



# Installation and Operation Instructions

## ED5051VDL Series Deck, Dash & Visor Light


FOR INTERIOR USE ONLY

**IMPORTANT!** Read all instructions before installing and using. Installer: This manual must be delivered to the end user.



**WARNING!**

Failure to install or use this product according to manufacturer's recommendations may result in property damage, serious injury, and/or death to those you are seeking to protect!

 **Do not install and/or operate this safety product unless you have read and understood the safety information contained in this manual.**

1. Proper installation combined with operator training in the use, care, and maintenance of emergency warning devices are essential to ensure the safety of emergency personnel and the public.
2. Emergency warning devices often require high electrical voltages and/or currents. Exercise caution when working with live electrical connections.
3. This product must be properly grounded. Inadequate grounding and/or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.
4. Proper placement and installation is vital to the performance of this warning device. Install this product so that output performance of the system is maximized and the controls are placed within convenient reach of the operator so that they can operate the system without losing eye contact with the roadway.
5. Do not install this product or route any wires in the deployment area of an air bag. Equipment mounted or located in an air bag deployment area may reduce the effectiveness of the air bag or become a projectile that could cause serious personal injury or death. Refer to the vehicle owner's manual for the air bag deployment area. It is the responsibility of the user/operator to determine a suitable mounting location ensuring the safety of all passengers inside the vehicle particularly avoiding areas of potential head impact.
6. It is the responsibility of the vehicle operator to ensure daily that all features of this product work correctly. In use, the vehicle operator should ensure the projection of the warning signal is not blocked by vehicle components (i.e., open trunks or compartment doors), people, vehicles or other obstructions.
7. The use of this or any other warning device does not ensure all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is the vehicle operator's responsibility to be sure they can proceed safely before entering an intersection, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
8. This equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning devices. Therefore, the user should check all applicable city, state, and federal laws and regulations. The manufacturer assumes no liability for any loss resulting from the use of this warning device.

<b>Size:</b>	ED5051VDL1	Light head only: 5.88 W x 1.56 D x 0.75" H Light head with shroud: 6.5" W x 2.88" D x 1.0" H
	ED5051VDL2	Light head only: 11.4" W x 1.6" D x 0.75" H Light head with shroud: 12.1" W x 3.0" D x 1.0" H
<b>Weight:</b>	ED5051VDL1	0.95 lbs.
	ED5051VDL2	1.7 lbs.
<b>Input Voltage:</b>		12-24 VDC
<b>Current (Max):</b>	ED5051VDL1	0.86 A @ 12 VDC
	ED5051VDL2	1.7 A @ 12 VDC
<b>Power (Max):</b>	ED5051VDL1	11.0 W @ 12 VDC
	ED5051VDL2	21.1 W @ 12 VDC
<b>Temp. Range:</b>		-40°C to 65°C
		-40°F to 149°F

## Installation & Mounting:

**Note:** Image shown is a ED5051VDL2 product. Use the same installation & mounting instructions for ED5051VDL1 product series.

Carefully remove the unit from its packaging. Examine the unit for transit damage. If damage is found, return the product to your local dealer for warranty replacement. Do not use damaged or broken parts. Determine a mounting location that ensures a clear line of sight for oncoming traffic.

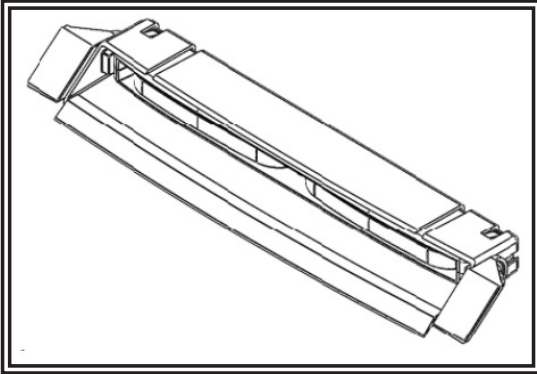


**CAUTION!**  
When drilling into any vehicle surface, make sure that the area is free from any electrical wires, fuel lines, vehicle upholstery, etc. that could be damaged.

