating Ambient Temperature	-40°C - +60°C
Operating Temperature	-40°C - +75°C
Storage Temperature	-40°C - +85°C
Expected Lifetime	50k hours at 75°C (Refer to graph on page 7)
Audible Noise	< 24dB Class A
Withstanding Voltage	2.5kV

* Depending on model

DIMMING	
Dimming Control	0-10V
Dimming Input Range	-2 to +15V
Dimming Curves	Linear / Logarithmic (Programmable)
Min. Dimming Level	Dim down to 0.1%
Dim to off	Yes (Programmable)
Current Consumption	0.35mA / Source

LED THERMAL PROTECTION (NTC)	
NTC Value (Manufacture: Vishay)	15 kΩ ± 5% @25°C P/N: NTCS0805E3153JMT
Output Level Range	1mA step programmable (0 - 100%)

PROTECTION	
Over Current Protection	Current limiting
Short Circuit Protection	Hiccup mode
Over Voltage Protection	Hiccup mode
Over Temperature Protection	Power derating (Refer to graph on page 7)
Mis-Wiring Protection	Auto shutdown

MECHANICAL HOUSING	
Length	4.19" (106.4mm)
Mounting Length	4.94" (125.7mm)
Width	2.59" (65.79mm)
Height	1.00" (25.4mm)
Housing Material	Aluminum
Housing Color	Blue Anodized
Junction Box	No
Input Connector Types	Black & White / Wago 253, Dual side / 16-20AWG strip 3/8"
Output Connector Types	Red & Blue / Wago 253, Dual side / 16-20AWG strip 3/8"
Dimming Connector Types	Purple & Grey / Wago 253, Dual side / 16-20AWG strip 3/8"
Auxiliary Connector Types	Yellow & Gray / Wago 253, Dual side / 16-20AWG strip 3/8"
NTC Connector Types	Orange & Orange / Wago 253, Dual side / 16-20AWG strip 3/8"
Mounting	(Side Feed) Two hole half flange mount (Dual Feed) 2 additional stud mounts

APPROVAL MARKINGS	
Certificates / Approval Signs	UL 8750 Class 2, Class P

Specifications subject to change without notice   AFLEX Series Compact rev 1.0   WE DRIVE LIGHT

AFLEX SERIES
COMPACT

Mechanical Diagram (Compact Case)

