

INSTALLATION & OPERATION MANUAL

SERIES
800



Code 3,® Inc., a subsidiary of
Public Safety Equipment, Inc.

CODE 3[®]
PUBLIC SAFETY EQUIPMENT, INC.

DECKBLASTER[®]

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IMPORTANT: *Read all instructions and warnings before installing and using.*
INSTALLER: *This manual must be delivered to the end user of this equipment.*

Introduction

The DeckBlaster® product line represents the latest advances in low cost directional dash and deck-mountable warning lights. Designed for durability and high reliability, the Deckblaster's low-profile design makes it ideal for use in many applications. The line boasts five separate models, available in both strobe and halogen configurations. These include a basic flashing halogen, a basic flashing strobe, a switchable halogen, a steady burn halogen and a remote strobe.



WARNING!

The use of this or any warning device does not insure that all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is your responsibility to be sure you can proceed safely before entering an intersection, driving against traffic, responding at a high rate of speed, or walking on or around traffic lanes. The effectiveness of this warning device is highly dependent upon correct mounting and wiring. Read and follow the manufacturer's instructions before installing or using this device. The vehicle operator should insure daily that all features of the device operate correctly. In use, the vehicle operator should insure the projection of the warning signal is not blocked by vehicle components (i.e.: open trunks or compartment doors), people, vehicles, or other obstructions.

This equipment is intended for use by authorized personnel only. It is the user's responsibility to understand and obey all laws regarding emergency warning devices. The user should check all applicable city, state and federal laws and regulations.

Public Safety Equipment, Inc., assumes no liability for any loss resulting from the use of this warning device.

Proper installation is vital to the performance of this warning device and the safe operation of the emergency vehicle. It is important to recognize that the operator of the emergency vehicle is under psychological and physiological stress caused by the emergency situation. The warning device should be installed in such a manner as to: A) Not reduce the output performance of the system, B) Place the controls within convenient reach of the operator so that he can operate the system without losing eye contact with the roadway.

Emergency warning devices often require high electrical voltages and/or currents. Properly protect and use caution around live electrical connections. Grounding or shorting of electrical connections can cause high current arcing, which can cause personal injury and/or severe vehicle damage, including fire.

PROPER INSTALLATION COMBINED WITH OPERATOR TRAINING IN THE PROPER USE OF EMERGENCY WARNING DEVICES IS ESSENTIAL TO INSURE THE SAFETY OF EMERGENCY PERSONNEL AND THE PUBLIC.

Unpacking & Pre-installation

Carefully remove the unit from the box, taking care not to scratch the lens, and examine it for any transit damage. You may wish to test the unit for proper operation before installation. To test models with a cigarette plug, firmly twist the plug on the unit into a +12 Volt D.C. cigarette lighter. For models without a plug, touch the black wire to ground (earth) and the red wire to the +12 Volt D.C. A battery may be used for this purpose. For the remote strobe, plug the connector into an appropriate CODE 3 strobe power supply. If the vehicle has an electrical system other than +12 Volts D.C. negative ground (earth), contact your local representative or call the Electronics Technical Assistance HOTLINE at (314)426-2700 Ext. 2131 for instructions.

NOTE: Flashing halogen and strobe units will require a filtered power supply for proper operation without a battery.

Installation & Mounting



WARNING!

This unit must be mounted within the interior passenger compartment of the vehicle only. It is not intended for use in exterior applications.

Mounting



WARNING!

This product, as with any device used inside a vehicle, may cause severe personal injury if not properly mounted and secured. Objects used in the interior of a vehicle may become airborne during a collision or other sudden changes in vehicle speed or direction, such as braking, acceleration or turns.

Permanent Mounting

Attach the basic mounting bracket to the bottom of the unit using the two screws supplied in the mounting kit as shown in Fig. 1. Position the unit as desired and secure to the dash or deck with user-supplied hardware (2 sheet metal screws or the adhesive strip). The bracket may be bent to allow for different windshield, dash, or deck angles. For mounting multiple units in the rear-deck, CODE 3 offers an optional rear-deck mounting kit for a four unit system, see part list on page 7 for ordering.

Temporary Mounting (Optional)



WARNING!

This product is supplied with a tether cord for added user safety. **DO NOT** use this product without the tether cord properly installed.

CODE 3 offers two temporary mounting kits for the Deckblaster: Hook and Loop and Suction-Cup mounting kits. CODE 3's Hook and Loop kit features Scotchmate® Hook and Loop strips with PV2000 adhesive, which is designed for plasticized vinyls. CODE 3 does not recommend using a Hook and Loop type fastener without the plasticized vinyl adhesive. See parts list on page 7 for ordering the Hook and Loop kit or the Suction-Cup kit. See Fig. 2 and Fig. 3 for proper installation of the tether cord when mounting the Deckblaster in a temporary position.

