nFORCE®
NEXUS TECHNOLOGY

SAE CLASS 1 DECK/ GRILL MOUNTS

ENFFTSDGS(x)(xxx)

MAKE SURE DRAIN HOLE IS FACING DOWN

PRESSURE EQUALIZING PATCH
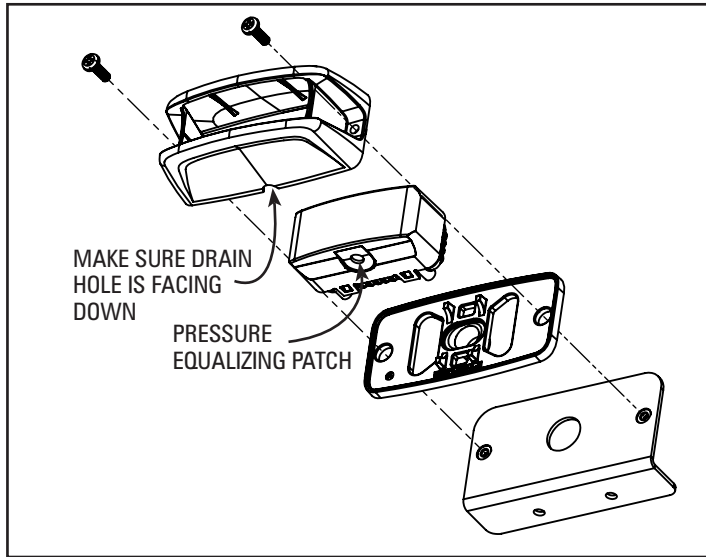
See Page 2 for Technical Specifications

⚠ WARNING

- HIGH CURRENT interconnects must be properly terminated. Poor crimp quality can cause heat build-up and fire. Follow crimp connector manufacturer instructions.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to vehicle Owner's Manual for deployment zones.
- Unit may become hot to touch during normal operation.
- Failure to properly install connectors, fuses or wiring may cause vehicle failure or fire.
- Installation must only be performed by trained technician. Installer must determine vehicle wiring configuration and proper integration of system.
- Use proper wire gauge. All power wires connecting to positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of max. current and properly fused at power source.
- Install protective grommets when routing wire through firewall or metal.

INSTALLATION:
DECK/GRILLE MOUNT

1. Locate mounting location on vehicle and take consideration into wire routing to power and switching source.

2. Using bracket as a template, mark the two mounting holes.

3. Drill Holes for screws. Screw hole size is determined by mounting method. Sheet metal screws are threaded into the drilled hole, good for panels where is access is limited. Machine screws can be used where the drilled hole is a clearance hole and the light is secured using a flat washer and nut (provided) on the back side of the panel.

   a. Sheet Metal Screws (Provided): 1/8" Diameter Drill Bit

   b. Machine Screws (Provided): #16 Drill Bit

4. Mount the bracket to the vehicle.

5. Locate the Pressure equalizing patch on light and drain hole on bezel. Both items should be oriented towards the ground for proper water drainage.

6. Mount the light to the bracket using the bezel, gasket and screws provided, feeding the wires through the hole on the bracket.

7. Route wires to power and switching source.

INFORMATION FOR nFORCE SECONDARY:

WIRE HOOK-UP TABLE

WIRE COLOR:	FUNCTION:
ORANGE OR RED	Power
BLACK	Ground
BLUE OR GREEN**	Sync2 *
YELLOW OR WHITE to GROUND	Wire Function -See page 4-
YELLOR OR WHITE to POWER	Function Wire
RED/WHITE OR ORANGE/WHITE	Power

** To sync multiple nFORCE lights, connect the Green and/or Blue wires from each light together.
* Will NOT work w/ other sync products such as Ghost, LED3, & Intersector.

3A FUSE
+Vdc
RED/WHITE
GREEN
Sync
Set-up/Function
WHITE
+Vdc
RED
3A FUSE
BLACK
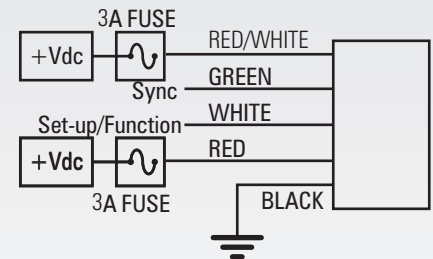
⚠ WARNING
This product contains high intensity LED devices. To prevent eye damage, DO NOT stare into the light beam at close range.

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OVER-VOLTAGE PROTECTION
When an over-voltage condition is detected, the module will flash an over-voltage warning pattern of 50mS ON/950mS OFF to alert of the over-voltage condition and protect the electronics from damage due to heat/voltage.

THERMAL COMPENSATION PROTECTION
The LED module is designed to provide maximum power output while providing protection to the electronic components by reducing the output power at extreme temperatures.

