



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at [wvOASIS.gov](http://wvOASIS.gov). As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at [WVPurchasing.gov](http://WVPurchasing.gov) with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

## Header 4


[List View](#)

## General Information

[Contact](#)[Default Values](#)[Discount](#)[Document Information](#)

Procurement Folder: 639585

Procurement Type: Central Master Agreement

Vendor ID: 000000200478 

Legal Name: MALLIMAR, INC.

Alias/DBA:

Total Bid: \$32,056.70

Response Date: 11/01/2019 

Response Time: 12:02

SO Doc Code: CRFQ

SO Dept: 0926



SO Doc ID: PSC2000000002

Published Date: 10/28/19

Close Date: 11/1/19

Close Time: 13:30

Status: Closed

Solicitation Description: Addendum 1-Emergency vehicle lights   


Total of Header Attachments: 4

Total of All Attachments: 4



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder :** 639585  
**Solicitation Description :** Addendum 1-Emergency vehicle lights  
**Proc Type :** Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-11-01 13:30:00	SR 0926 ESR11011900000002739	1

VENDOR
000000200478 MALLIMAR, INC.

**Solicitation Number:** CRFQ 0926 PSC2000000002

**Total Bid :** \$32,056.70      **Response Date:** 2019-11-01      **Response Time:** 12:02:07

**Comments:** Our bid is for the Star Signal Vehicle Products equivalent for each item. The price for lightbars on line items 3.1.1.1 and 3.1.1.2 include mounting feet. The price for the ULB24-DLP-BB on line item 3.1.1.4 includes a vehicle specific mounting bracket. The price for the D-44 speaker on line item 3.1.1.21 includes a vehicle specific mounting bracket. We have attached the spec sheets for each item as well as the provided pricing sheet.

**FOR INFORMATION CONTACT THE BUYER**  
 Jessica S Chambers  
 (304) 558-0246  
 jessica.s.chambers@wv.gov

<b>Signature on File</b>	<b>FEIN #</b>	<b>DATE</b>
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Emergency vehicle lights	1.00000	LS	\$32,056.700000	\$32,056.70

Comm Code	Manufacturer	Specification	Model #
25172901			

**Extended Description :** Lump Sum price, Vendor must include the Pricing Page (Exhibit A) from bid package.

**Comments:** OUR BID IS FOR THE STAR SIGNAL VEHICLE PRODUCTS EQUIVALENT FOR EACH LINE ITEM. SPEC SHEETS AND PRICING PAGE WILL BE ATTACHMENTS.

## Emergency vehicle lights pricing page

### Exhibit A

Contract Item	Vendor contract item brand/item # for "or equal"	Estimated quantity	Each unit cost	Extended Cost (quantity x unit cost)
3.1.1.1 Whelen Liberty II Duo + WeCan Series Lightbar	1500-CUST 51" DUAL COLOR LIGHTBAR SSVP PHAZER	5	\$1,475.00	\$7,375.00
3.1.1.2 Whelen Liberty II Solo IX Series Lightbar	1500-CUST 51" SINGLE LIGHTBAR SSVP PHAZER	5	\$1,420.00	\$7,100.00
3.1.1.3 Whelen Lightbar Mounting Hardware				
Utility vehicle (MKLP83)	920-35FX3	5	\$25.00	\$125.00
Sedan vehicle (MKLP76)	920-35FX3	5	\$25.00	\$125.00
3.1.1.4 Whelen Inner Edge SFT WeCan Light	STAR SIGNAL ULB24-DLP-BB	5	\$441.00	\$2,205.00
3.1.1.5 Whelen Inner Edge RST Series Light	STAR SIGNAL ULB34-1-FISUV-B	5	\$255.60	\$1,278.00
3.1.1.6 Whelen Traffic Advisor Light	STAR SIGNAL DLQS-6-B	5	\$350.40	\$1,752.00
3.1.1.7 Whelen Micron lighthouse (stud mount)	STAR SIGNAL DLX6F-BB	5	\$56.40	\$282.00
3.1.1.8 Whelen Micron lighthouse (universal mount)	STAR SIGNAL DLX6F-BB	5	\$56.40	\$282.00
3.1.1.9 Whelen ION Series lighthouse	STAR SIGNAL DLITE-BB	5	\$58.79	\$293.95
3.1.1.10 ION Duo Series lighthouse (universal mount)	STAR SIGNAL DLITMC-RBW	5	\$72.40	\$362.00
3.1.1.11 Whelen ION Duo Series (surface mount)	STAR SIGNAL DLITMC-RBW	5	\$72.40	\$362.00
3.1.1.12 Whelen Avenger II Series Light	STAR SIGNAL ULB9E-1-BB	5	\$85.00	\$425.00
3.1.1.13 Whelen ION T Series light	STAR SIGNAL DLITMC-RBW	5	\$72.40	\$362.00
3.1.1.14 Whelen license plate bracket	STAR SIGNAL BB274-DLX4-G-RL	5	\$17.00	\$85.00
3.1.1.15 Whelen ION series universal license plate bracket	STAR SIGNAL BB274-DLIT-RL	5	\$19.19	\$95.95
3.1.1.16 Whelen Vertex light (single color)	STAR SIGNAL LDHF311-W-10	5	\$74.31	\$371.55
3.1.1.17 Whelen Vertex light (split color)	STAR SIGNAL DLS306-RB	5	\$68.79	\$343.95
3.1.1.18 Whelen Interface Module	STAR SIGNAL BBK-FDCH	5	\$70.20	\$351.00
3.1.1.19 Whelen Tracer Series light array	STAR SIGNAL DLQS-76-B	5	\$547.06	\$2,735.30
3.1.1.20 Whelen CenCom Sapphire Controller	STAR SIGNAL LCS850	5	\$599.00	\$2,995.00

<b>3.1.1.21</b> Whelen Speaker SA315 series	STAR SIGNAL D-44	5	\$151.00	\$755.00
<b>3.1.2.1</b> Whelen Hands Free Siren	STAR SIGNAL LCS880	5	\$399.00	\$1,995.00
<b>TOTAL BID AMOUNT</b>				<b>\$32,056.70</b>



# Star Phazer

Model 1500 - 51"



Pos	Light Head Type and Style	Amperage
01	Blue Lineum	1.200A
02	Blue Lineum	1.200A
03	Blue Lineum	1.200A
04	Cool White Lineum	1.200A
05	Cool White Lineum	1.200A
06	Blue Lineum	1.200A
07	Blue Lineum	1.200A
08	Blue Lineum	1.200A
09	Cool White Small Lineum	0.680A

Pos	Light Head Type and Style	Amperage
10	Blue Lineum	1.200A
11	Blue Lineum	1.200A
12	Blue Lineum	1.200A
13	Blue Lineum	1.200A
14	Blue Lineum	1.200A
15	Blue Lineum	1.200A
16	Blue Lineum	1.200A
17	Blue Lineum	1.200A
18	Cool White Small Lineum	0.680A

Quantity	Additional Parts
1	1500 Bar Base - 51"
1	Black plastic, Permanent/Gutter mount
2	P120-1C-C Clear Coated Clear End Lens
3	P120-2C-C Clear Coated Clear Center Lens
1	Control Circuit - Dual-Color Capable
4	Center Mounting Plate(s)

Totals: 20.560A max  
10.280A avg.

Quantity	Cables
1	External Control Cable - 17'
2	Internal Control Cable - Dual Color, Left
2	Internal Control Cable - Dual Color, Right

**Part Number: 1500-Single Color\_STAR162\_1910311527458**

Customer 1500-Single Color	Order Number / PO 0	Order Date Nov 01, 2019
Order Notes Filename: U:/Personal_Folders/Z-Community/Custom Lightbar Design Kit/Custom Phazer/Lightbar Drawings/Quotes/1500-Single Color_STAR162_1910311527458/1500-Single Color_STAR162_1910311527458.pdf		

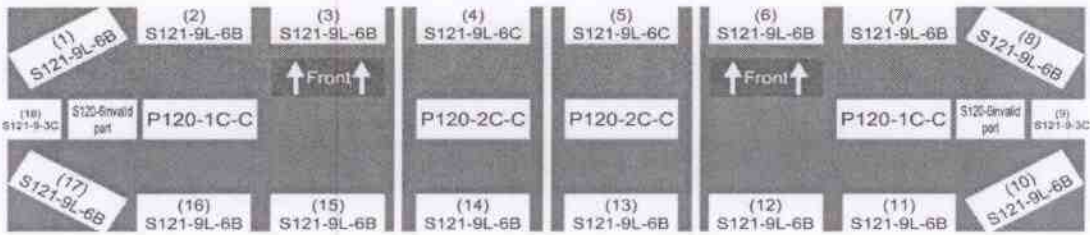
Order Number: 0

PRODUCTION COPY

(C) 2015 Star Headlight and Lantern Co., Inc.

# Model 1500

## Production Copy - Bill of Materials



Quantity	Component	Description
1	1500	Bar Base - 51"
1	S8070-454-2	Control Circuit - Dual-Color Capable
1	120-39PB	Black plastic, Permanent/Gutter mount
4	S30147-184K	Center Mounting Plate(s)
14	S121-9L-6B	Blue Lineum
2	S121-9L-6C	Cool White Lineum
2	S121-9-3C	Cool White Small Lineum

Quantity	Lenses	Description
2	P120-1C-C	Clear Coated Clear End Lens
3	P120-2C-C	Clear Coated Clear Center Lens

Quantity	Cables	Description
1	SWH-1000BAR17	External Control Cable - 17'
2	SWH-1000-51DL	Internal Control Cable - Dual Color, Left
2	SWH-1000-51DR	Internal Control Cable - Dual Color, Right