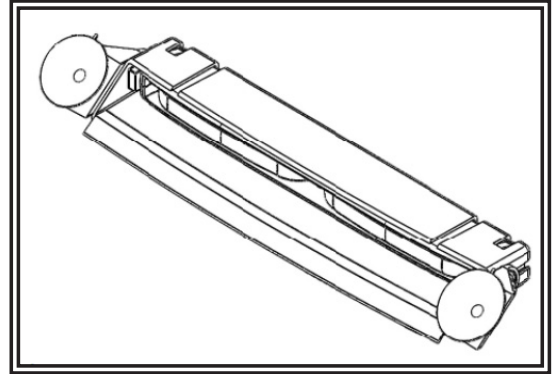


**CAUTION!**  
When installing using VHB tape into any vehicle with aftermarket tinted glass, it is best practice to trim the film around the surface where bracket will be mounted to ensure adhesion and avoid damage to the tint film.

### Mounting with Shroud:



**Figure 1**



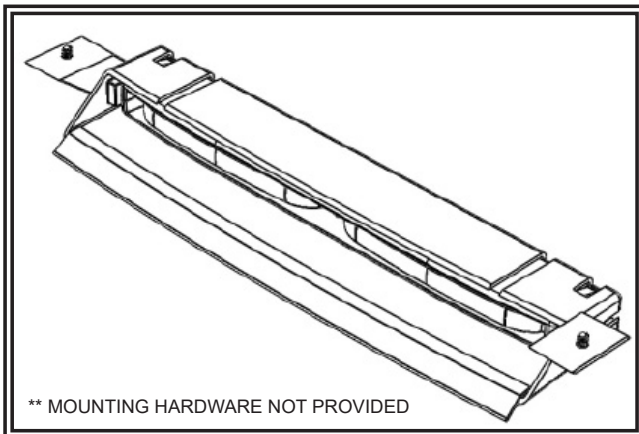
**Figure 2**

### Mounting with Shroud:

1. Ensure that the light head is securely attached to the shroud.
2. Install rubber gasket onto the shroud.
3. Remove the suction cup from each shroud bracket.
4. Clean the brackets with supplied alcohol wipe. \* for extra adhesion, see notes below.
5. Remove one side of the adhesive liner & apply to both brackets. Apply light pressure for 20 seconds.
6. Install the bracket as shown on Figures 4 & 5. Gently hand tighten the nut.
7. WITHOUT removing the second adhesive liner, hold the product to desired location. Loosen & hand tighten the nut as needed to adjust the light head angle. Once desired angle is achieved, gently tighten the fastener using a 10mm wrench or socket.
8. Clean mounting surface with supplied alcohol wipe. \*for extra adhesion, see notes below.
9. Remove the second adhesive liner.
10. Apply product on to the treated surface. Apply light pressure for 20 seconds.

### Mounting with Suction Cup:

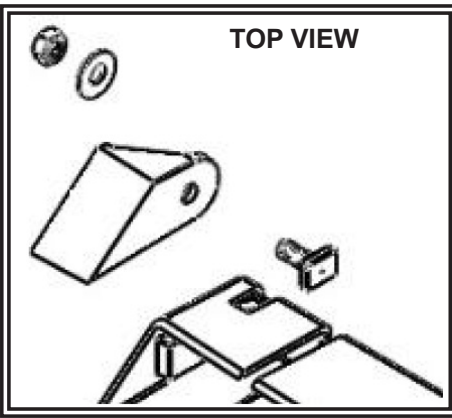
1. Ensure that the light head is securely attached to the shroud.
2. Install the shroud bracket as shown on Figures 4 & 5. Gently hand tighten the nut.
3. Clean mounting surface with supplied alcohol wipe.
4. Apply the product on to the treated surface by gently pressing the suction cups on to the glass. Apply light pressure for 20 seconds. Gently adjust the light head to its desired angle if needed.
5. Once desired angle is achieved, gently tighten the fastener using a 10mm wrench or socket.