SYNC 2
Syncronizing the flashing of multiple light modules is accomplished by connecting the Green and/or Blue wires of different light modules together. Up to 24 light modules can be connected for syncronized flashing. All light module flash patterns must be set to the same flash pattern # to ensure proper operation. Refer to the Sequence Type section in Set-Up Table to setup light modules to flash in alternate or simultaneous flash pattern. NOTE: Will NOT work with non-Sync 2 products such as Ghost, LED3, and Single Color Intersector.

FLASH PATTERNS			
PATTERN #	SINGLE COLOR	DUAL COLOR	TRI-COLOR
1	QUINT		
2	WARP		
3	INTER-CYCLE		
4	DOUBLE		
5	QUAD		
6	POWER PULSE		
7	ROAD RUNNER		
8	Q-SWITCH		
9	STEADY-BURN / ROADRUNNER (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: ROADRUNNER)		
10	STEADY-BURN DRIVER TITLE 13 QUAD (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: TITLE 13 QUAD)		
11	QUAD 2		
12	DOUBLE 2		
13		RANDOM 1	
14		RANDOM 2	

TECHNICAL SPECIFICATIONS	
DECK/GRILLE MOUNT nFORCE FIT	
Single Mount Dim:	3.9"L x 1.89"H x 1.60"D
Input Voltage:	10 - 16 Vdc
CURRENT CONSUMPTION	
	10-16 Vdc
3, 6 & 9 Tri-Color	<0.5A @12.8 Vdc
6 LED Dual Color	<1.0A @ 12.8 Vdc

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FUNCTION TABLES

Changing the function table is only enabled when the LED module is in a flashing mode (disabled in cruise or steady ON functions). The functional operation of the LED module can be changed while applying the +V to the Red or Orange wire with the black wire connected to ground. When the light is flashing, momentarily connect the White or Yellow wire to ground for >4S and <5S (light will go steady high, steady low, off, steady high, steady low) then release. The function table will now advance to the next table (table 1 to table 2, table 2 to table 3, or table 3 to table 1). Repeat above process until required function table is active.

FUNCTION TABLE 1

WIRE			LIGHT		
RED (SGL) ORANGE (DUAL)	R/W (SGL) O/W (DUAL)	WHT (SGL) YELLOW (DUAL)	SINGLE	DUAL	TRI
+12V			FLASH	FLASH DUAL	FLASH TRI
	+12		CRUISE	STEADY CLR 2	STEADY CLR 3
+12V	+12V		FLASH	STEADY CLR 2	STEADY CLR 3
		+12V	NO OP	NO OP	NO OP
+12V		+12V	LOW PWR FLASH	FLASH CLR 1	FLASH CLR 1
	+12V	+12V	CRUISE	FLASH CLR 2	FLASH CLR 2
+12V	+12V	+12V	LOW PWR FLASH	FLASH CLR 1 & 2	FLASH CLR 3

FUNCTION TABLE 2

WIRE			LIGHT		
RED (SGL) ORANGE (DUAL)	R/W (SGL) O/W (DUAL)	WHT (SGL) YELLOW (DUAL)	SINGLE	DUAL	TRI
+12V			FLASH	FLASH CLR 1	FLASH CLR 1 & 2
+12V		+12V	CRUISE	FLASH CLR 1 & 2	FLASH CLR 1, 2 & 3
	+12V		STEADY CLR 1	STEADY CLR 2	STEADY CLR 3
	+12V	+12V	STEADY CLR 1	STEADY CLR 2	STEADY CLR 3
+12V	+12V	+12V	STEADY CLR 1	STEADY CLR 2	STEADY CLR 3
		+12V	NO OP	NO OP	NO OP

FUNCTION TABLE 3

WIRE			LIGHT		
RED (SGL) ORANGE (DUAL)	R/W (SGL) O/W (DUAL)	WHT (SGL) YELLOW (DUAL)	SINGLE	DUAL	TRI
+12V			FLASH	FLASH DUAL	FLASH CLR 1, 2 & 3
	+12V		FLASH LOW PWR	FLASH CLR 1 & 2 LOW PWR	FLASH CLR 1, 2 & 3 LOW PWR
+12V	+12V		FLASH LOW PWR	FLASH COLOR 1 & 2 LOW PWR	FLASH CLR 1, 2 & 3 LOW PWR
		+12V	NO OP	NO OP	NO OP
+12V		+12V	FLASH LOW PWR	FLASH COLOR 1 & 2 LOW PWR	FLASH CLR 1, 2 & 3 LOW PWR
	+12V	+12V	FLASH LOW PWR	FLASH COLOR 1 & 2 LOW PWR	FLASH CLR 1, 2 & 3 LOW PWR
+12V	+12V	+12V	FLASH LOW PWR	FLASH COLOR 1 & 2 LOW PWR	FLASH CLR 1, 2 & 3 LOW PWR

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COLOR SWAP
This function is only valid for dual and tri-color light modules and can only be changed when the light module is in a flashing mode (disabled for single color modules and when light module is operating in cruise or steady ON functions). When the light is flashing, momentarily connect the white or yellow wire to ground for >2S and <3S (light will go steady high, steady low, off) then release. The light module will switch between Color Swap OFF and Color Swap ON. When Color Swap is OFF, the 1st color will flash 1st on a dual/tri color pattern. When Color Swap is ON, the 2nd color will flash 1st on a dual/tri color pattern.