# Wiring Diagram

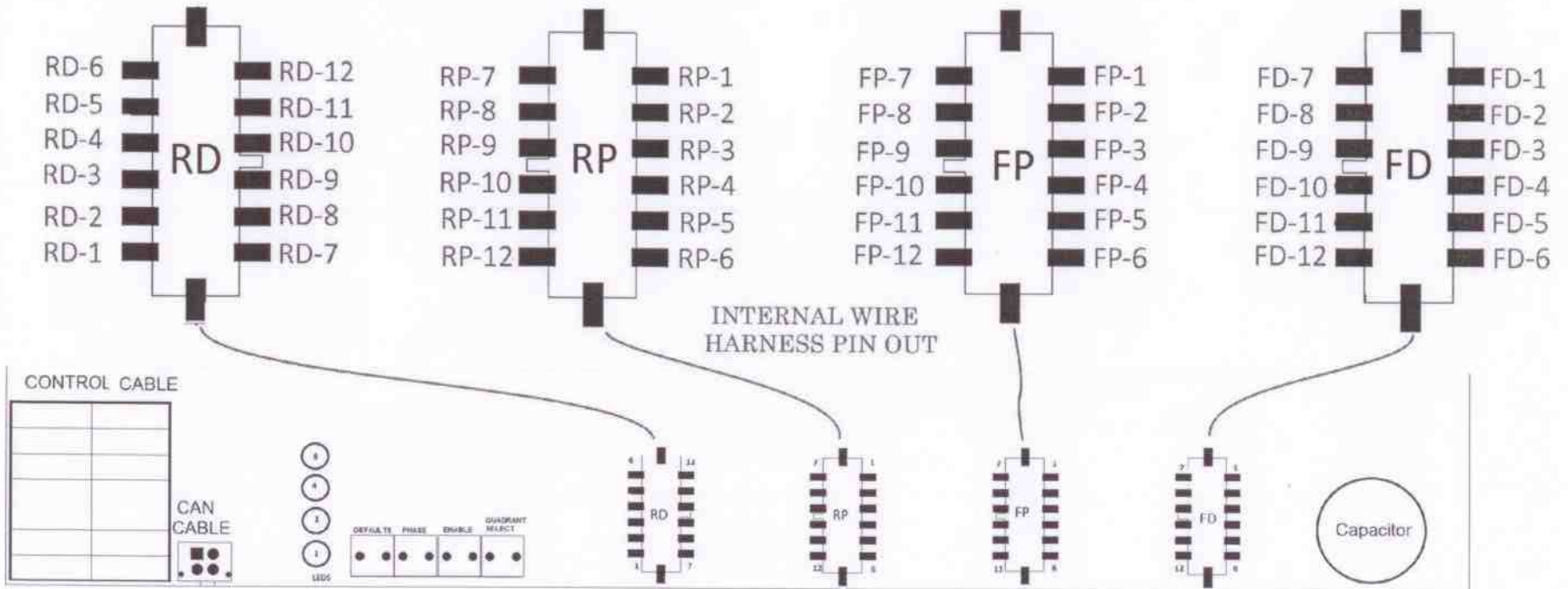


SWH-1000-51DL

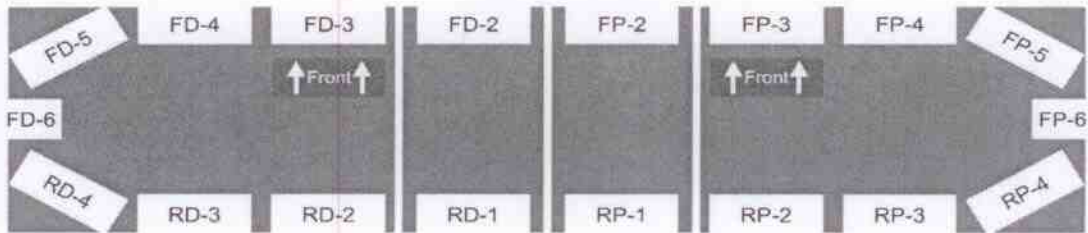
SWH-1000-51DR

SWH-1000-51DR

SWH-1000-51DL



# Bar Programming



## Function Definitions

Function	Positions		Pattern(s)
	Phase A	Phase B	
STEADY1 - Takedown / Work Lights White & Orange	FD-1, FP-1		Steady Burn
P1 - Priority 1 White & Yellow	RP-1 thru -4	RD-1 thru -4	Quadruple w/ Post Pop
P2 - Priority 2 White & Red	FP-3 thru -5, RP-1 thru -4	FD-3 thru -5, RD-1 thru -4	Quintuple
P3 - Priority 3 Brown	FP-1, FP-3, FP-5, RP-1 thru -4	FD-1, FD-3, FD-5, RD-1 thru -4	Random 2
TDL - Direct Left Yellow	RP-1 thru -3, RD-1 thru -3		Snake
TDR - Direct Right Green	RP-1 thru -3, RD-1 thru -3		Snake
STEADY3 - Alley Left Blue	FD-6		Steady Burn
STEADY4 - Alley Right Gray	FP-6		Steady Burn
OR1 - ICL Purple & White	FP-5	FD-5	Flicker
DIM - Dimmer Purple	FD-1, FD-3, FD-5, FP-1, FP-3 thru -5, RP-1 thru -4, RD-1 thru -4		Dimmer
PAT - Pattern Red & Green			Pattern Selection

Tested for Accuracy

# Phazer Cable Assembly Checklist

Initials

## Assembly / Inspection

Date: Nov 01, '19

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

- Confirm correct light components / color with order
- Check for loose/splayed wires in terminal block
- Check for pinched wires
- Check for and remove loose hardware, wire insulation, etc.
- Wipe all components clean
- Power components individually / check off appropriate color wire below
- Apply all labels (Model #, Serial #, USA, etc.)
- Run burn-in test

Order #: \_\_\_\_\_

Serial #: \_\_\_\_\_

S.O. #: \_\_\_\_\_

Start: \_\_\_\_\_ Stop: \_\_\_\_\_  
**(1 hour typical, 30 minutes minimum)**

## Packing

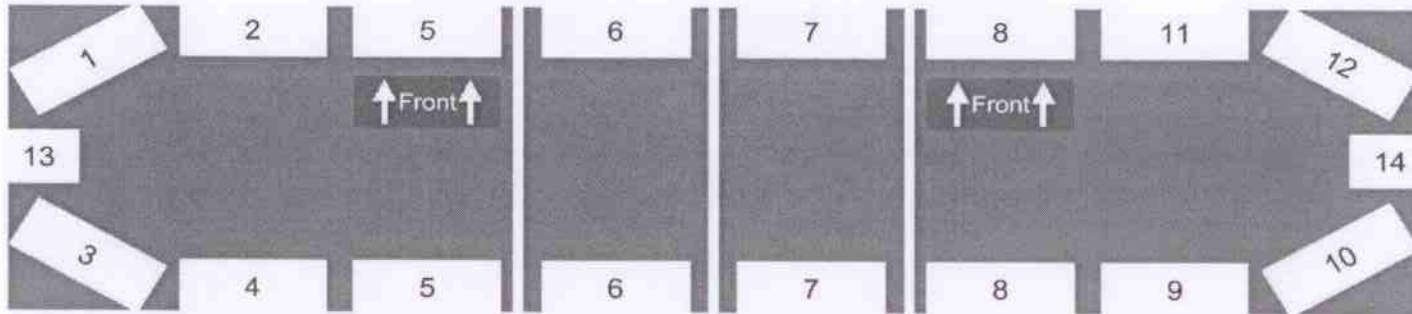
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<input type="checkbox"/>

- Polish Plates
- Add mounting kit
- Add gutter mount
- Add instruction sheet
- Add carton labels

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

- No mounting kit required
- No gutter mount required
- Add Checklist (Confirm Serial #!)
- Program Lightbar

# Output Usage Map



# Change Log

Date	Time	CPU Name	Changes Made
April 20, 2016	03:01:51	PRE-SET	RB 51_TD_Alley

# Enables List - Page 1 of 2

## White & Orange STEADY1 - Takedown / Work Lights



## White & Yellow P1 - Priority 1



## White & Red P2 - Priority 2



## Brown P3 - Priority 3



## Yellow TDL - Direct Left



# Enables List - Page 2 of 2

## Green TDR - Direct Right



## Blue STEADY3 - Alley Left



## Gray STEADY4 - Alley Right



## Purple & White OR1 - ICL



## Purple DIM - Dimmer





# Star Phazer

Model 1500 - 51"



Pos	Light Head Type and Style	Amperage
Pos 01	Blue Lineum	1.200A
Pos 02	Blue Lineum	1.200A
Pos 03	Blue Lineum	1.200A
Pos 04	Cool White Lineum	1.200A
Pos 05	Cool White Lineum	1.200A
Pos 06	Blue Lineum	1.200A
Pos 07	Blue Lineum	1.200A
Pos 08	Blue Lineum	1.200A
Pos 09	Cool White Small Lineum	0.680A

Pos	Light Head Type and Style	Amperage
Pos 10	Blue Lineum	1.200A
Pos 11	PC Amber/Blue Dual Lineum	1.200A
Pos 12	PC Amber/Blue Dual Lineum	1.200A
Pos 13	PC Amber/Blue Dual Lineum	1.200A
Pos 14	PC Amber/Blue Dual Lineum	1.200A
Pos 15	PC Amber/Blue Dual Lineum	1.200A
Pos 16	PC Amber/Blue Dual Lineum	1.200A
Pos 17	Blue Lineum	1.200A
Pos 18	Cool White Small Lineum	0.680A

Quantity	Additional Parts
1	1500 Bar Base - 51"
1	Black plastic, Permanent/Gutter mount
2	P120-1C-C Clear Coated Clear End Lens
3	P120-2C-C Clear Coated Clear Center Lens
1	Control Circuit - Dual-Color Capable
4	Center Mounting Plate(s)

Quantity	Cables
1	External Control Cable - 17"
2	Internal Control Cable - Dual Color, Left
2	Internal Control Cable - Dual Color, Right

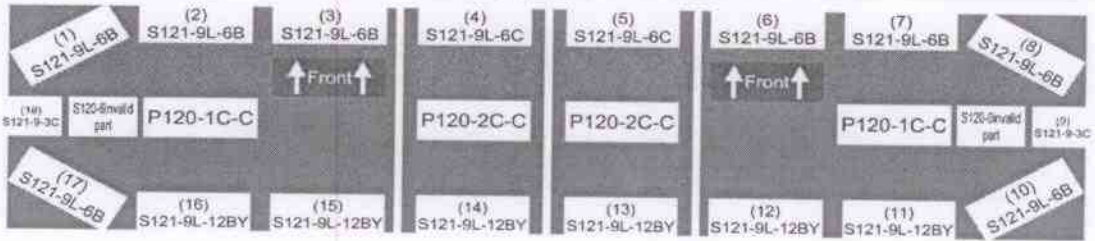
Totals: 20.560A max  
10.280A avg

## Part Number: 1500B-Single Color\_STAR162\_1910311540464

Customer 1500-Single Color	Order Number / PO 0	Order Date Nov 01, 2019
Order Notes Filename: U:/Personal_Folders/Z-Community/Custom Lightbar Design Kit/Custom Phazer/Lightbar Drawings/Quotes/1500B-Single Color_STAR162_1910311540464/1500B-Single Color_STAR162_1910311540464.pdf		

# Model 1500

## Production Copy - Bill of Materials



Quantity	Component	Description
1	1500	Bar Base - 51"
1	S8070-454-2	Control Circuit - Dual-Color Capable
1	120-39PB	Black plastic, Permanent/Gutter mount
4	S30147-184K	Center Mounting Plate(s)
8	S121-9L-6B	Blue Lineum
2	S121-9L-6C	Cool White Lineum
2	S121-9-3C	Cool White Small Lineum
6	S121-9L-12BY	PC Amber/Blue Dual Lineum

Quantity	Lenses	Description
2	P120-1C-C	Clear Coated Clear End Lens
3	P120-2C-C	Clear Coated Clear Center Lens

Quantity	Cables	Description
1	SWH-1000BAR17	External Control Cable - 17'
2	SWH-1000-51DL	Internal Control Cable - Dual Color, Left
2	SWH-1000-51DR	Internal Control Cable - Dual Color, Right