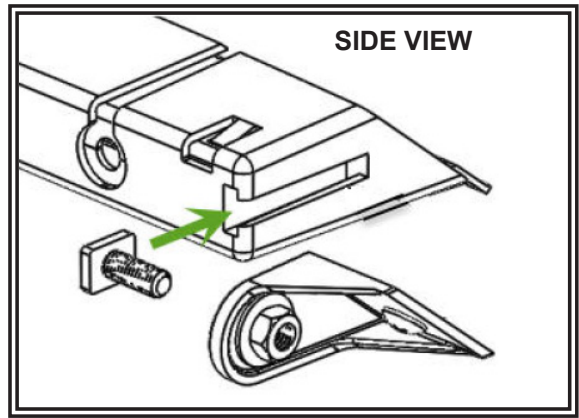
**Figure 3**

### Mounting with Hardware (NOT PROVIDED):

1. Ensure that the light head is securely attached to the shroud.
2. Install the shroud bracket as shown on Figures 4 & 5. Gently hand tighten the nut.
3. Clean mounting surface with supplied alcohol wipe.
4. Install product on to the treated surface by using #8 hardware screw (not included). Torque screws to  $8 \pm 2$  in-lbs.
5. Gently adjust the light head to its desired angle if needed.
6. Once desired angle is achieved, gently tighten the fastener using a 10mm wrench or socket.

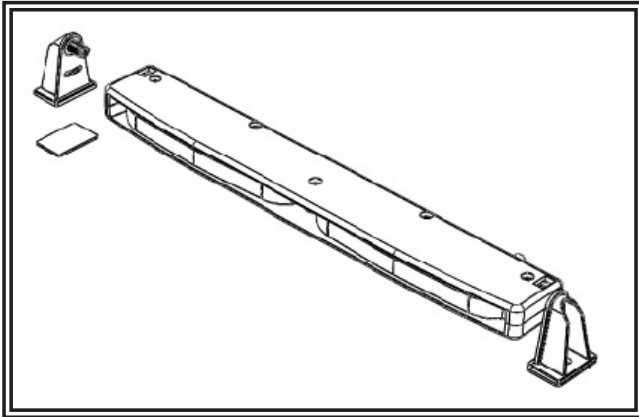


**Figure 4**

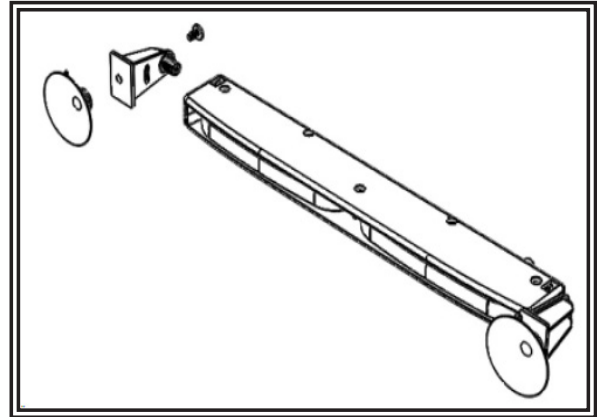


**Figure 5**

**Standard Mounting without Shroud:**



**Figure 6**



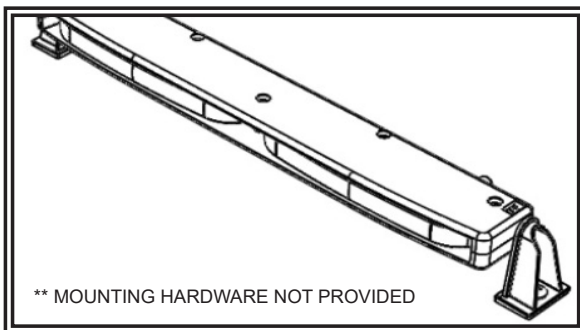
**Figure 7**

**Mounting with VHB Tape:**

1. Carefully remove the light head from the shroud.  
CAUTION: gently release the locking tabs to avoid breaking the tabs shown in Figure A .
2. Clean the light head brackets with supplied alcohol wipe. \* for extra adhesion, see notes below.
3. Remove one side of the adhesive liner & apply to both brackets. Apply light pressure for 20 seconds.
4. Insert bracket as shown on Figure B.
5. WITHOUT removing the second adhesive liner, hold the product to desired location. Adjust the light head to its desired angle by adjusting the bracket.
6. Clean mounting surface with supplied alcohol wipe. \*for extra adhesion, see notes below.
7. Remove the second adhesive liner.
8. Apply product on to the treated surface. Apply light pressure for 20 seconds.
9. Insert the provided screws in the light head locking mechanism as shown in Figure C. This will hold the brackets in position & the light head in the desired angle.