Dual Feed

2.00"
50.00mm

Half hole flange

1.71"
43.45mm

0.44"
11.2mm

4.56"
115.8mm

4.95"
125.8mm

1.00"
25.4mm

2.53"
64.20mm

1.97"
50.0mm

4.20"
106.8mm

0.67"
17.0mm

2.13"
54.0mm

TC Point

Side Feed

4.56"
115.7mm

4.95"
125.7mm

0.97"
24.6mm

2.53"
64.20mm

4.20"
106.6mm

0.67"
17.0mm

2.13"
54.0mm

TC Point

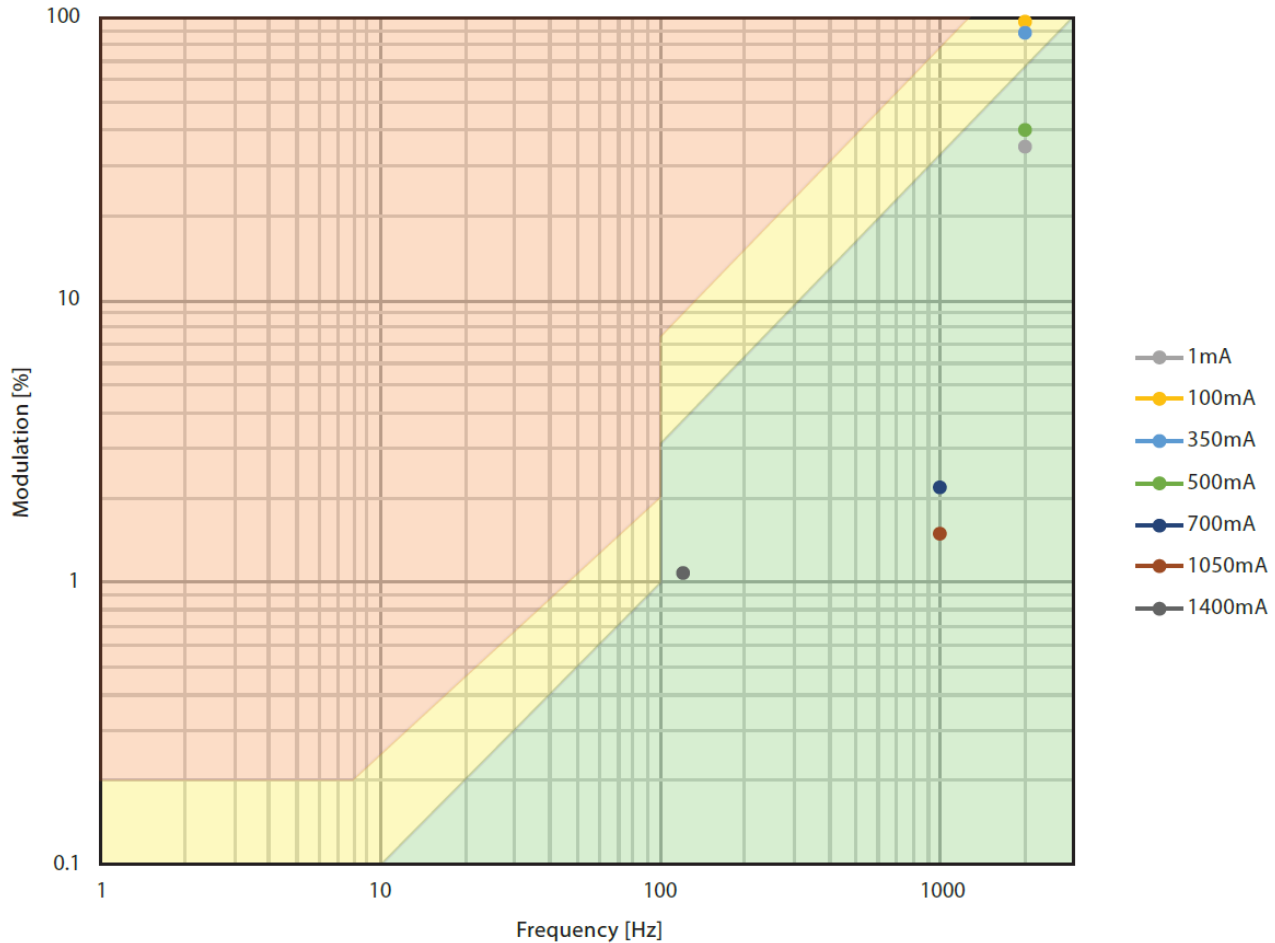Specifications subject to change without notice   AFLEX Series Compact rev 1.0   WE **DRIVE** LIGHT
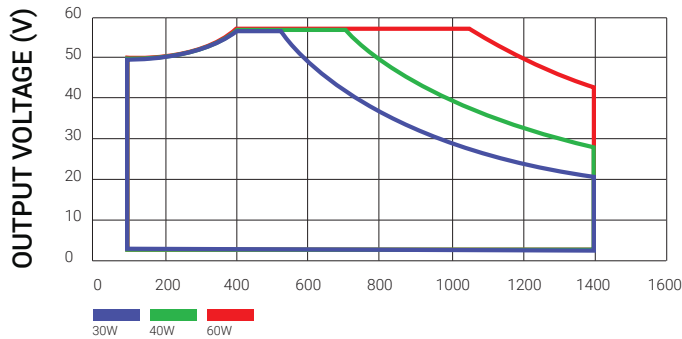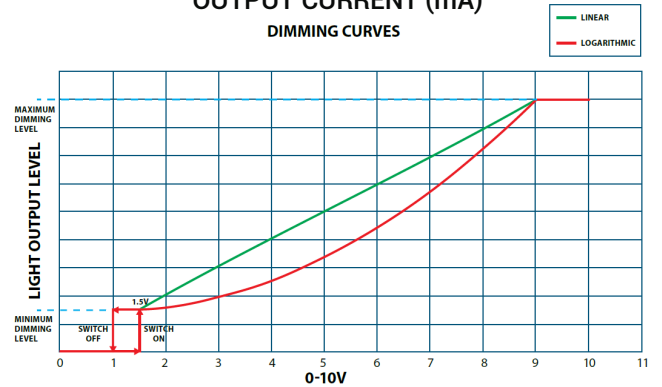
Flicker Performance