# Wiring Diagram

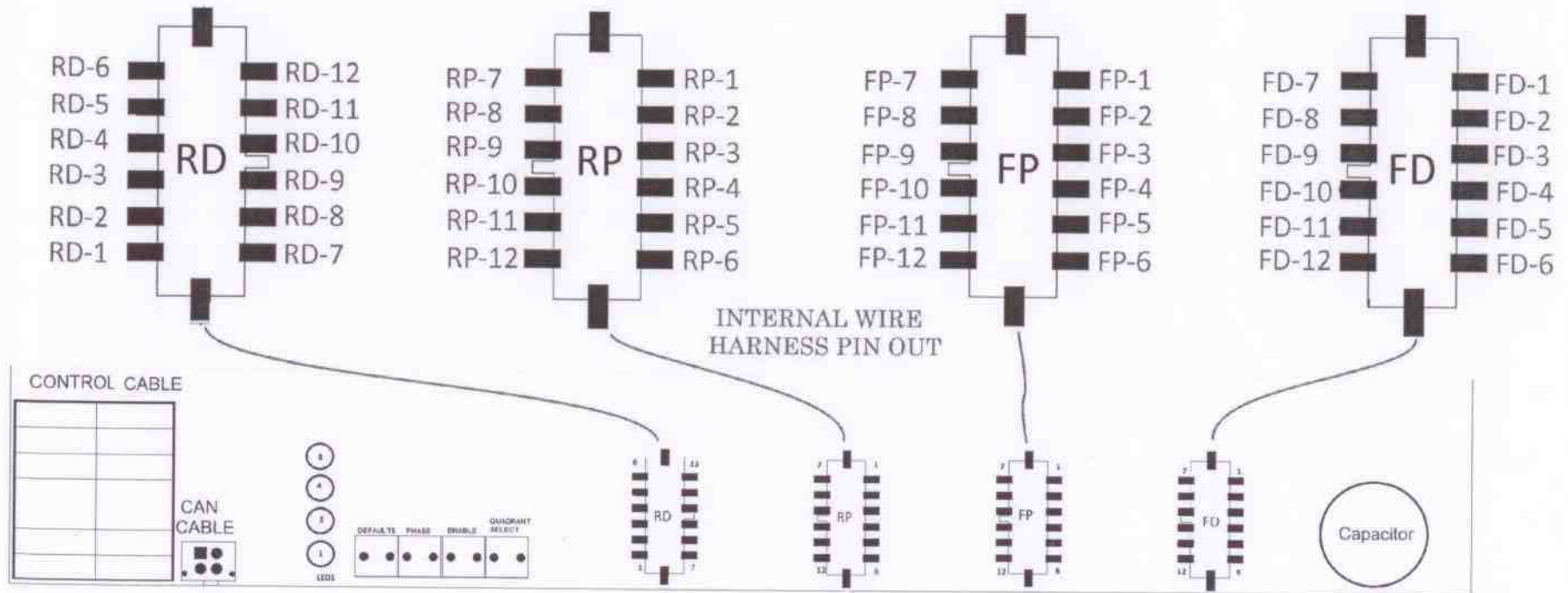


SWH-1000-51DL

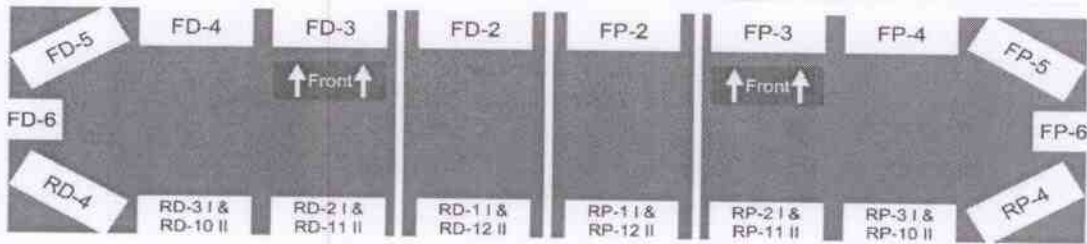
SWH-1000-51DR

SWH-1000-51DR

SWH-1000-51DL



# Bar Programming



## Function Definitions

Function	Positions		Pattern(s)
	Phase A	Phase B	
STEADY1 - Takedown / Work Lights White & Orange	FD-1, FP-1		Steady Burn
P1 - Priority 1 White & Yellow	RP-12, RD-4, RD-10 thru -11	RP-4, RP-10 thru -11, RD-12	Slow Triple
P2 - Priority 2 White & Red	FP-3 thru -5	FD-3 thru -5	Quintuple
P3 - Priority 3 Brown	FP-1, FP-3, FP-5	FD-1, FD-3, FD-5	Random 2
TDL - Direct Left Yellow	RP-1 thru -3, RD-1 thru -3		Snake
TDR - Direct Right Green	RP-1 thru -3, RD-1 thru -3		Snake
STEADY3 - Alley Left Blue	FD-6		Steady Burn
STEADY4 - Alley Right Gray	FP-6		Steady Burn
OR1 - ICL Purple & White	FP-5	FD-5	Flicker
DIM - Dimmer Purple	FD-1, FD-3, FD-5, FP-1, FP-3 thru -5, RP-1 thru -3, RD-1 thru -3		Dimmer
PAT - Pattern Red & Green			Pattern Selection

Tested for Accuracy

# Phazer Cable Assembly Checklist

Initials

## Assembly / Inspection

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

- Confirm correct light components / color with order
- Check for loose/splayed wires in terminal block
- Check for pinched wires
- Check for and remove loose hardware, wire insulation, etc.
- Wipe all components clean
- Power components individually / check off appropriate color wire below
- Apply all labels (Model #, Serial #, USA, etc.)
- Run burn-in test

Date: Nov 01, '19

Order #: \_\_\_\_\_

Serial #: \_\_\_\_\_

S.O. #: \_\_\_\_\_

Start: \_\_\_\_\_ Stop: \_\_\_\_\_  
**(1 hour typical, 30 minutes minimum)**

## Packing

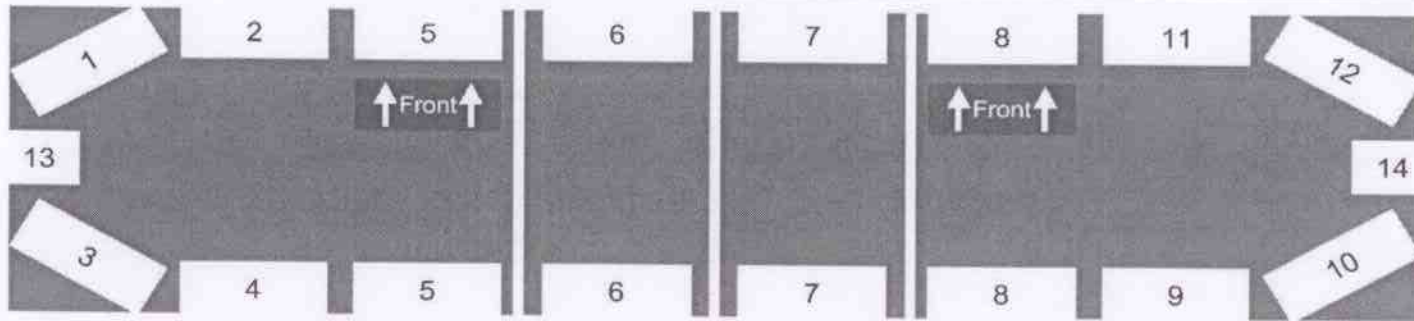
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<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

- Polish Plates
- Add mounting kit
- Add gutter mount
- Add instruction sheet
- Add carton labels

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
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- No mounting kit required
- No gutter mount required
- Add Checklist (Confirm Serial #!)
- Program Lightbar

# Output Usage Map

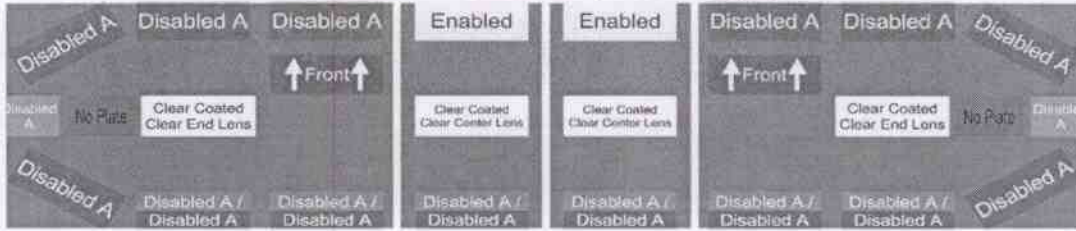


# Change Log

Date	Time	CPU Name	Changes Made
April 20, 2016	03:01:51	PRE-SET	RB 51_TD_Alley

# Enables List - Page 1 of 2

## White & Orange STEADY1 - Takedown / Work Lights



## White & Yellow P1 - Priority 1



## White & Red P2 - Priority 2



## Brown P3 - Priority 3

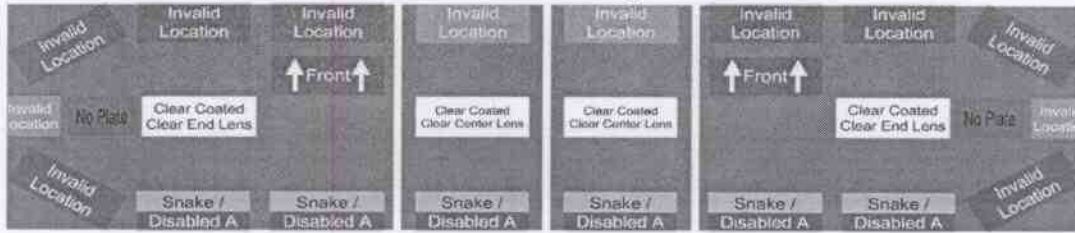


## Yellow TDL - Direct Left



# Enables List - Page 2 of 2

## Green TDR - Direct Right



## Blue STEADY3 - Alley Left



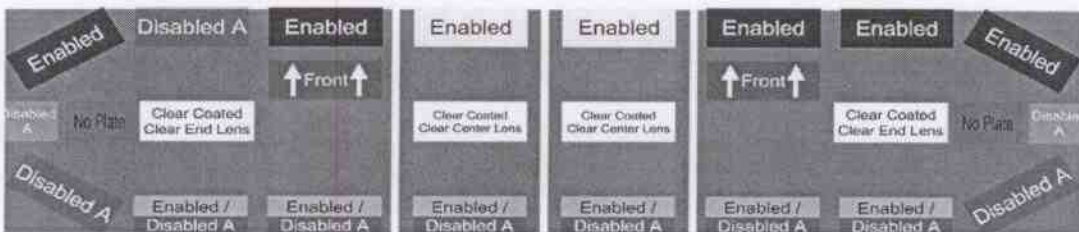
## Gray STEADY4 - Alley Right



## Purple & White OR1 - ICL



## Purple DIM - Dimmer





# STAR HEADLIGHT & LANTERN CO.

## FLEXIBLE GUTTER BRACKET



### Specifications and Features

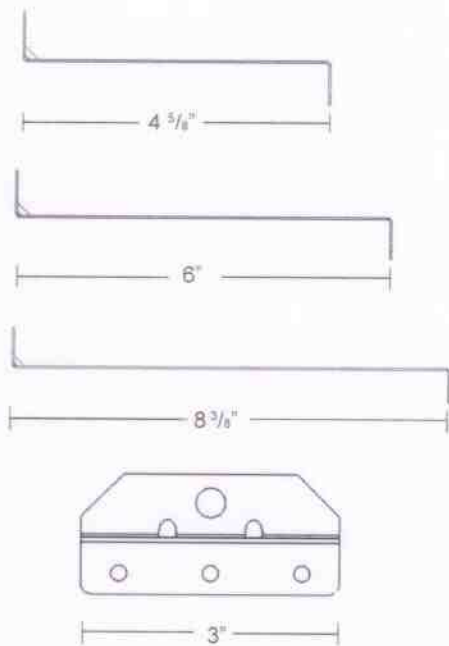
- Stock fewer models, versions replace most current kits
- Constructed of high strength spring Stainless Steel that conforms to the shape of the vehicle
- Adaptable to a wider range of vehicles including the Camry, Focus, Malibu, etc.

