3510

LOW PROFILE LED DIRECTIONAL LIGHT

INSTALLATION GUIDE

ECCO®

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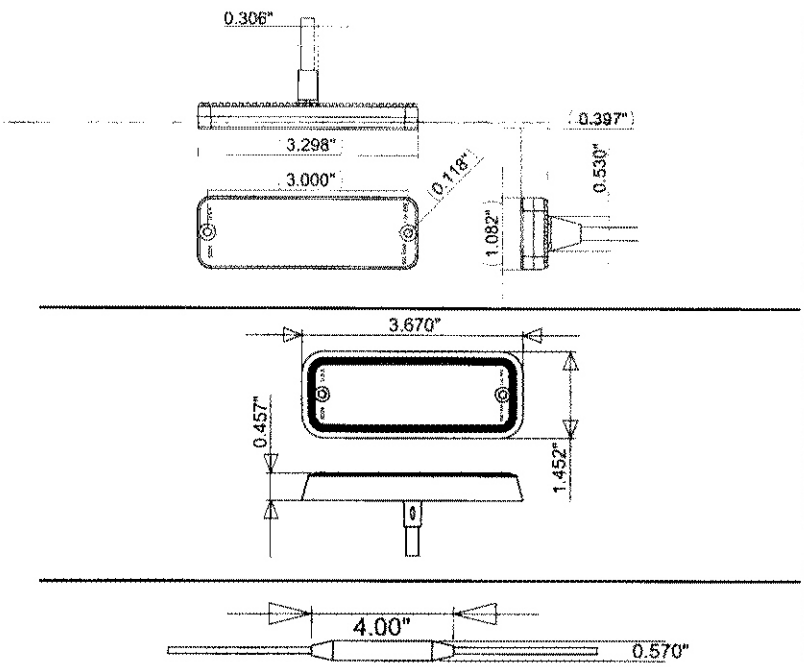
TECHNICAL SPECIFICATIONS

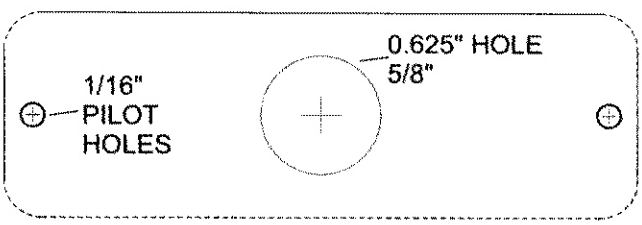
INPUT VOLTAGE	12.8V (10 to 16 Vdc)
INPUT CURRENT	0.75A maximum.
CABLE LENGTH	9 FT.
LED ELEMENTS	24
FLASH PATTERNS	16 (8 Standard, 8 optional cycle)
MAXIMUM NUMBER OF SYNCHRONIZED HEADS	64
WARRANTY PERIOD	5 YEARS
LIGHT OUTPUT	AMBER: 336 LUMENS BLUE: 120 LUMENS RED: 360 LUMENS CLEAR: 528 LUMENS

SAEJ595, SAEJ845, CA Title 13

DIMENSIONS



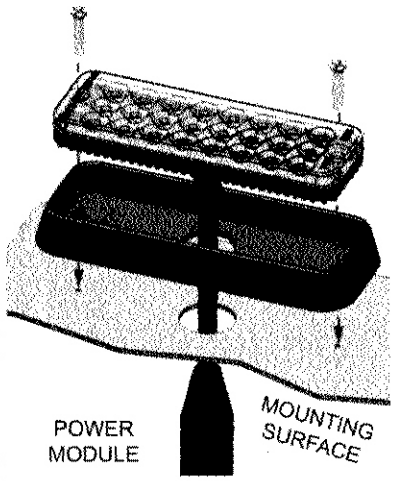
DRILLING TEMPLATE



ACTUAL SIZE
(DO NOT FIT TO PAGE WHEN PRINTING FROM PDF)

MOUNTING

DO NOT MAKE THE HOLES IN THE LENS LARGER OR USE LARGER HARDWARE THAN WHAT IS PROVIDED! DAMAGE TO SEAL WILL RESULT!



Drill a 0.625" diameter hole in the mounting surface to pass the cable through.

Use the provided #4 mounting screws to attach the 3510 to the mounting surface.
The drilling template below can be used to mark the hole locations.

Use silicone sealant around the cable and screw holes to prevent moisture from entering body panels.

Note: There are electronic components in the power module. Do not drill into the power module.