**Mounting with Suction Cup:**

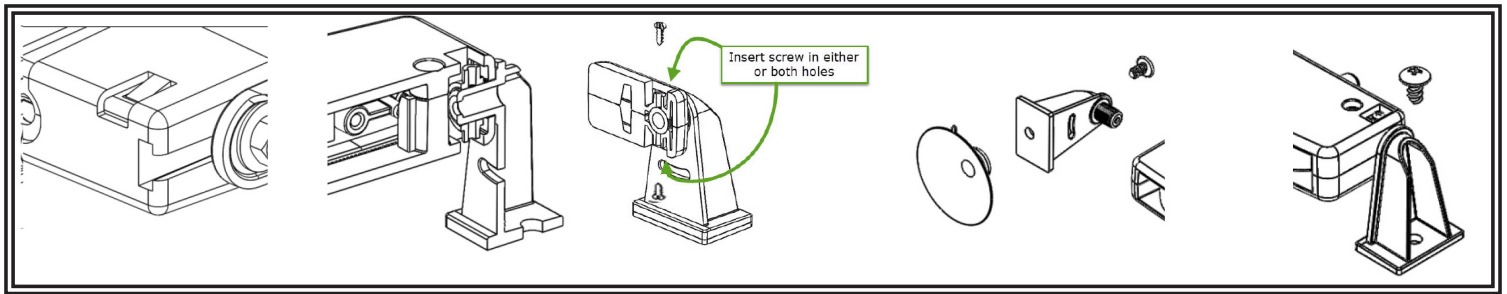
1. Carefully remove the light head from the shroud.  
CAUTION: gently release the locking tabs to avoid breaking the tabs shown on Figure A.
2. Remove the suction cups from the shroud mounting brackets.
3. Install each suction cup to each bracket using the existing screws as shown on Figure D.
4. Insert bracket as shown on Figure B.
5. Clean mounting surface with supplied alcohol wipe.
6. Apply the product on to the treated surface gently pressing the suction cups on to the glass. Apply light pressure for 20 seconds. Gently adjust the light head to its desired angle if needed.
7. Insert the provided screws in the light head locking mechanism as shown in Figure C. This will hold the brackets in position & the light head in the desired angle.



**Figure 8**

**Mounting with Hardware (NOT PROVIDED):**

1. Carefully remove the light head from the shroud.  
CAUTION: gently release the locking tabs to avoid breaking the tabs shown on Figure A.
2. Insert the light head bracket as shown on Figure B.
3. Hold the product to desired location. Adjust the light head to its desired angle by adjusting the bracket.
4. Clean mounting surface with supplied alcohol wipe.
5. Install product on to the treated surface by using #8 hardware screw (not included) as shown on Figure E. Torque screws to  $8 \pm 2$  in-lbs.
6. Insert the provided screws in the light head locking mechanism as shown in Figure C. This will hold the brackets in position & the light head in the desired angle.