### Model Numbers/Descriptions:

Hard Bend Model Number	Flex Model Number
920-35	920-35FX1 4.6" Flex Bracket
920-35-C	
920-35-S105	
920-35CVLP	
920-35D	
920-35F	
920-35GM	
920-35GM5	
920-35M1	
920-35RM2	
920-35RM5	
920-35I	
920-35F9	
920-35FT	
920-35GM2	
920-35C5	
920-35F4	

Hard Bend Model Number	Flex Model Number
920-35CH	920-35FX2 6.2" Flex Bracket
920-35CTB	
920-35GM7	
920-35GM8	
920-35RM3	
920-35I6	
920-35GM6	

Hard Bend Model Number	Flex Model Number
920-35F8	920-35FX3 8.4" Flex Bracket
920-35F5	
920-35F6	
920-35F1	
920-35F2	
920-35F3	
920-35D1	



SF183 Rev - 10-7-16



Star Headlight & Lantern Co., Inc.

455 Rochester Street  
Avon, NY 14414

Phone: 585-226-9500

Fax: 888-478-2797

starheadlight.com



PROUDLY MADE IN THE U.S.A.

An ISO 9001:2008 Certified Company



# STAR HEADLIGHT & LANTERN CO.

**ULB24 STARBURST SPLIT-PHANTOM™ UNDERCOVER INTERIOR LED LIGHTBAR**



ULB24

## Specifications and Features

- Phantom™ series easily mounts under the center visor clips above the rear view mirror in 15-20 minutes
- No drilling required with vehicle specific visor brackets
- An adjustable baffle is also included to eliminate "flash back" from the window
- Interior mount LED lightbar is perfect for undercover or unmarked vehicles
- Extremely thin profile
- 35 customer selectable flash patterns via a push button switch, plus a 30 second Superburst™ all LED steady burn mode
- Twenty four high intensity, Star Generation IV LEDs
- Straddles the overhead console
- Two angled LED sections that provide intersection clearing
- 12' Cig. plug (non DLP models)
- 12' six conductor wire harness (DLP models)
- Dimensions: 1 1/16"H x 34" min. - 56" (max) x 6"D
- Voltage: 12V DC
- Weight: 2.8 lbs.
- Amp Draw: 2.5 amps (average), 5.0 amps (max), amp draw will vary depending on the color of the LED heads used and the flash pattern selected
- LED Colors: 
 

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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- Approvals: SAE Class I, (A, R, B, W) California Title 13\*, (A, R, B) (\* - does not apply to all flash patterns or colors)

## Vehicle Specific Brackets (must choose one to be included with light):

274-ULB21-CP	Chevy Caprice, 2011 - 2016
274-ULB21-IM	Chevy Impala, 2006 - 2013
274-ULB21-TA	Chevy Tahoe, 2007 - 2016, Chevy Suburban, 2007 - 2016
274-ULB21-CH	Dodge Charger, 2006 - 2010, Dodge Magnum, 2005 - 2008
274-ULB21-CH11	Dodge Charger 2011 and newer
274-ULB21-RM	Dodge Ram 1500, 2500, 3500, 2009 - 2016
274-ULB21-CV	Ford Crown Victoria, 2006 - 2011
274-ULB21-EX	Ford Explorer, 2006 - 2015, Ford Expedition, 2007 - 2013, F-150, 2004 - 2014, Ford Interceptor SUV, 2012 - 2016
274-ULB21-F1	F-150, 2015 - 2016
274-ULB21-INT	Ford Interceptor Sedan, 2012 - 2016
274-ULB21-DU	Dodge Durango, 2010 - 2018
274-ULB21-U1	Universal mount

## Model Numbers/Descriptions:

ULB24	Starburst Split-Phantom™ interior LED lightbar
ULB24-DLP	Starburst Split-Phantom™ interior LED lightbar, directional takedown pursuit

SF115 Rev B 2-25-2016

**STAR**  
WARNING  
SYSTEMS®

**STAR SIGNAL**  
VEHICLE PRODUCTS®

Star Headlight & Lantern Co., Inc.

455 Rochester Street  
Avon, NY 14414  
Phone: 585-226-9500

Fax: 888-478-2797

starheadlight.com

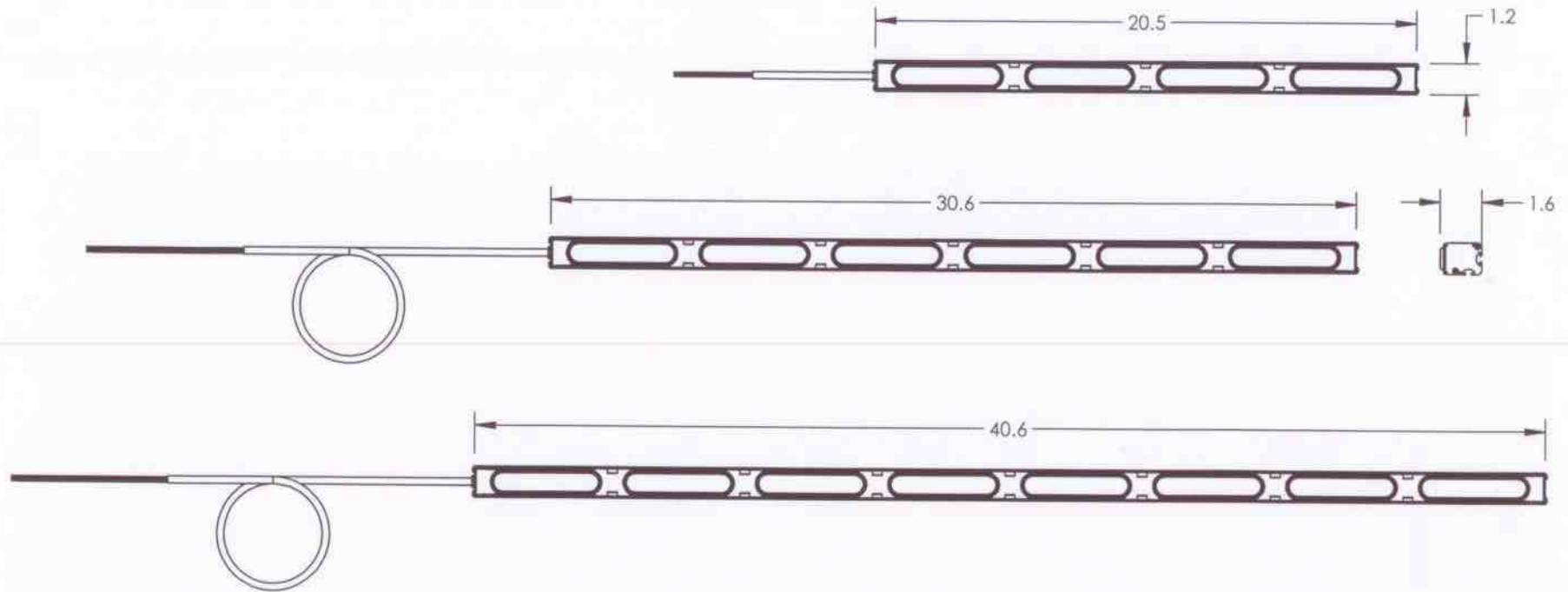
**BRADFORD**  
Vehicle Solutions Inc.



PROUDLY MADE IN THE U.S.A.  
An ISO 9001:2008 Certified Company



REV.	ECR	DESCRIPTION	DATE
-	14752	INITIAL DRAWING REQUEST	10/25/2017
A	16287	WIRE GAGE FOR 6 AND 8 HEAD QUICK STICK UPDATED	11/14/2018



**PRODUCT SPECIFICATIONS:**

- VOLTAGE: 10-16vdc
- AMP DRAW:
 

	max.	avg.
4-HEAD	4A	2A
6-HEAD	6A	3A
8-HEAD	8A	4A

- OPERATING TEMPERATURE RANGE - 30C TO +50C
- CONNECTIONS: 6-WIRE, 25FT CABLE.

**MECHANICAL:**

- EXTRUDED ALUMINUM HOUSING
- POLYCARBONATE LENS

**MOUNTING:**

- BACK AND BOTTOM SLOTS (DESIGNED FOR #10 CARRIAGE BOLT)

**APPROVALS:**

- MEETS LIGHT OUTPUT REQUIREMENTS OF TITLE 13
- SAEJ575 AUG 15 CLASS 1

CABLE WIRE FUNCTIONS (4 HEAD STICK)		
COLOR	FUNCTION	WIRE GAGE
RED	POWER/WARNING	20
WHITE	PATTERN SELECT	20
BLACK	NEUTRAL (GROUND)	20

CABLE WIRE FUNCTIONS (6 AND 8 HEAD STICK)		
COLOR	FUNCTION	WIRE GAGE
ORANGE W/RED	WARNING	22
WHITE W/BROWN	TD LEFT	22
GREEN W/YELLOW	TD RIGHT	22
GREEN W/RED	PATTERN SELECT	22
RED	IGNITION SWITCH +12VDC	18
BLACK	NEUTRAL (GROUND)	18
BARE	DRAIN/SHIELD	22

UNLESS OTHERWISE SPECIFIED	DRAWN BY: EP
DIMENSIONS ARE IN INCHES	DRAWING APPROVED BY ECR
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ANGULAR: ± 2 DEG.	
.X ± .100	
.XX ± .020	
.XXX ± .005	
.XXXX ± .001	
RoHS COMPLIANT: Yes	
MATERIAL: N/A	
FINISH: N/A	

<b>STAR HEADLIGHT &amp; LANTERN CO., INC.</b>		
455 Rochester St. Avon NY 14414 Ph: (585) 226-9500 Fax: (585) 226-2029		
MODEL: DLQS-4, DLQS-6 and DLQS-8		
TITLE: MODEL DRAWING		
DWG. NO.	DLQS	REV A
SCALE: 1:8	DO NOT SCALE FROM DRAWING	SHEET 1 OF 1