ELECTRICAL CONNECTIONS

The cable on the 3510 is long enough to run across the front or the rear of a vehicle. Trim the cable shorter if needed. The wiring diagram on page 2 shows a typical install.

RED: +12V
Connect to +12V through an ON/OFF switch.
The use of a fuse located close to the voltage source is recommended. Size the fuse according to the number of heads used in the system. 18AWG or larger wire is recommended.
DO NOT CONNECT THIS UNIT TO VOLTAGES HIGHER THAN 16 VOLTS DC!

BLACK: - GROUND
Connect to - GROUND vehicle chassis.
18AWG or larger wire is recommended.

BLUE: Flash pattern SYNC and SELECTION wire.
If you wish to have all the LED heads synchronize their flash timings and patterns with each other then all the BLUE wires must be connected together. (64 Heads Maximum)
The BLUE wire is also used to select the flash pattern.
Touch the BLUE wire to +V to select the next pattern in the FLASH PATTERN LIST. The BLUE wire can also be run to a momentary push-button located on the dashboard to allow the flash pattern to be changed when desired.
Note: Do not connect the BLUE wire to - Ground. It will disrupt the flash pattern sync signal.

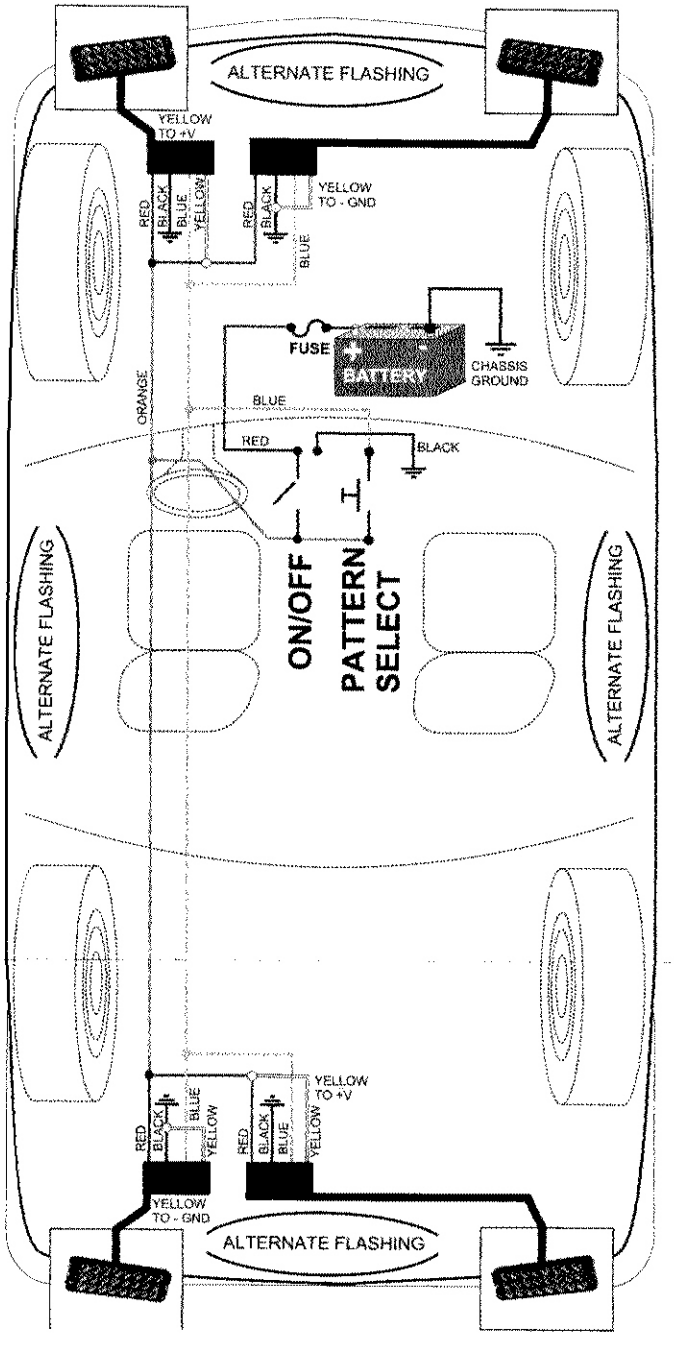
ELECTRICAL CONNECTIONS

YELLOW: Alternating / Simultaneous selection.
The BLUE wires of all 3510 heads must be connected together for the alternating /simultaneous function to work.
Connect to either +V or GROUND (GND).
The YELLOW wire makes the head fire AT THE SAME TIME or ALTERNATING with the other heads in the system.
Heads with YELLOW connected to +V fire at the same time.
Heads with YELLOW connected to GND fire at the same time.
Heads with YELLOW connected to +V will ALTERNATE with heads that have YELLOW connected to GND.
The YELLOW wire has no function in STEADY ON mode.