**Figure A**

**Figure B**

**Figure C**

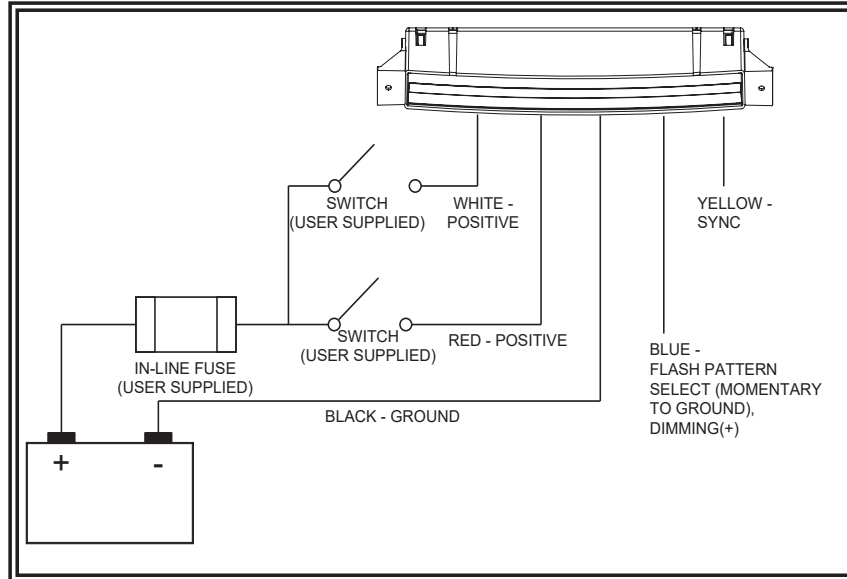
**Figure D**

**Figure E**

**Hardwire Wiring Instructions:**

All wiring should be stranded and a minimum of 20 AWG. The positive line must have an in-line 3 AMP slow-blow fuse for each directional as shown in FIGURE 9. Isolate the yellow and blue wires when not in use.

**IMPORTANT! This unit is a safety device and it must be connected to its own separate, fused power point to assure its continued operation should any other electrical accessory fail.**



**Figure 9**

**HARDWIRE CONFIGURATION SHOWN**

**Flash pattern select:**

To select a flash pattern, apply power to the RED or WHITE or both RED and WHITE wires.

Apply blue to black wire for flash pattern change:

Push Times	Function
0-1 secs.	next pattern
1-3 secs.	previous pattern
3-5 secs.	factory default pattern
5+ secs.	last pattern

**Dimming Function:**

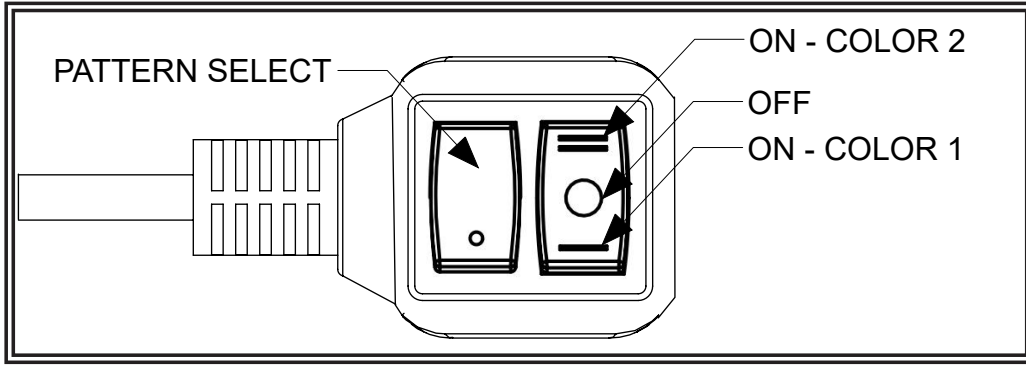
Connect blue wire to Red power wire.

**Synchronization:**

The ED5051VDL series is capable of syncing with other compatible ECCO products by following these steps:

1. Set the desired flash pattern on each unit individually. It is also strongly recommended that the same style of flash pattern be used on all units to produce the most effective warning pattern. NOTE: Phases A and B for each style of flash pattern in the table denote the relative timing between units connected in a synchronizing installation. To operate simultaneously, each unit must be set to the same phase (A + A or B + B); to operate alternately, units must be set to have the opposite phase (A + B or B + A).
2. Connect the yellow sync wires together and check that the units are flashing in a synchronized manner as expected. If a pattern on one unit appears incorrect, the blue pattern select wire can be used to cycle forward or backward on that individual unit until the correct pattern is selected. NOTE: This will only change the pattern in the one unit and will not affect the other units connected to the yellow sync wire.

**FLASH PATTERN SELECTION (CIGARETTE ADAPTER):**



ED5051VDL1 Series Flash Pattern Chart/ED5051VDL1 Serie Tabla de patrones de destello  
ED5051VDL1 Série Tableau des effets clignotants