Fig. 1

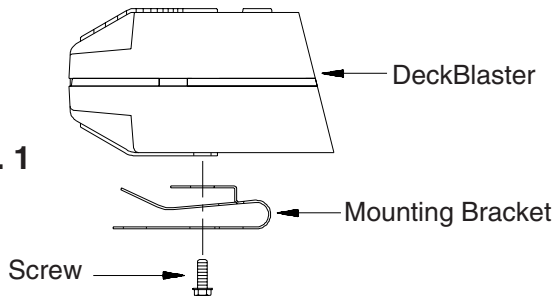
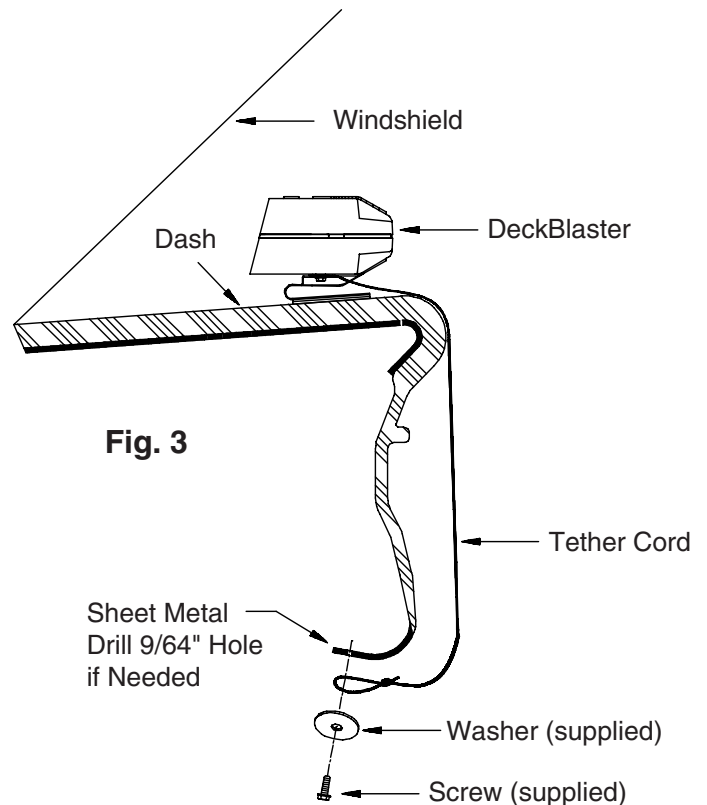
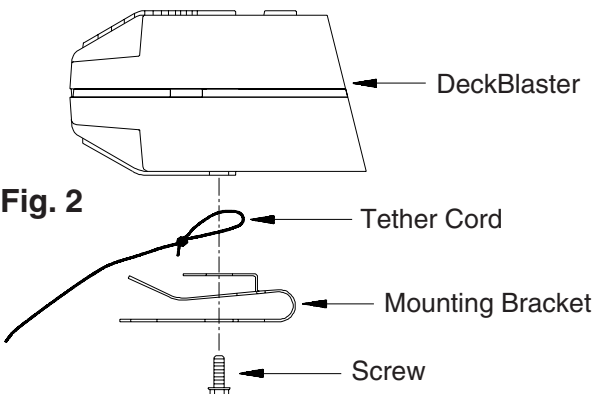


Fig. 2



Wiring Instructions



WARNING!

Use a minimum of 16 gauge wire or 14 gauge on runs longer than 15 ft. Larger wires and tight connections will provide longer service life for components. For high current wires it is highly recommended that terminal blocks or soldered connections be used with shrink tubing to protect the connections. Do not use insulation displacement connectors (e.g. 3M® Scotchlock type connectors). Route wiring using grommets and sealant when passing through compartment walls. Minimize the number of splices to reduce voltage drop. High ambient temperatures (e.g. underhood) will significantly reduce the current carrying capacity of wires, fuses, and circuit breakers. Use "SXL" type wire in engine compartment. All wiring should conform to the minimum wire size and other recommendations of the manufacturer and be protected from moving parts and hot surfaces. Looms, grommets, cable ties, and similar installation hardware should be used to anchor and protect all wiring.

Fuses or circuit breakers should be located as close to the power takeoff points as possible and properly sized to protect the wiring and devices.