# STAR HEADLIGHT & LANTERN CO.

**VERSA STAR® LED LIGHTS**



DLX3



DLX4



DLX6F

### Specifications and Features

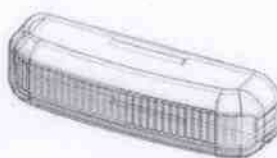
- High intensity Star Generation IV LEDs
- 25 customer selectable flash patterns, including steady-on (only 13 customer selectable flash patterns if you have one DLX3 light)
- S-Link System™ synchronizing capabilities with other Star LED units
- Versatile LED warning lights that are built with fully encapsulated circuitry
- Can be mounted just about anywhere, interior or exterior
- Size is the same between options, allowing for easy relocation or reconfiguration
- Includes the same snap on Black (standard), Chrome, or White bezel
- Optional mounting brackets are also available
- Reverse polarity protected and current limiting protection over the entire operating voltage
- DLX3, DLX4, DLX6F - designed for flush or bracket mount
- DLX6 - incorporates a heavy duty heat sink, bracket mount only
- Dimensions: 1"H x 3 5/8"W x 3/4"D (DLX3, DLX4, DLX6F), 1"H x 3 5/8"W x 1 15/16"D (DLX6)
- Voltage: DLX3 - 10-16V DC, DLX4, DLX6, DLX6F - 10-30V DC
- Amp draw: DLX3 - .29 amps, DLX4 - 0.7 amps @ 12V, 0.3 amps @ 24V, DLX6 - 0.9 amps @ 12V, 0.5 amps @ 24V DC, DLX6F - 0.9 amps
- Color combinations: DLX3 - single colors only, DLX4, DLX6 - single or split color
- Approvals  
 DLX3 - SAE Class II (Amber/White), SAE Class I (Blue/Red)\*  
 DLX3H-A - J595 SAE Class I, CA Title 13 - Amber only  
 DLX4 - J595 SAE Class I (Amber, White, Blue, Red) California Title 13 (Blue/Red)  
 DLX6, DLX6F - SAE Class I, California Title 13  
 \* approvals only apply when properly configured

### Model Numbers/Descriptions:

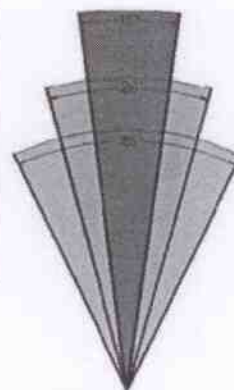
DLX3	Three array LED head with Black bezel
DLX3H-A	Three array high power LED head with Black bezel (only Amber)
DLX4	Four array LED head with Black bezel
DLX4C	Four array LED head with Chrome bezel
DLX6	Six array LED head with Black bezel
DLX6C	Six array LED head with Chrome bezel
DLX6F	Six array LED head with Black bezel, flush mount
136-4	Optic lens increases spread of light 20°
136-6	Optic lens increases spread of light 35°



136-4 (20°)



136-6 (35°)



Optic spread

SF120 Rev E 2-19-2016

**STAR**  
WARNING  
SYSTEMS

**STAR SIGNAL**  
VEHICLE PRODUCTS

Star Headlight & Lantern Co., Inc.

455 Rochester Street  
Avon, NY 14414

Phone: 585-226-9500

Fax: 888-478-2797

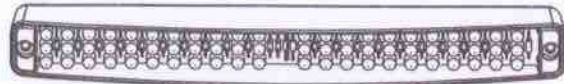
starheadlight.com

**BRADFORD**  
Vehicle Solutions Inc.



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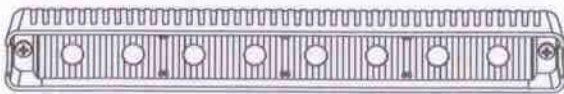
REV.	ECR	DESCRIPTION	DATE
-	12513	INITIAL DRAWING REQUEST	3/19/15



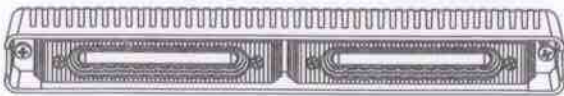
ULB9 & ULB9-1 \*



ULB9S & ULB9S-1 \*



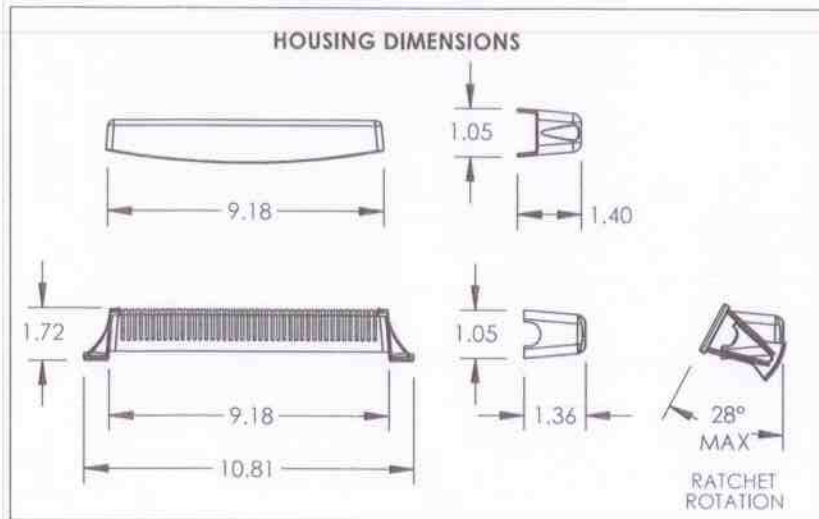
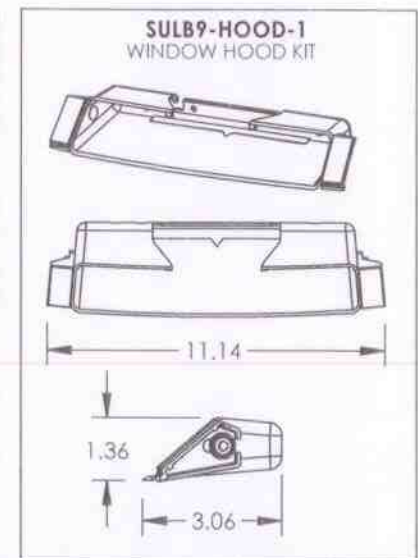
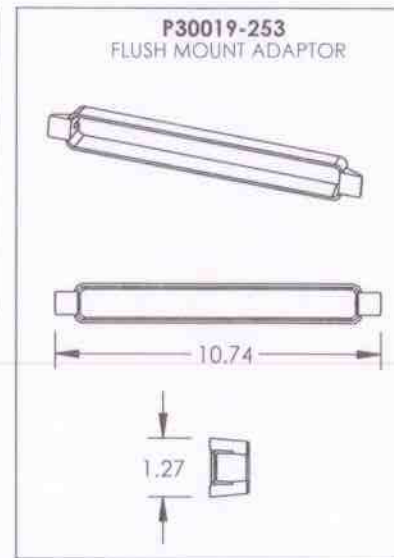
ULB9E & ULB9E-1 \*



ULB9LDC & ULB9LDC-1 \*

-- CABLE WIRE FUNCTIONS (-I MODELS) --  
 BLACK - (20AWG) (-) GROUND  
 RED - (20AWG) (+) POWER  
 GREEN - (20AWG) PATTERN SELECT  
 WHITE - (20AWG) SYNC

SERIES	INCLUDED WITH LIGHT (X = INCLUDED O = OPTIONAL)			AMP DRAW
	274-ULB9BKT	P30019-253	SULB9-HOOD-1	
ULB9	X	O	O	0.5
ULB9S	O	-	X	0.5
ULB9E	O	-	X	0.3
ULB9LDC	O	-	X	0.6
VOLTAGE 10-16 vdc ALL MODELS				
TEMPERATURE RANGE ALL MODELS: -30C TO +50C				
* MODELS ENDING "-1" HAVE 12' CABLE, OTHERS ARE 12" LONG CIG PLUG				



UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS ARE IN INCHES

TOLERANCES:  
 ANGULAR: ± 2 DEG.  
 .X ± .100  
 .XX ± .020  
 .XXX ± .005  
 .XXXX ± .001

RoHS COMPLIANT: NO

MATERIAL: NA

FINISH: NA

DRAWN BY: SWN  
 DRAWING APPROVED BY ECR

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**STAR HEADLIGHT & LANTERN CO., INC.**

455 Rochester St. Avon NY 14414  
 Ph:(585) 226-9500 Fax: (585) 226-2029

MODEL: ULB9, ULB9S, ULB9E, ULB9LDC

TITLE:

ULB9 SERIES MODEL DRAWING

DWG. NO.

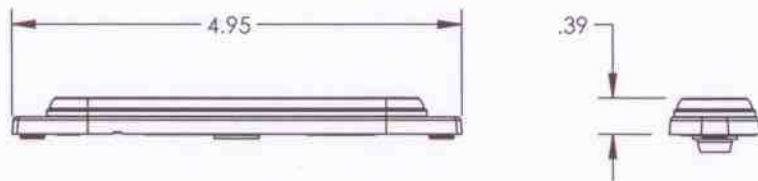
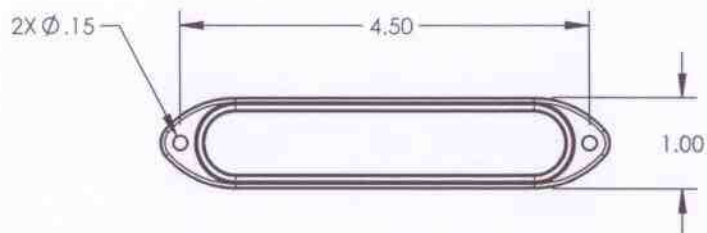
ULB9 SERIES

REV  
 -

SCALE: 1:8

DO NOT SCALE FROM DRAWING

SHEET 1 OF 1



REV.	ECR	DESCRIPTION	DATE
-	16232	INITIAL DRAWING REQUEST	10/29/18
A	16611	NOW FORML REV:001	5/16/2019

**SPECIFICATIONS:**

Input Voltage Range: 9-32VDC  
 Current Draw: 0.8A ave., 1.5A Peak @12.8VDC  
 Operating Temperature Range: -40C to 55C  
 Connections: 8 inch (min.) wires exiting the unit.  
 Permanent Mounting: 2 Hole Pattern 4.5"

**Materials:**

Module Lens: Polycarbonate  
 Mounting Hardware: Stainless Steel  
 Heat Sink: Die cast Aluminum  
 Mounting Gasket: EPDM Foam Rubber

**Connections:**

22 Gage Yellow with Green VDC  
 22 Gage Yellow with Black VDC  
 22 Gage Yellow with Red VDC  
 22 Gage Black Wire: Negative VDC  
 22 Gage Green Wire: Pattern Select  
 22 Gage White: Synchronization