Pattern	LED Color 1 & Color 3 Red line	LED Color 2 & Color 4 White line	PATTERNS	Phase	FPM	SAE J595	CA T13
						A,B,R,W	A,B,R
1	1-Default		Single Flash Color 1	A	75	CLASS 1	CLASS B,E
	2		Single Flash Color 1	B	75	CLASS 1	CLASS B,E
			Single Flash Alternating Color 1 & Color 2	A	75	TBD	TBD
			Single Flash Alternating Color 1 & Color 2	B	75	TBD	TBD
		1-Default	Single Flash Color 2	A	75	CLASS 1	CLASS B,E
		2	Single Flash Color 2	B	75	CLASS 1	CLASS B,E
	3	3	Single Flash Alternating Color 1 & Color 2	A	75	TBD	TBD
	4	4	Single Flash Alternating Color 1 & Color 2	B	75	TBD	TBD
2	5	5	Single Flash Alternating Color 1 & Color 2		75	TBD	TBD
	6		Single Flash Color 1	A	375	N/A	N/A
	7		Single Flash Color 1	B	375	N/A	N/A
			Single Flash Alternating Color 1 & Color 2	A	375	N/A	N/A
			Single Flash Alternating Color 1 & Color 2	B	375	N/A	N/A
		6	Single Flash Color 2	A	375	N/A	N/A
		7	Single Flash Color 2	B	375	N/A	N/A
	8	8	Single Flash Alternating Color 1 & Color 2	A	375	N/A	N/A
	9	9	Single Flash Alternating Color 1 & Color 2	B	375	N/A	N/A
	10	10	Single Flash Alternating Color 1 & Color 2		375	N/A	N/A
3	11		Double Flash Color 1	A	75	CLASS 1	CLASS B,E
	12		Double Flash Color 1	B	75	CLASS 1	CLASS B,E
			Double Flash Alternating Color 1 & Color 2	A	75	TBD	TBD
			Double Flash Alternating Color 1 & Color 2	B	75	TBD	TBD
		11	Double Flash Color 2	A	75	CLASS 1	CLASS B,E
		12	Double Flash Color 2	B	75	CLASS 1	CLASS B,E
	13	13	Double Flash Alternating Color 1 & Color 2	A	75	TBD	TBD
	14	14	Double Flash Alternating Color 1 & Color 2	B	75	TBD	TBD
4	15	15	Double Flash Alternating Color 1 & Color 2		75	TBD	TBD
	16		Double Flash Color 1	A	120	CLASS 1	N/A
	17		Double Flash Color 1	B	120	CLASS 1	N/A
			Double Flash Color 1 Alternately Color 4	A	120	N/A	N/A
			Double Flash Color 1 Alternately Color 4	B	120	N/A	N/A
		16	Double Flash Color 2	A	120	CLASS 1	N/A
		17	Double Flash Color 2	B	120	CLASS 1	N/A
	18	18	Double Flash Alternating Color 1 & Color 2	A	120	N/A	N/A
5	19	19	Double Flash Alternating Color 1 & Color 2	B	120	N/A	N/A
	20	20	Double Flash Alternating Color 1 & Color 2		120	N/A	N/A
	21		Triple Flash Color 1	A	75	CLASS 1	TBD
	22		Triple Flash Color 1	B	75	CLASS 1	TBD
			Triple Flash Color 1 Alternately Color 4	A	75	TBD	TBD
			Triple Flash Color 1 Alternately Color 4	B	75	TBD	TBD
		21	Triple Flash Color 2	A	75	CLASS 1	TBD
		22	Triple Flash Color 2	B	75	CLASS 1	TBD
6	23	23	Triple Flash Alternating Color 1 & Color 2	A	75	TBD	TBD
	24	24	Triple Flash Alternating Color 1 & Color 2	B	75	TBD	TBD
	25	25	Triple Flash Alternating Color 1 & Color 2		75	TBD	TBD
	26		Quad Flash Color 1	A	75	CLASS 1	CLASS B,E
	27		Quad Flash Color 1	B	75	CLASS 1	CLASS B,E
			Quad Flash Color 1 Alternately Color 4	A	75	TBD	TBD
			Quad Flash Color 1 Alternately Color 4	B	75	TBD	TBD
		26	Quad Flash Color 2	A	75	CLASS 1	CLASS B,E
7		27	Quad Flash Color 2	B	75	CLASS 1	CLASS B,E
	28	28	Quad Flash Alternating Color 1 & Color 2	A	75	TBD	TBD
	29	29	Quad Flash Alternating Color 1 & Color 2	B	75	TBD	TBD
	30	30	Quad Flash Alternating Color 1 & Color 2		75	TBD	TBD
	31		Quad Flash Color 1	A	120	CLASS 1	N/A
	32		Quad Flash Color 1	B	120	CLASS 1	N/A
			Quad Flash Color 1 Alternately Color 4	A	120	N/A	N/A
			Quad Flash Color 1 Alternately Color 4	B	120	N/A	N/A
8		31	Quad Flash Color 2	A	120	CLASS 1	N/A
		32	Quad Flash Color 2	B	120	CLASS 1	N/A
	33	33	Quad Flash Alternating Color 1 & Color 2	A	120	N/A	N/A
	34	34	Quad Flash Alternating Color 1 & Color 2	B	120	N/A	N/A
	35	35	Quad Flash Alternating Color 1 & Color 2		120	N/A	N/A
	36		Steady burn-Color 1 & 3	N/A	N/A	N/A	CLASS B,E
	36	Steady burn-Color 2 & 4	N/A	N/A	N/A	CLASS B,E	