Particular attention should be paid to the location and method of making electrical connections and splices to protect these points from corrosion and loss of conductivity. Ground terminations should only be made to substantial chassis components, preferably directly to the vehicle battery.

The user should install a fuse sized to approximately 125% of the maximum Amp capacity in the supply line to protect against short circuits. For example, a 30 Amp fuse should carry a maximum of 24 Amps. **DO NOT USE 1/4" DIAMETER GLASS FUSES AS THEY ARE NOT SUITABLE FOR CONTINUOUS DUTY IN SIZES ABOVE 15 AMPS.** Circuit breakers are very sensitive to high temperatures and will "false trip" when mounted in hot environments or operated close to their capacity. **ALL PSE 4-HEAD POWER SUPPLIES MUST BE USED WITH FOUR REMOTE UNITS. USE OF 4-HEAD POWER SUPPLIES WITH LESS THAN 4 REMOTE UNITS MAY RESULT IN THERMAL FAILURE, VOIDING THE WARRANTY.** (Note: See power supply instructions for remote strobe model synchronization.)

NOTE: All DeckBlaster units are reverse polarity protected. No damage will result from incorrect connection of the inputs if within the specified operating voltage range.

For models with a cigarette plug (basic halogen, basic strobe, switchable halogen), insert the plug firmly into the lighter socket and twist to insure good electrical contact. The unit will flash when power is connected to the socket. For the switchable halogen unit, move the switch to the desired operating position; forward for steady-burn, center for off (no current draw), or to the rear for flashing mode. For the remote strobe unit, insert the plug firmly into the output socket of an appropriate CODE 3 power supply.

NOTE:

For the steady-burn halogen unit, connect one of the wires to ground (earth). Route the other wire to a user-supplied switch or flasher and then, from the switch or flasher to the positive terminal of the battery through a 10 amp fuse or circuit breaker.



High voltages and or temperatures are present inside the unit. Disconnect from power and wait 5 minutes prior to servicing. Use hand and eye protection when changing halogen lamps or flashtubes.

Flash Pattern Slection

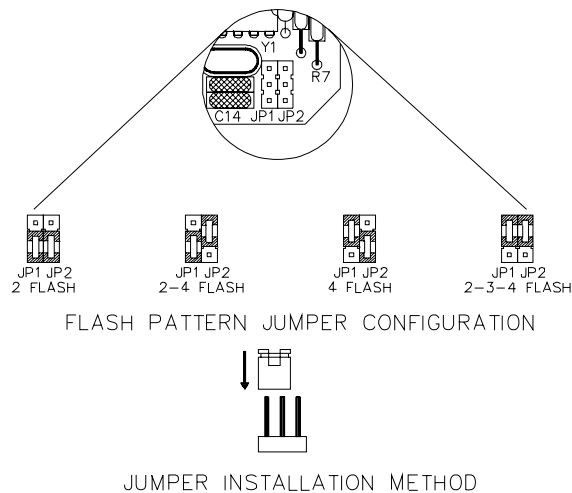
This Deckblaster is capable of producing four distinct multiple pulse flash patterns. They are:

1. A two pulse flash, 80 primary flashes per minute.
2. A four pulse flash, 80 primary flashes per minute.
3. A flash cycle consisting of a two pulse flash followed by a four pulse flash, 40 flash cycles per minute.
4. A flash cycle consisting of a two pulse flash, followed by a three pulse flash, followed by a four pulse, 27 flash cycles per minute.

The flash pattern is factory set for the four pulse flash pattern, Optional flash patterns can be selected by changing the placement of jumpers JP1 and JP2, located on the Deckblaster printed circuit board (see Fig. 4 below). Flash patterns can be changed an unlimited number of times.

Disassembly/Assembly

Turn the unit upside down, remove the four screws holding the case together and remove the bottom case half by lifting upward. To assemble, reinstall the lower case half by aligning the lens slots with the lens and sliding it down on the other case half. Take care to insure that the wires are not pinched. Do not overtighten the screws.



Maintenance

Disassembly/Assembly

Turn the unit upside down, remove the four screws holding the case together and remove the bottom case half by lifting upward. To assemble, reinstall the lower case half by aligning the lens slots with the lens and sliding it down on to the other case half. Take care to insure that the wires are not pinched. Do not overtighten the screws.

Lens Replacement/Change

Remove the lens by lifting upward and sliding it out of the slots on the inside of the case. To change the lens to a dual color, locate the lens halves of the desired colors from the parts bag (optional). With a slight twisting motion, assemble the two halves into a single lens, taking care not to touch the inside of the lenses. Locate the lens slots in the case and slide the assembled lens into the case. Reassemble the unit.