SIMULTANEOUS/ALTERNATE
This function can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions) and only has an effect when at least 2 LED modules have the green sync wire connected together. When the light is flashing, momentarily connect the white or yellow wire to ground for >3S and <4S (light will go steady high, steady low, off, steady high) then release. The light module will switch between Simultaneous and Alternate each time this sequence is done. To have light modules flash simultaneously, both light modules need to be set to the same sequence type (Set-Up Table). To have light modules flash alternately, the light modules need to be set to different sequence types (Set-Up Table).

ADVANCE PATTERN
Flash pattern can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white or yellow wire to ground for >250mS and <1S (light will go steady high) then release. The flash pattern will advance to the next pattern. If the light module was at the last pattern, the pattern will reset to the 1st pattern.

BACKUP PATTERN
This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white or yellow wire to ground for >1S and < 2S (light will go steady high, steady low) then release. The flash pattern will backup to the previous pattern. If the light module was at the first pattern, the pattern will change to the last pattern on the list.

PATTERN RESET
This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white or yellow wire to ground for >5S and <6S (light will go steady high, steady low, off, steady high, steady low, off) then release. The flash pattern will reset to the 1st pattern in the list.

FACTORY RESET
This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white or yellow wire to ground for >6S and <7S (light will go steady high, steady low, off, steady high, steady low, off, steady high) then release. The LED module will reset to: pattern=1, Function Table=1, Color Swap=OFF, Simultaneous.

SETUP TABLE			
SECONDS		**USER INTERFACE**	
FROM	**TO**	**VISUAL FEEDBACK**	**ACTION TAKEN**
0	1	STEADY-HIGH (60%)	FORWARD ONE PATTERN
1	2	STEADY-LOW (30%)	BACKWARD ONE PATTERN
2	3	OFF	COLOR SWAP (OFF OR ON)
3	4	STEADY - HIGH (60%)	SEQUENCE TYPE: SIMULTANEOUS OR ALTERNATE
4	5	STEADY - LOW (30%)	SEE FUNCTION TABLE
5	6	OFF	RESET TO PATTERN 1
6	7	STEADY-HIGH (60%)	FACTORY RESET (PATTERN 1, COLOR SWAP: OFF, SIMULTANEOUS) SEPARATE COLOR CONTROL: OFF
If held longer than 7 seconds, the light will go back to flashing the current pattern and no action will be taken.			

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REMOTE MODE: FOR USE WITH bluePRINT SYSTEM ONLY
Connecting the Green or Blue wire to ground before applying power to the Orange, Orange/White, Red or Red/White wires will place the LED module into remote mode and the light output color will be directly controlled by the input wires as shown below.

For Cruise mode or Low Power control of the LED module, the signal to the control wires must be 100 +/- 2Hz using the duty cycle inputs listed below to produce the light output.

nFORCE Secondary LED Light Remote Mode Functionality							
Red or Orange Wire	Red/Wht or Orange/Wht Wire	Single Color		Dual Color		Tri Color	
		Color Swap=OFF	Color Swap=ON	Color Swap=OFF	Color Swap=ON	Color Swap=OFF	Color Swap=ON
Cruise	-	Cruise Color 1		Cruise Color 1	Cruise Color 2	Cruise Color 1	Cruise Color 2
-	Cruise			Cruise Color 2	Cruise Color 1	Cruise Color 2	Cruise Color 1
Cruise	Cruise			Cruise Color 2	Cruise Color 1	Cruise Color 3	Cruise Color 3
Flash	-	Flash Color 1		Flash Color 1	Flash Color 2	Flash Color 1	Flash Color 2
-	Flash			Flash Color 2	Flash Color 1	Flash Color 2	Flash Color 1
Flash	Flash			Flash Color 2	Flash Color 1	Flash Color 3	Flash Color 3
Steady ON	-	Steady ON Color 1		Steady ON Color 1	Steady ON Color 2	Steady ON Color 1	Steady ON Color 2
-	Steady ON			Steady ON Color 2	Steady ON Color 1	Steady ON Color 2	Steady ON Color 1
Steady ON	Steady ON			Steady ON Color 2	Steady ON Color 1	Steady ON Color 3	Steady ON Color 3
Cruise	Flash			Flash Color 2/Cruise Color 1 during OFF cycle of Flash	Flash Color 1/Cruise Color 2 during OFF cycle of Flash		
Cruise	Steady ON			Steady ON Color 2	Steady ON Color 1		
Flash	Steady ON			Steady ON Color 2	Steady ON Color 1		

Cruise Mode Duty Cycle (@ 100Hz)	
Input	Light Output
40%	0FF
50%	5%
60%	10%

Low Power Flash D.C. (@ 100Hz)	
Input	Light Output
70%	30%
80%	40%
90%	50%

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