Model Colors: See CHART 1

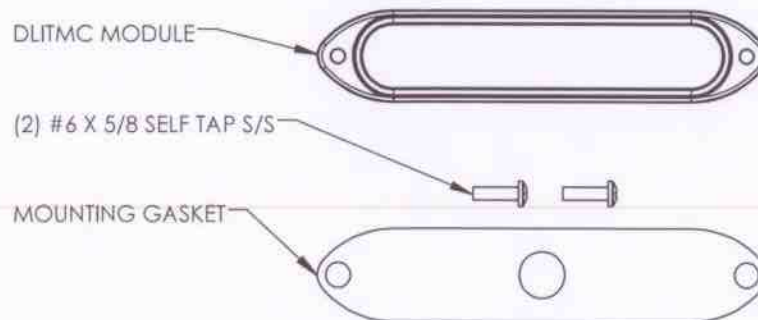
CHART 1

MODEL	CLASSIFICATION
DLITMC-RBW	SAE J595 CLASS I
DLITMC-RBA	SAE J595 CLASS I
DLITMC-RAW	SAE J595 CLASS I
DLITMC-ABW	SAE J595 CLASS I
DLITMC-AGW	+SAE J595 CLASS I
DLITMC-AW	SAE J595 CLASS I

+ FOR AMBER AND WHITE ONLY

**MODEL COLOR DEFINITIONS:**

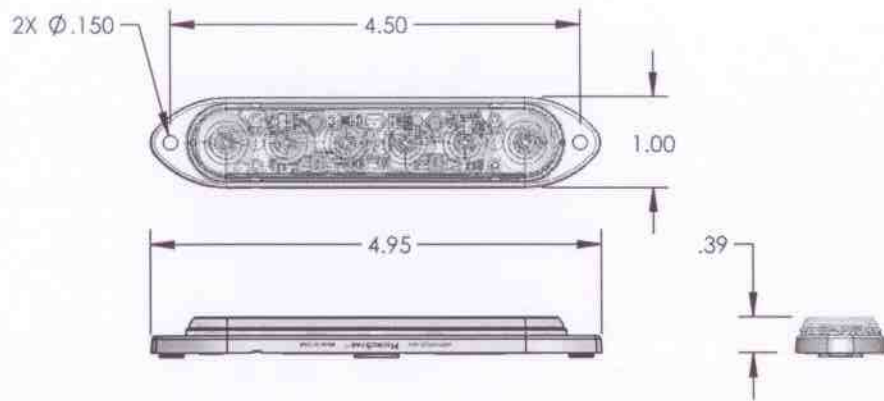
A: AMBER  
 B: BLUE  
 G: GREEN  
 R: RED  
 W: WHITE



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TOLERANCES: ANGULAR: ± 2 DEG.	DRAWING APPROVED BY ECR
.X ± .100 .XX ± .020 .XXX ± .005 .XXXX ± .001	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF STAR HEADLIGHT & LANTERN CO., INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF STAR HEADLIGHT & LANTERN CO., INC. IS STRICTLY PROHIBITED.
ROHS COMPLIANT: Yes	
MATERIAL: N/A	
FINISH: N/A	

STAR HEADLIGHT & LANTERN CO., INC. 455 Rochester St. Avon NY 14414 Ph:(585) 226-9500 Fax: (585) 226-2029
MODEL: DLITMC-*** REV:001
TITLE: MODEL DRAWING
DWG. NO. DLITMC REV 001
SCALE: 1:2 DO NOT SCALE FROM DRAWING

REV A
SHEET 1 OF 1



REV.	ECR	DESCRIPTION	DATE
-	13246	INITIAL DRAWING REQUEST	02/08/16
A	13492	UPDATE CHART 1 SAE & TITLE 13 CLASSIFICATIONS	4/1/2016
B	14925	UPDATE ECE, REMOVED "EXPECTED"	1/19/2018

**SPECIFICATIONS:**

Typical Input Voltage Range: 10-30VDC @0.55A  
 Operating Temperature Range: -40C to 55C  
 Connections: 8 inch (min.) wires exiting the unit.  
 Permanent Mounting: 2 Hole Pattern 4.5"

**Materials:**

Module Lens: Polycarbonate  
 Mounting Hardware: Stainless Steel  
 Heat Sink: Die cast Aluminum  
 Mounting Gasket: EPDM Foam Rubber

**Connections:**

22 Gage Red Wire: Positive VDC  
 22 Gage Black Wire: Negative VDC  
 22 Gage Green Wire: Pattern Select  
 22 Gage White: Synchronization

Model Colors: See CHART 1

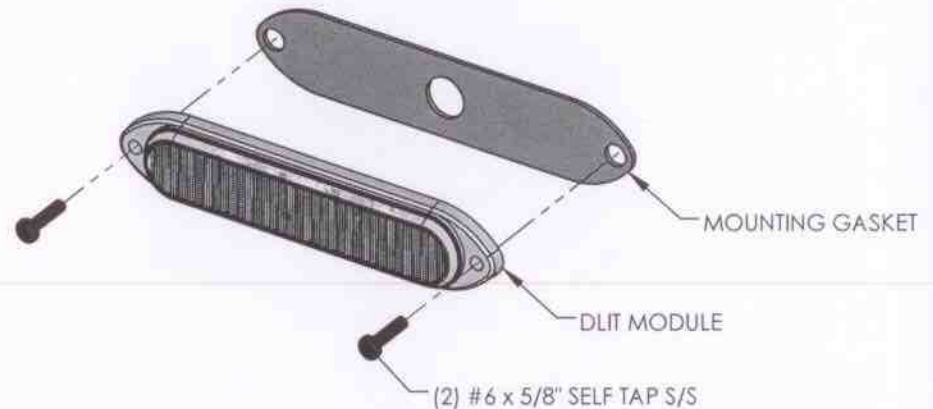
**MODEL COLOR DEFINITIONS:**

Y: AMBER  
 B: BLUE  
 G: GREEN  
 R: RED  
 W: COOL WHITE



CHART 1

MODEL	VOLTAGE	CURRENT	CLASSIFICATION	CLASSIFICATION	CLASSIFICATION
DLITE-YY	10-30VDC	0.55A	ECE REG. 65	SAE CLASS I	ECE REG 10
DLITE-YB	10-30VDC	0.55A	N/A	SAE CLASS II	ECE REG 10
DLITE-YG	10-30VDC	0.55A	N/A	N/A	ECE REG 10
DLITE-YR	10-30VDC	.055A	N/A	SAE CLASS II	ECE REG 10
DLITE-YW	10-30VDC	0.55A	N/A	SAE CLASS II	ECE REG 10
DLITE-BB	10-30VDC	0.55A	ECE REG. 65	SAE CLASS I	ECE REG 10
DLITE-BW	10-30VDC	0.55A	N/A	SAE CLASS II	ECE REG 10
DLITE-GG	10-30VDC	0.55A	N/A	N/A	ECE REG 10
DLITE-GW	10-30VDC	0.55A	N/A	N/A	ECE REG 10
DLITE-RB	10-30VDC	0.55A	N/A	SAE CLASS I	ECE REG 10
DLITE-RR	10-30VDC	0.55A	ECE REG. 65	SAE CLASS I	ECE REG 10
DLITE-RW	10-30VDC	0.55A	N/A	SAE CLASS II	ECE REG 10
DLITE-WW	10-30VDC	0.55A	N/A	SAE CLASS I	ECE REG 10
DLITS-YY	10-30VDC	0.55A	SAE CLASS I	CA TITLE 13	ECE REG 10
DLITS-YB	10-30VDC	0.55A	SAE CLASS I	CA TITLE 13	ECE REG 10
DLITS-YG	10-30VDC	0.55A	N/A	N/A	ECE REG 10
DLITS-YR	10-30VDC	0.55A	SAE CLASS I	CA TITLE 13	ECE REG 10
DLITS-YW	10-30VDC	0.55A	SAE CLASS I	N/A	ECE REG 10
DLITS-BB	10-30VDC	0.55A	SAE CLASS I	CA TITLE 13	ECE REG 10
DLITS-BW	10-30VDC	0.55A	SAE CLASS I	N/A	ECE REG 10
DLITS-GG	10-30VDC	0.55A	N/A	N/A	ECE REG 10
DLITS-GW	10-30VDC	0.55A	N/A	N/A	ECE REG 10
DLITS-RB	10-30VDC	0.55A	SAE CLASS I	CA TITLE 13	ECE REG 10
DLITS-RR	10-30VDC	0.55A	SAE CLASS I	CA TITLE 13	ECE REG 10
DLITS-RW	10-30VDC	0.55A	SAE CLASS I	N/A	ECE REG 10
DLITS-WW	10-30VDC	0.55A	SAE CLASS I	N/A	ECE REG 10



**UNLESS OTHERWISE SPECIFIED**  
 DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 ANGULAR: ± 2 DEG.  
 .X ± .100  
 .XX ± .020  
 .XXX ± .005  
 .XXXX ± .001

ROHS COMPLIANT: Yes

MATERIAL:  
 N/A  
 FINISH:  
 N/A

DRAWN BY: MD  
 DRAWING APPROVED BY ECR

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**STAR HEADLIGHT & LANTERN CO., INC.**  
 455 Rochester St. Avon NY 14414  
 Ph:(585) 226-9500 Fax: (585) 226-2029

MODEL: DLITE-\*\* DLITS-\*\*  
 TITLE: MODEL DRAWING

DWG. NO. DLIT REV B  
 SCALE: 1:2 DO NOT SCALE FROM DRAWING SHEET 1 OF 1



# STAR HEADLIGHT & LANTERN CO.

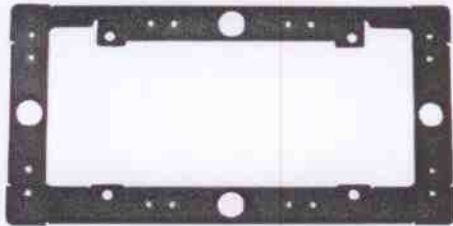
**MICROSTAR™ LED LIGHT**



DLITE



50° Spread



274-DLIT-LPB4



DLITS



15° Spread



274-DLIT-RL



274-DLIT-U

### Specifications and Features

- Ultra low profile
- Six super bright Star Generation V LEDs
- 12 different selectable flash patterns in either of two phases, plus steady-on
- Robust design, die cast aluminium base
- Endless mounting possibilities
- Single and split color models
- Current limit protection over entire operating voltage
- Standard four wire hook-up
- S-Link System™ synchronizing capabilities with other Star LED units

- Optional chrome or white bezels available
- Dimensions: 1"H x 4 3/16"W x 25/64"D
- Voltage: 10-30V DC
- Amp draw: 0.75 amps
- Color availability:
- Split color:

- Approvals: SAE Class I, CA Title 13 available where applicable
- \* approvals only apply when properly configured

### Model Numbers/Descriptions:

DLITE-**	Six array LED head, wide spread optic
DLITS-**	Six array LED head, spot spread optic
274-DLIT-RL	License plate bracket for two DLIT's
274-DLIT-LPB4	License plate bracket for four DLIT's
274-DLIT-U	Universal bracket for DLIT's
P30019-289P	Chrome bezel add on
P30019-289W	White bezel add on

SF172 Rev E 02-22-2019



Star Headlight & Lantern Co., Inc.