The IEEE P1789 flicker test results are presented graphically with no observable effect (green area), low-risk (yellow area), and high risk (red area).
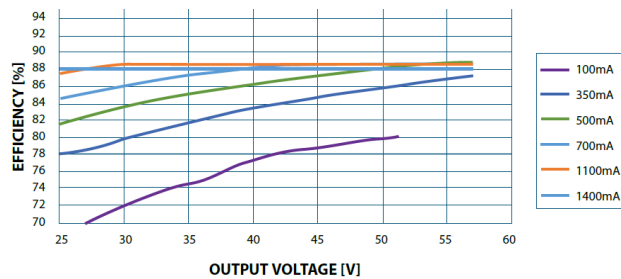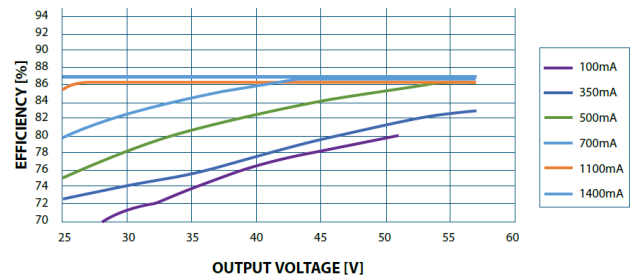
Specifications subject to change without notice   AFLEX Series Compact rev 1.0   WE DRIVE LIGHT

MAGNITUDE LIGHTING

OPERATING RANGE

OUTPUT VOLTAGE (V)

30W 40W 60W

OUTPUT CURRENT (mA)
DIMMING CURVES

LINEAR
LOGARITHMIC

MAXIMUM DIMMING LEVEL

LIGHT OUTPUT LEVEL

MINIMUM DIMMING LEVEL

1.5V

SWITCH OFF   SWITCH ON

0-10V

EFFICIENCY vs OUTPUT VOLTAGE (120VAC)

EFFICIENCY [%]

OUTPUT VOLTAGE [V]

100mA
350mA
500mA
700mA
1100mA
1400mA

EFFICIENCY vs OUTPUT VOLTAGE (277VAC)

EFFICIENCY [%]

OUTPUT VOLTAGE [V]

100mA
350mA
500mA
700mA
1100mA
1400mA

POWER FACTOR vs OUTPUT POWER

POWER FACTOR

OUTPUT POWER [W]

120VAC
277VAC

THD vs OUTPUT POWER

THD(%)

OUTPUT POWER [W]