WARNING! Lamps are extremely hot! Allow to cool completely before attempting to remove. Gloves and eye protection should be worn when handling halogen lamps as they are pressurized and accidental breakage can result in flying glass.

Halogen Lamp/Flashtube Replacement for non-remote models

Remove the circuit board/reflector assembly. Using a needle-nose pliers, straighten the leads of the tube or halogen lamp protruding through the circuit board on the component side of the board. Using hand protection, grasp the lamp or tube gently and pull to remove from the reflector, taking care not to break the glass. Replace with a CODE 3 approved replacement as found in the parts list on page 7. When reinstalling the halogen lamp, take care to note the lamp orientation as shown on page 7. The red marking on the flashtube should be oriented such that it is to the right side of the reflector when facing the unit in its upright position, see Fig. 5. Incorrect installation could result in premature failure of the flashtube or intermittent operation. Reassemble the unit. Connect the unit to power to verify that it operates properly before reinstalling.

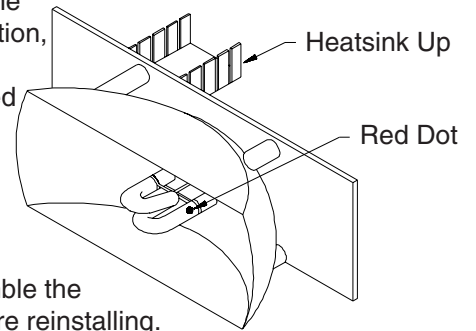
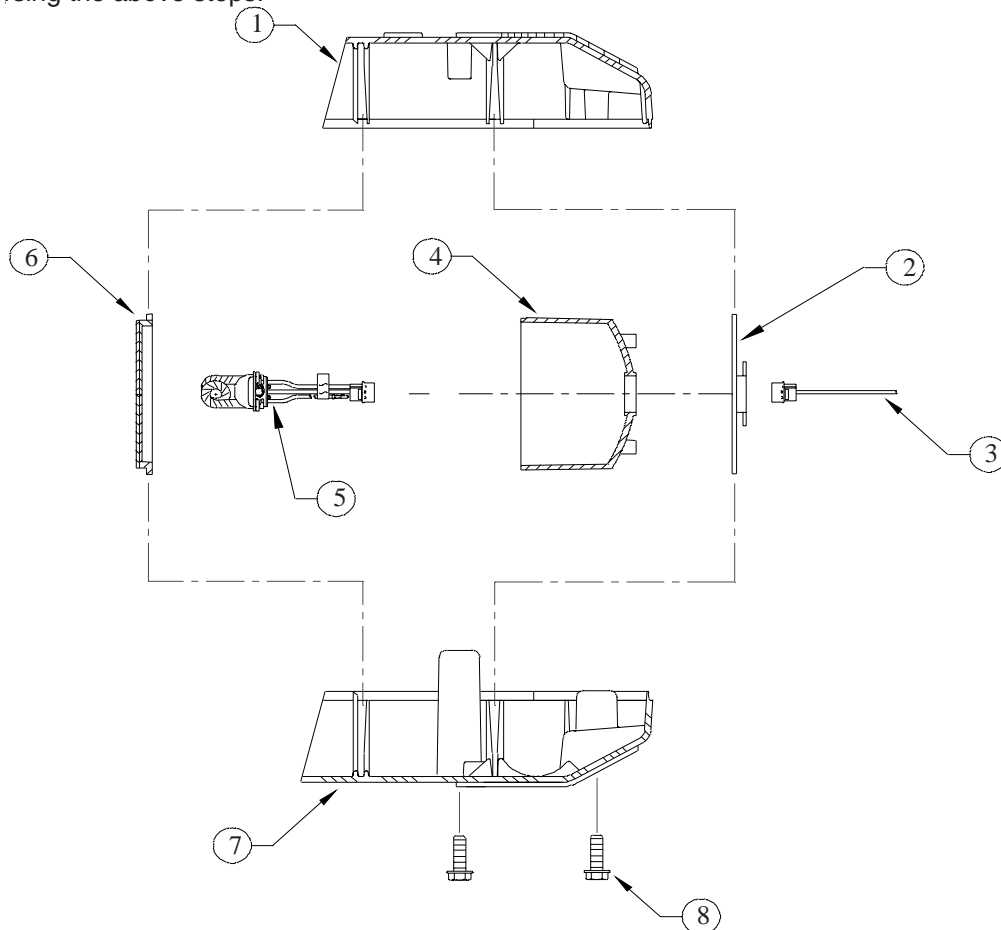


Fig. 5

Flashtube replacement for remote model

Disconnect the unit from the power supply and disassemble. Remove the bracket/reflector assembly from the housing and unplug the power cable from the lamp. Using hand protection, grasp the lamp from the front of the reflector and turn counterclockwise until it comes free. Pull the lamp forward through the reflector and replace it with a CODE 3 approved replacement as found in the parts list on page 9. Reassemble the unit by reversing the above steps.