455 Rochester Street  
Avon, NY 14414

Phone: 585-226-9500

Fax: 888-478-2797

starheadlight.com



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# STAR HEADLIGHT & LANTERN CO.

## VERSAR STAR® OPTIONAL BASKETS



274-DLX4-6-T  
Trunk mounting



274-DLX4-6-45  
45° angle mounting



274-DLX4-6-U  
L-bracket for  
universal mounting



274-DLX4-6-W  
Window mounting



274-DLX4-6-2X1  
L-bracket for mounting two  
Versa Star® vertically



274-DLX4-6-1X2  
L-bracket for mounting  
two Versa Star® horizontally



274-DLX4-6-H  
Headliner bracket for  
DLX4-HK, DLX4-HK2, DLX6-HK,  
and DLX6-HK2 series with a  
flashback hood



BB274-DLX-VC  
Visor clip mounting



BB274-DLX4-6-SLP  
Pickup rear window mounting



BB274-DLX6-BAIL  
Bail bracket mounting



274-DLX4-6-RL  
License plate mounting



BB274-DLX4-6-RHK  
Pickup rear window mount  
using hanger clips



BB274-DLX46LPM  
Adjustable license plate mounting



Star Headlight & Lantern Co., Inc.

455 Rochester Street  
Avon, NY 14414

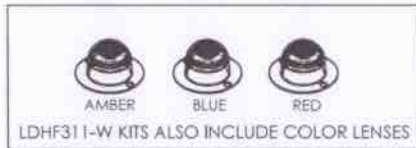
Phone: 585-226-9500

Fax: 888-478-2797

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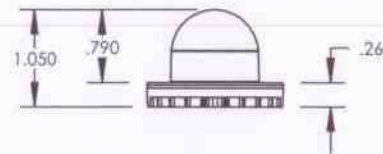
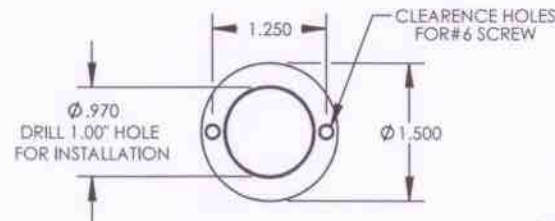
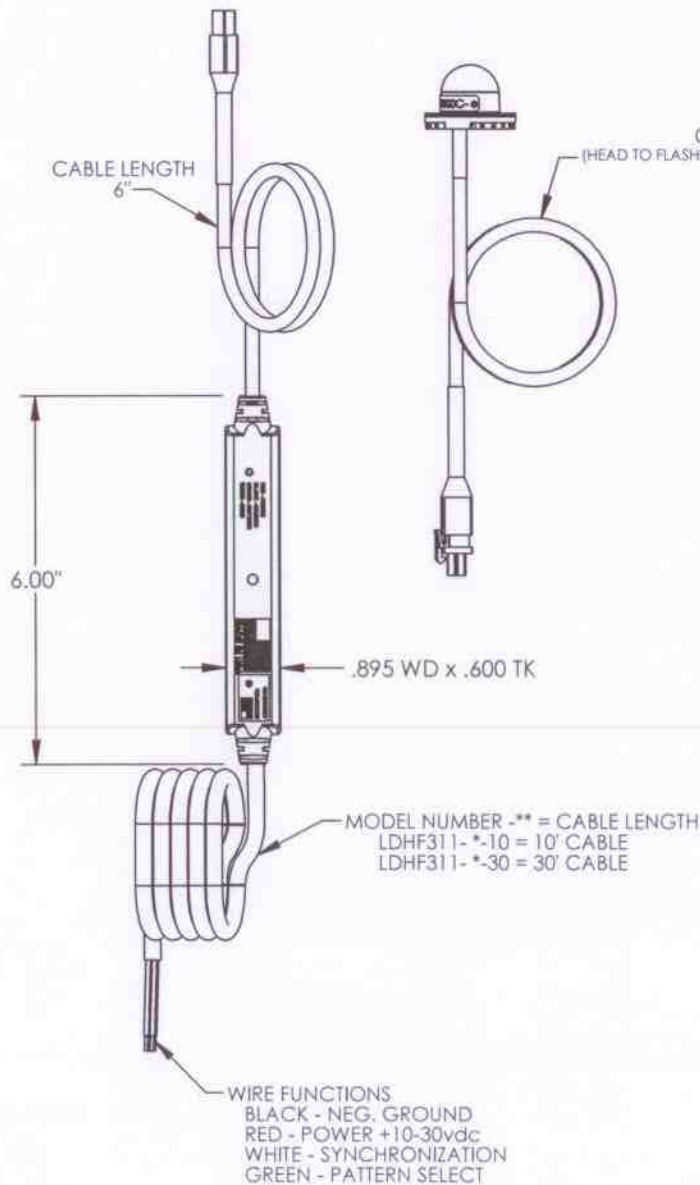


REV.	ECR	DESCRIPTION	DATE
-	12178	INITIAL DRAWING REQUEST	8/21/14

STANDARD MODELS AVAILABLE	
MODEL	DESCRIPTION
LDHF311-A-**	SPHERICAL LED HEAD w/INLINE FLASHER - AMBER
LDHF311-B-**	SPHERICAL LED HEAD w/INLINE FLASHER - BLUE
LDHF311-G-**	SPHERICAL LED HEAD w/INLINE FLASHER - GREEN
LDHF311-R-**	SPHERICAL LED HEAD w/INLINE FLASHER - RED
LDHF311-W-**	SPHERICAL LED HEAD w/INLINE FLASHER- WHITE w/3 colored lenses

\*\* = CABLE LENGTH  
 -10 = 10' CABLE  
 -30 = 30' CABLE

CABLE EXTENSIONS	
CABLE P/N	LENGTH
SWH-L4	4'
SWH-L8	8'
SWH-L15	15'
SWH-L20	20'
SWH-L25	25'
SWH-L30	30'
SWH-L35	35'



- TYPICAL PRODUCT INFORMATION --**
- ELECTRICAL
    - VOLTAGE: 10 - 30vdc
    - AMP DRAW: 0.5 MAX PER HEAD
    - SYNCHRONIZABLE WITH OTHER STAR LED UNITS
    - 25 SELECTABLE FLASH PATTERNS
  - MECHANICAL:
    - BASE - NICKEL PLATED ALUMINUM
    - POLYCARBONATE LENS
    - CUSTOMER CHANGABLE LENSES

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGULAR: ± 2 DEG. X ± .100 XX ± .020 XXX ± .005 .XXXX ± .001	DRAWN BY: SWN	STAR HEADLIGHT & LANTERN CO., INC. 455 Rochester St. Avon NY 14414 Ph:(585) 226-9500 Fax: (585) 226-2029
	DRAWING APPROVED BY ECR	
RoHS COMPLIANT	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF STAR HEADLIGHT & LANTERN CO., INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF STAR HEADLIGHT & LANTERN CO., INC. IS STRICTLY PROHIBITED.	MODEL: LDHF311
MATERIAL: NONE		TITLE: LDHF311 MODEL DRAWING
FINISH: NONE		DWG. NO. LDHF311 REV -
		SCALE: 1:12 DO NOT SCALE FROM DRAWING SHEET 1 OF 1



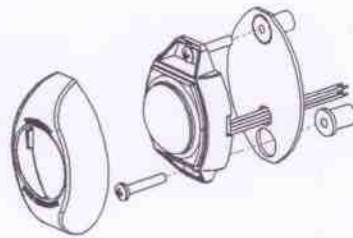


# STAR HEADLIGHT & LANTERN CO.

**DLS306 LED LIGHT**



DLS306



**New Steady-Burn Override**



274-DLS306-U  
sold separately

### Specifications and Features

- Maximum light output in a minimum package
- Six Star Generation IV LEDs
- 12 customer selectable flash patterns, in two phases, plus steady-on
- 13 customer selectable flash patterns if you have one DLS306 light
- New redesign allows steady burn activation through an independent wire
- Programmable modes include:
  - Dual-color flashing mode and steady side overrides flashing (default)
  - Dual-color flashing and opposite side continues flashing when steady side activated
  - One color for flashing mode and other color for steady mode
- Amber now 2X brighter than before
- Only options with white will have steady burn override
- S-Link System™ synchronizing capabilities other Star LED units
- Circuitry is fully encapsulated within the housing for vibration and water resistance
- Specially engineered lens with diffusing optics for wider coverage
- Versatile design allows this light to be mounted in just about any location and in any direction
- Completely self-contained - no separate flasher needed
- Interior/exterior mount
- Kit includes a snap-on polycarbonate bezel that hides screw heads and provides for a clean install screw heads for a clean install
- Black bezel standard. Optional Chrome or White bezels available
- Dimensions: 1 7/8" H X 2 9/16" W X 7/8" D
- Voltage: 10-30V DC
- Amp draw: 1.2 amps (max)
- Color combinations:
 

■	■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■	■

### Model Numbers/Descriptions:

DLS306	Mini-Comet™, Black bezel
DLS306C	Mini-Comet™, Chrome bezel

SF143 Rev C 10-29-2018



Star Headlight & Lantern Co., Inc.

455 Rochester Street  
Avon, NY 14414  
Phone: 585-226-9500  
Fax: 888-478-2797  
starheadlight.com

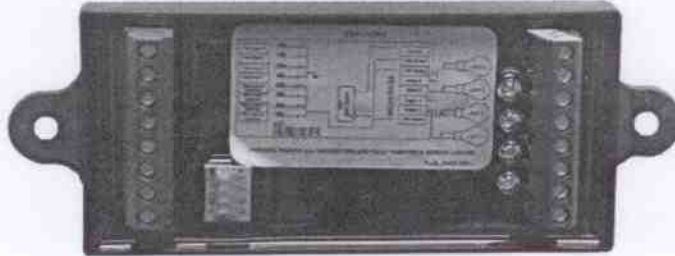


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# STAR HEADLIGHT & LANTERN CO.