120VAC
277VAC

MAGNITUDE LIGHTING

Specifications subject to change without notice   AFLEX Series Compact rev 1.0   WE DRIVE LIGHT
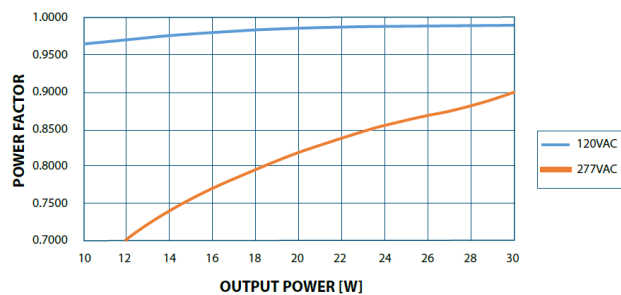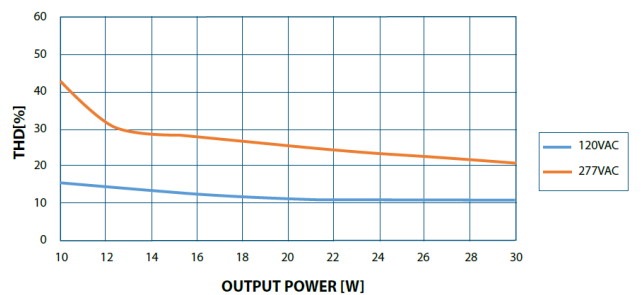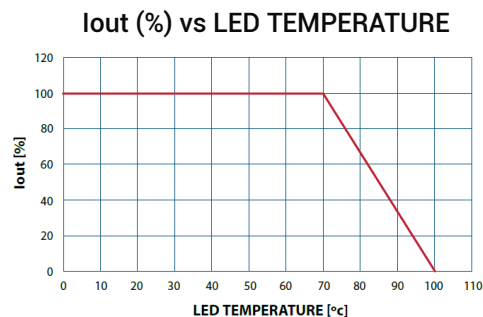
LED Thermal Protection (NTC)

AFLEX Series drivers help protect the LED's lifetime and will reduce LED temperature by derating the output current in case of high temperatures. The negative temperature coefficient (NTC) thermistor must be connected to the LED driver as shown in the wiring diagram.

For maximum performance, the NTC thermistor must be placed close to the Tc point of the LED module. The power derating parameters can be programmed using the FlexTool programmer. The NTC outputs can be left disconnected if thermal protection is not required.
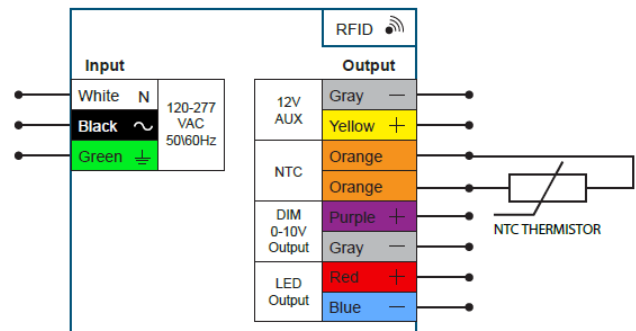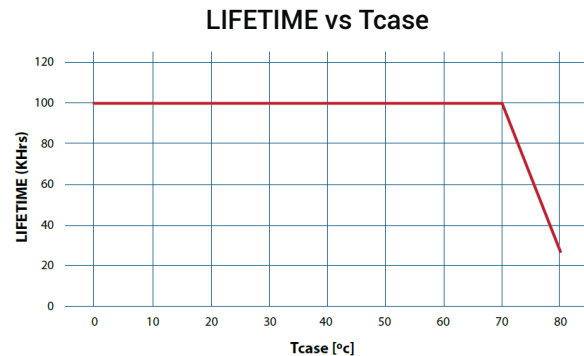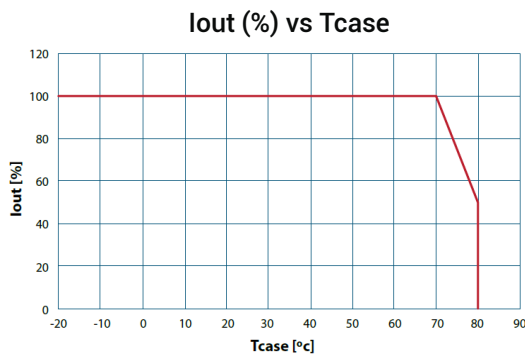
Compatible NTC Thermistor