The 3510 will also synchronize with any 9010 or 9011 HIDE-A-LEDTM head. The wiring colors and functions are identical.

ELECTRICAL CONNECTIONS

INSTALLATION OF 4 3510 USING PATTERN SLELECT SWITCH PANEL(OPTIONAL) ON DASHBOARD.



FLASH PATTERNS

POWER-UP RESET:
After installing the system it is best to do a POWER-UP RESET the first time to ensure all heads are in sync.
Touch **BLUE** wires to +V (**RED** wire) while applying power.
Release **BLUE** wires. All heads will reset to Pattern #2.
If you have installed a pattern select pushbutton, press and hold pattern select while turning power switch ON.

To select a flash pattern, touch **BLUE** to +V or press pattern select switch to increment the flash pattern. The heads will remember the selected pattern even if power is removed.

STANDAED ONLY
STANDAED + CYCLE

#	Pattern:	Frequency:	Description:
	STANDARD PATTERNS		
1	**Quad Flash**	1.25 Hz	75 Quad Flashes Per Minute
2	**Double Flash**	1.25 Hz	75 Double Flashes Per Minute
3	**Triple Flash**	1.53 Hz	92.3 Triple Flashes Per Minute
4	**DeciBlast**	1.42 Hz	85.5 Deci Flashes Per Minute
5	**Single Flash**	1.25 Hz	75 Single Flashes Per Minute
6	**Mega Flash**	1.90 Hz	114 Single Flashes Per Minute
7	**Triple+Burst**	1.37 Hz	82.5 Triple+Burst Flashes Per Minute
8	**Steady On**		Steady on. **Split Color = Fast Mega**
	CYCLE PATTERNS		
9	**Cycle All**		Cycle through patterns 1 to 7
10	**Double-Triple+Burst**		2 Double, 2 Triple+Burst cycle
11	**Cycle Classic**		1 Double, 1 Quad, 2 Mega cycle
12	**Quad-Mega**		3 Quad, 4 Mega cycle
13	**Single-Quad**		2 Single, 2 Quad cycle
14	**DeciBlast-Quad**		2 DeciBlast, 2 Quad cycle
15	**Single-Triple-DeciBlast**		2 Single, 2 Triple, 2 DeciBlast cycle
16	**Mega-Triple+Burst**		1 Mega, 1 Triple+Burst cycle

STANDARD PATTERNS:
the 3510 ships with only the standard patterns enabled (1 through 8). To enable cycle flash patterns follow the procedure below.

CYCLE PATTERNS:
You may add patterns 9 through 16 by following this procedure:
1) Touch **BLUE** wires to +V (**RED** wire) while applying power.
If you have installed a pattern select pushbutton, press and hold pattern select while turning power switch ON.

2) Hold **BLUE** wires on +V for 5 SECONDS (heads will not be flashing during this time). After 5 SECONDS the heads will flash once or twice to indicate the flash pattern list that has been selected:
ONE FLASH = Standard Patterns only.
TWO FLASHES = Standard + Cycle patterns.

3) Remove the **BLUE** wires from +V (or release pushbutton).

You may switch the pattern set at any time as many times as you wish. All heads will remember the pattern set that was selected even when power is removed.

TROUBLESHOOTING

HEAD NOT FLASHING:
Check the RED and BLACK wires for a reversed connection. (Reverse connection will not damage the unit). Check RED and BLACK wires for either a bad splice or a corroded ground connection.

HEADS NOT SYNCHRONIZING:
Check for a short circuit on the BLUE wire to either +V or GROUND.
Salt water on the wire connections will short circuit the sync signal on the BLUE wire.
Check for non-functional heads in the system. If any one of the heads has a bad GROUND connection it can cause the sync signal to become corrupted. If any one of the heads has it's RED and BLACK wires reverse connected it will corrupt the sync signal.

FLASH PATTERN CHANGING:
If the flash pattern changes on it's own there may be an intermittent short between the BLUE wire and +V. Check for water in the wiring connections. If any one of the heads in the system has an intermittent GROUND connection it can also cause the flash pattern to change.