**BBK-FDCH**



## Specifications and Features

- Interface control module provides quick and easy connections to Ford Interceptor and Dodge Charger Police package steering wheel push buttons
- Can be used in conjunction with a siren that has light control functionality such that the connected devices can be controlled by either the steering wheel controls "or" the siren controls
- No output fuses required
- Programmable "Progressive" lighting on PB4
- Siren inputs are feedback protected (i.e. steering wheel activation of that output does NOT send power back to the siren input)
- Four outputs (lights, horns, etc.)
- 10A per output
- See below for Specifications

## Model Numbers/Descriptions:

BBK-FDCH	Steering Wheel interface control module
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SF140 Rev A 2-13-2017



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# STAR HEADLIGHT & LANTERN

## DLQS QUICK STICK SERIES



DLQS-4



DLQS-6



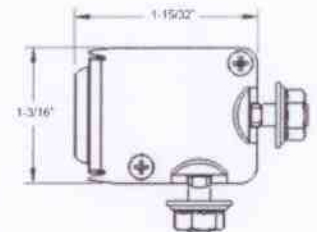
DLQS3-8



DLQS-76

### Specifications and Features

- Weatherproof interior or exterior mount
- 34 customer selectable warning flash patterns plus 5 phase options
- 12 traffic director patterns (6 and 8 head versions only)
- DLQS-4 comes with a 2' three-wire cable (power, ground, pattern select)
- DLQS-6 (8) & DLQS3-8 comes with a 25' six wire cable, (power, ground, program wire, left enable, right enable, warn enable, center-out = L + R)
- Bottom and rear T-slots allow for easy mounting via industry standard #10 carriage bolt
- Front load assembly design allows quick and easy swap of heads
- Built-in Traffic Director function available (six head and eight head models only)
- Sealed DLITS heads for maximum reliability
- Shipped standard with L-brackets
- Dual Warn option (8 head module only): Programmable to allow the end heads to flash a warning pattern, while the center 6 heads flash a traffic director pattern
- Ideal for front push bumpers, rear SUV or truck windows, headache rack, and running lights
- Dimensions:
  - (DLQS3-8) 25 1/2" L x 1 15/32" W x 1 3/16" H
  - (DLQS-4) 20 1/2" L x 1 15/32" W x 1 3/16" H
  - (DLQS-6) 30 39/64" L x 1 15/32" W x 1 3/16" H
  - (DLQS-8) 40 39/64" L x 1 15/32" W x 1 3/16" H
  - (DLQS-60) 60" L x 1 15/32" W x 1 3/16" H
  - (DLQS-76) 76" L x 1 15/32" W x 1 3/16" H
- Voltage: 10-16V DC
- Amp draw: 2 amps average (4 head) 3 amps average (6 head) 4 amps average
- Color combinations:
- Approvals: SAE Class I (A,B,C,R DLITS or



### Model Numbers/Descriptions:

DLQS3-8	25" Eight LED heads, with traffic director function
DLQS-4	20.5" Four LED heads
DLQS-6	30.6" Six LED heads, with traffic director function
DLQS-8	40.6" Eight LED heads, with traffic director function
DLQS-60	60" Six LED heads, with traffic director function
DLQS-76	76" Eight LED heads, with traffic director function



# STAR HEADLIGHT & LANTERN CO.

**LCS800, LCS850**



LCS850-8

LCS800-008

## Specifications and Features

- Trunk mount amplifier with remote control head
- Wail, Yelp, Air Horn, Phaser, Manual, and Two-Tone
- Eight light functions
- Four position progressive slide switch with LED indicators
- Integrated public address microphone
- Dual color backlighting on keypad (Amber and Red)
- Park kill input, auxiliary input
- Positive or negative switching for auxiliary and park kill inputs
- Replaceable jumpers and dip switches for option selection
- Universal mounting bracket or flange mount available
- Drives one or two 100 watt speakers
- LED speaker diagnostics
- High and low voltage shut down protection
- Self-resetting circuit protection against speaker shorts
- Ships complete with positive locking connector, mic. clip, mounting bracket, hardware, thirty standard function replacement labels, RFI filter, and instructions
- Dimensions **LCS800** and **LCS850**: Control head with flange: 4 11/64"H x 7 11/16"W x 7/8"D, Control head without flange: 3 3/16"H x 6 11/16"W x 7/8"D, Amp: 2 1/2"H x 7"W x 7 3/8"D (plus 3/4" flange on each side)
- Weight: **LCS800, LCS800-F** (with flange) - 8.5 lbs  
**LCS850, LCS850-F** (with flange) - 9.5 lbs
- Output: 100 or 200 watts (one or two speakers)
- Input: 10-16V DC
- Siren tone frequency: 675-1633Hz
- Amp Draw: 8 amps (per speaker)
- Approvals: Exceeds Acoustical and Environmental requirements of SAE J1849, CA Title 13 (when used with SVP driver(s) and approved tones)

## Model Numbers/Descriptions:

LCS800-008	Siren with light control
LCS800-8F	Siren with light control, with flange
LCS850-8	Siren with light and arrow stick controller
LCS850-8F	Siren with light and arrow stick controller, with flange

SF049 Rev C 4-22-2017

**STAR**  
WARNING  
SYSTEMS

**STAR SIGNAL**  
VEHICLE PRODUCTS

Star Headlight & Lantern Co., Inc.

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Avon, NY 14414

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**BRADFORD**  
Vehicle Solutions Inc.



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# STAR HEADLIGHT & LANTERN CO.

LCS880-016

## New & Improved All push button control head



LCS880-016



### Specifications and Features

- Trunk mount amplifier with remote control head
- Air Horn, Manual, cycle through Wail, Yelp, Phaser (or two tone)
- Up to four push button 20 amp lighting outputs & three progressive push button outputs
- Eight light functions
- Integrated public address microphone
- Dual color backlighting on keypad (Amber and Red)
- **Traffic Director Compatibility:**  
By default the S4 button will cycle through the Left, Right, and Center-Out patterns of compatible Traffic Directors. Optionally, the S3 button can be programmed to activate the Warn pattern of your compatible Traffic Director. (note: compatible with Star Phazer, ULB48, ULB38, DLQS or dummy head sticks in conjunction with the TDC-3 flasher)
- Positive or negative switching for auxiliary and park kill inputs
- LED speaker diagnostics
- High and low voltage shut down protection
- Self-resetting circuit protection against speaker shorts
- Dimensions: Control head: 6"H x 2 1/2" W x 15/16"D, Amp: 2 1/2"H x 7"W x 7 3/8"D
- Weight: 8.5 lbs.
- Output: 100 or 200 watts (one or two speakers)
- Input: 10-16V DC
- Siren tone frequency: 675-1633Hz
- Amp Draw: 8 amps (per speaker)
- Approvals: Exceeds Acoustical and Environmental requirements of SAE J1849, CA Title 13 (when used with SVP driver(s) and approved tones)

### Model Numbers/Descriptions:

LCS880-016 Full feature handheld siren with light controls, traffic director function, cradle, siren amplifier

SF186 Rev - 4-21-2017



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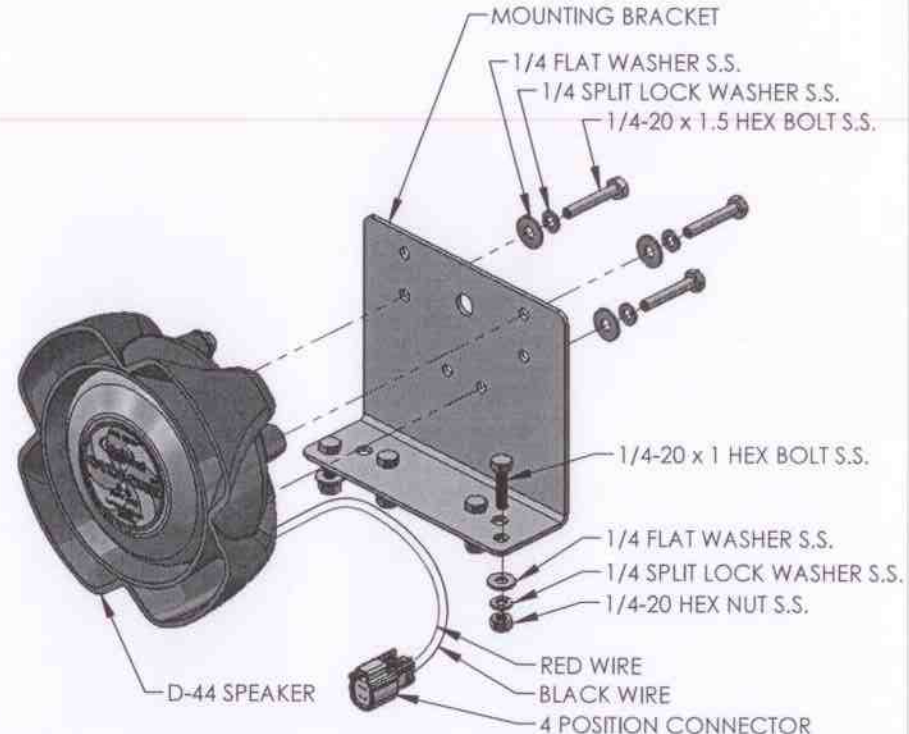
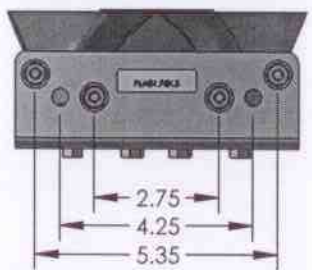
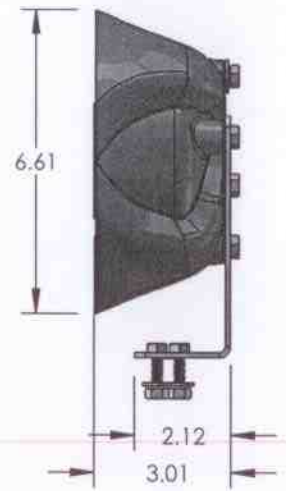
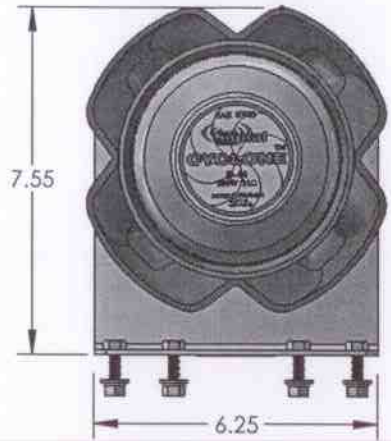
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REV.	ECR	DESCRIPTION	DATE
-	11167	INITIAL DRAWING REQUEST	05/02/2013



**SPECIFICATIONS:**  
 Power 100W.  
 Impedance 11ohms.  
 Connection: 3 FT harness exiting the unit.  
 Mounting: 6 Holes, Patterns 2.75", 4.25" and 5.35"

**MATERIALS:**  
 Speaker Housing: Glass Filled Nylon.  
 Mounting Bracket: 11 gage CRS.  
 Mounting Hardware: Stainless Steel.

**CONNECTIONS:**  
 18 Gage Red Wire.  
 18 Gage Black Wire.  
 4 Position Connector.

**APPROVALS:** (When used with SVP Sirens)  
 SAE J1849  
 CA Title 13

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES:	DRAWN BY: EP	<b>STAR HEADLIGHT &amp; LANTERN CO., INC.</b> 455 Rochester St. Avon NY 14414 Ph:(585) 226-9500 Fax: (585) 226-2029		
	DRAWING APPROVED BY ECR			
TOLERANCES:	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF STAR HEADLIGHT & LANTERN CO., INC.. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF STAR HEADLIGHT & LANTERN CO., INC. IS STRICTLY PROHIBITED.			
ANGULAR: ± 2 DEG.				
.X ± .100				
.XX ± .020				
.XXX ± .005	MODEL: D-44-FISUV	TITLE: D-44-FISUV MODEL DRAWING		
.XXXX ± .001	RoHS COMPLIANT: Yes	DWG. NO. D-44-FISUV		
MATERIAL: N/A	REV -			
FINISH: N/A	SCALE: 1/4		DO NOT SCALE FROM DRAWING	SHEET 1 OF 1