SPECIFICATION	MANUFACTURER	MANUFACTURER P/N
15 kΩ ± 5% @ 25°C	Vishay	NTCS0805E3153JMT

Iout (%) vs LED TEMPERATURE

Driver Thermal Protection

Iout (%) vs Tcase

LIFETIME vs Tcase

5% LED DROP ALLOWED			
AWG	100-700mA	700-1650mA	1500-2000mA
18	17ft	7ft	6ft
16	27ft	12ft	9ft
14	42ft	19ft	15ft
12	67ft	36ft	24ft

10% LED DROP ALLOWED			
AWG	100-700mA	700-1650mA	1500-2000mA
18	34ft	15ft	12ft
16	53ft	23ft	19ft
14	85ft	37ft	30ft
12	135ft	59ft	47ft

	MIN	MAX
Normal Operation	-40°C	+70°C
Derating Area	+70°C	+80°C
Protection Area	+80°C	
Resume operation after protection activated	+70°C	

Specifications subject to change without notice   AFLEX Series Compact rev 1.0

WE **DRIVE** LIGHT

Inrush Current

VIN (V)	IPEAK (A)	T (@50% IPEAK)
120VAC	14.2	1.5 usec
277VAC	38	1.2 usec
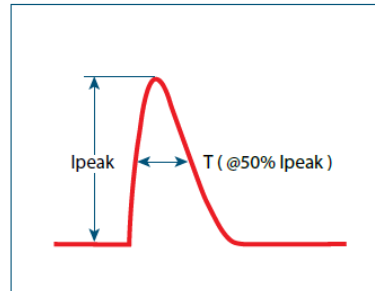
Remote Installation

OUTPUT CURRENT vs LED VOLTAGE

Legend:
- L1=1ft.
- L2=100ft
- L3=300ft.
- L4=500ft.
- L5=1000ft.
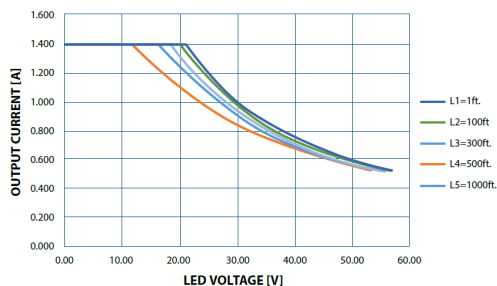
TEST CONDITION:

1. Output Power = 40W
2. Output Current = 1.4A
3. Wire parameters = 18AWG, 16/ 30, 6.75Ω/ 1000'

Note – Above L=100ft. min LED voltage = 10V

Compatible 0-10V Dimmers

Refer to MagnitudeInc.com for compatability information.

Specifications subject to change without notice   AFLEX Series Compact rev 1.0

WE **DRIVE** LIGHT

FLEXTOOL

P/N: FLEX-TOOL-G1

Programming the AFLEX Driver

The FlexTool wireless programer used to program Magnitude's Flex Series of LED Drivers. By using the FlexTool, OEM's can quickly and smoothly configure the drivers parameters without applying power or wires to the driver.

With the FlexTool software you can easily save driver configuration profiles externally and use as needed. The software provides graphic and audio indication that the driver was successfully configured.

Programmable Output Current and Power

Current programmable in 1mA steps. Power programmable in 1W steps.

Dimming Control

- Dim to Off: Yes/No (check box) Factory Default: Yes
- Dimming Curve: Linear or Log. Factory Default: Linear
- Min. Dimming level before Dim to Off
- Factory default 1mA
- Dimming Type: 0-10V / None. Factory Default: 0-10V

LED Thermal Protection

- Temperature Derating start. Factory Default: 70°C
- Temperature Derating end. Factory Default: 100°C
- Minimum Current Level Before Shutoff: 1mA

Specifications subject to change without notice   AFLEX Series Compact rev 1.0

WE **DRIVE** LIGHT