ED5051VDL2 Series Flash Pattern Chart/ED5051VDL2 Serie Tabla de patrones de destello/ED5051VDL2 Série Tableau des effets clignotants								
Pattern	Mode	Description	Phase	FPM	SAE J595		CA Title 13	
					RW, BW, AW	RWBW	RW, BW, AW	RWBW
1	1	Single Flash - Simultaneous Color 1	A	75	Class 1	N/C	Class B	N/C
	2	Single Flash - Simultaneous Color 1	B	75	Class 1	N/C	Class B	N/C
	3	Single Flash - Alternating Color 1	A	75	N/C	N/C	N/C	N/C
	4	Single Flash - Alternating Color 1	B	75	N/C	N/C	N/C	N/C
2	5	Double Flash - Simultaneous Color 1	A	75	Class 1	N/C	Class B	N/C
	6	Double Flash - Simultaneous Color 1	B	75	Class 1	N/C	Class B	N/C
	7	Double Flash - Alternating Color 1	A	75	N/C	N/C	N/C	N/C
	8	Double Flash - Alternating Color 1	B	75	N/C	N/C	N/C	N/C
3	9	Quad Flash - Simultaneous Color 1	A	75	Class 1	N/C	Class B	N/C
	10	Quad Flash - Simultaneous Color 1	B	75	Class 1	N/C	Class B	N/C
	11	Quad Flash - Alternating Color 1	A	75	N/C	N/C	N/C	N/C
	12	Quad Flash - Alternating Color 1	B	75	N/C	N/C	N/C	N/C
4	13	Single Flash - Simultaneous Color 1	A	120	Class 1	N/C	N/C	N/C
	14	Single Flash - Simultaneous Color 1	B	120	Class 1	N/C	N/C	N/C
	15	Single Flash - Alternating Color 1	A	120	N/C	N/C	N/C	N/C
	16	Single Flash - Alternating Color 1	B	120	N/C	N/C	N/C	N/C
5	17	Double Flash - Simultaneous Color 1	A	120	Class 1	N/C	N/C	N/C
	18	Double Flash - Simultaneous Color 1	B	120	Class 1	N/C	N/C	N/C
	19	Double Flash - Alternating Color 1	A	120	N/C	N/C	N/C	N/C
	20	Double Flash - Alternating Color 1	B	120	N/C	N/C	N/C	N/C
6	21	Quad Flash - Simultaneous Color 1	A	120	Class 1	N/C	N/C	N/C
	22	Quad Flash - Simultaneous Color 1	B	120	Class 1	N/C	N/C	N/C
	23	Quad Flash - Alternating Color 1	A	120	N/C	N/C	N/C	N/C
	24	Quad Flash - Alternating Color 1	B	120	N/C	N/C	N/C	N/C
7	25	Single Flash - Simultaneous Color 1	A	350	N/C	N/C	N/C	N/C
	26	Single Flash - Simultaneous Color 1	B	350	N/C	N/C	N/C	N/C
	27	Single Flash - Alternating Color 1	A	350	N/C	N/C	N/C	N/C
	28	Single Flash - Alternating Color 1	B	350	N/C	N/C	N/C	N/C
8	29	Single Flash - Simultaneous Color 2	A	75	Class 1	Class 1	N/C	N/C
	30	Single Flash - Simultaneous Color 2	B	75	Class 1	Class 1	N/C	N/C
	31	Single Flash - Alternating Color 2	A	75	N/C	N/C	N/C	N/C
	32	Single Flash - Alternating Color 2	B	75	N/C	N/C	N/C	N/C
9	33	Double Flash - Simultaneous Color 2	A	120	Class 1	Class 1	N/C	N/C
	34	Double Flash - Simultaneous Color 2	B	120	Class 1	Class 1	N/C	N/C
	35	Double Flash - Alternating Color 2	A	120	N/C	N/C	N/C	N/C
	36	Double Flash - Alternating Color 2	B	120	N/C	N/C	N/C	N/C
10	37	Single Flash - Simultaneous Color 1 & Color 2	A	75	N/C	N/C	N/C	N/C
	38	Single Flash - Simultaneous Color 1 & Color 2	B	75	N/C	N/C	N/C	N/C
	39	Single Flash - Alternating Color 1 & Color 2	A	75	N/C	N/C	N/C	N/C
	40	Single Flash - Alternating Color 1 & Color 2	B	75	N/C	N/C	N/C	N/C
11	41	Double Flash - Simultaneous Color 1 & Color 2	A	120	N/C	N/C	N/C	N/C
	42	Double Flash - Simultaneous Color 1 & Color 2	B	120	N/C	N/C	N/C	N/C
	43	Double Flash - Alternating Color 1 & Color 2	A	120	N/C	N/C	N/C	N/C
	44	Double Flash - Alternating Color 1 & Color 2	B	120	N/C	N/C	N/C	N/C
12	45	Single Flash - Simultaneous Color 2 & Color 1	A	75	N/C	N/C	N/C	N/C
	46	Single Flash - Simultaneous Color 2 & Color 1	B	75	N/C	N/C	N/C	N/C
	47	Single Flash - Alternating Color 2 & Color 1	A	75	N/C	N/C	N/C	N/C
	48	Single Flash - Alternating Color 2 & Color 1	B	75	N/C	N/C	N/C	N/C
13	49	Double Flash - Simultaneous Color 2 & Color 1	A	120	N/C	N/C	N/C	N/C
	50	Double Flash - Simultaneous Color 2 & Color 1	B	120	N/C	N/C	N/C	N/C
	51	Double Flash - Alternating Color 2 & Color 1	A	120	N/C	N/C	N/C	N/C
	52	Double Flash - Alternating Color 2 & Color 1	B	120	N/C	N/C	N/C	N/C
14	53	Steady Burn - Color 1 & Single Flash - Color 1		75	N/C	N/C	N/C	N/C
	54	Single Flash - Color 1 & Steady Burn - Color 1		75	N/C	N/C	N/C	N/C
	55	Steady Burn - Color 1 & Single Flash - Color 2		75	N/C	N/C	N/C	N/C
	56	Single Flash - Color 1 & Steady Burn - Color 2		75	N/C	N/C	N/C	N/C
	57	Steady Burn - Color 2 & Single Flash - Color 1		75	N/C	N/C	N/C	N/C
15	58	Single Flash - Color 2 & Steady Burn - Color 1		75	N/C	N/C	N/C	N/C
	59	Steady Burn - Color 1 & Quad Flash - Color 1		75	N/C	N/C	N/C	N/C
	60	Quad Flash - Color 1 & Steady Burn - Color 1		75	N/C	N/C	N/C	N/C
	61	Steady Burn - Color 1 & Quad Flash - Color 2		75	N/C	N/C	N/C	N/C
	62	Quad Flash - Color 1 & Steady Burn - Color 2		75	N/C	N/C	N/C	N/C
	63	Steady Burn - Color 2 & Quad Flash - Color 1		75	N/C	N/C	N/C	N/C
	64	Quad Flash - Color 2 & Steady Burn - Color 1		75	N/C	N/C	N/C	N/C
16	65	Steady Burn - Color 1		N/A	N/C	N/C	N/C	N/C
	66	Steady Burn - Color 2		N/A	N/C	N/C	N/C	N/C
17	67	Off		N/A	N/C	N/C	N/C	N/C