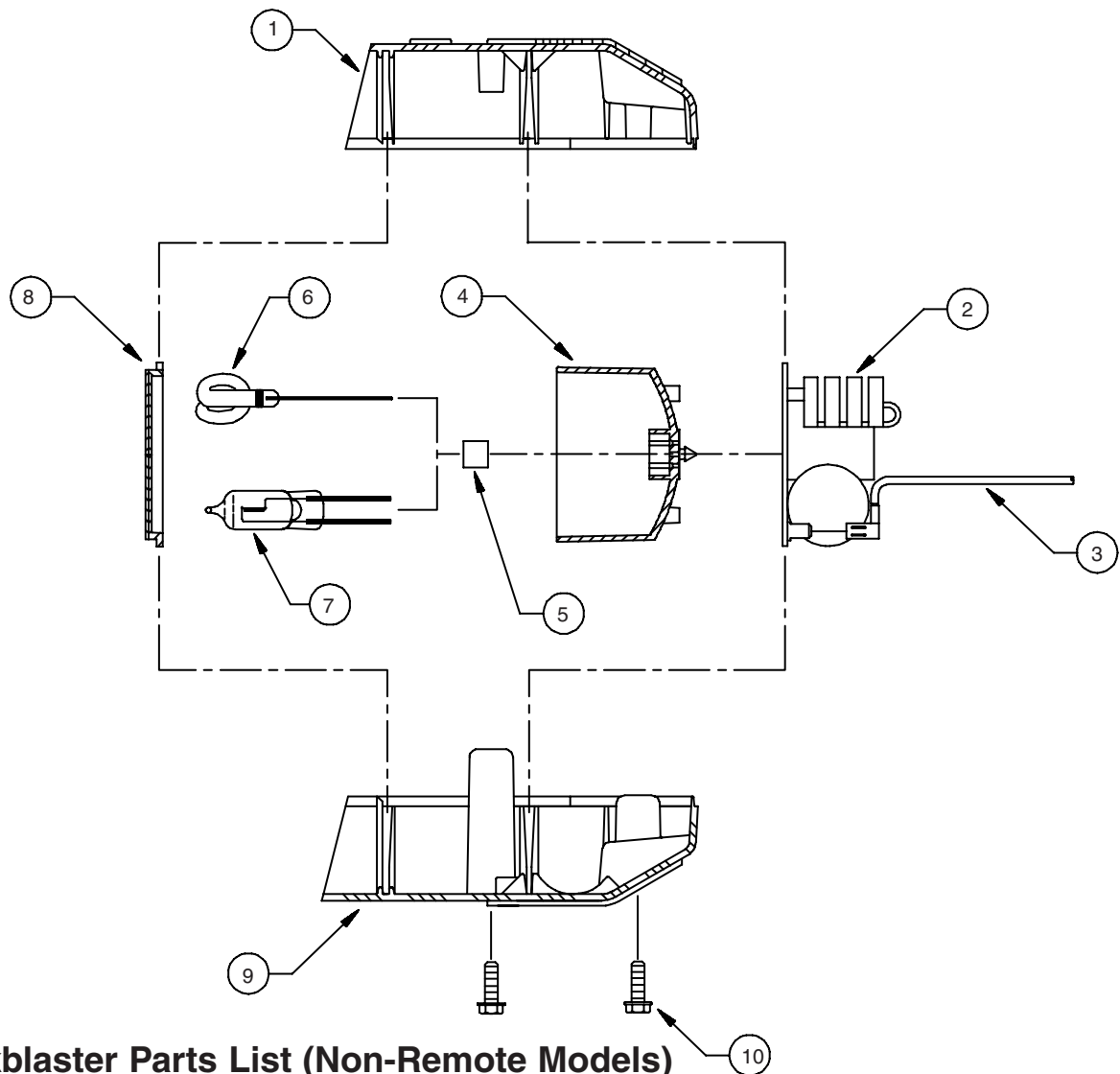


Deckblaster Parts List (Remote Model) Ref No. Description Part No.

Qty.		Ref No.	Description	Part No.
1	Upper Case Half			T06570 1
2	Reflector Bracket			S35321 1
3	Wiring - Straight Cord			S35250 1
4	Reflector			S81231 1
5	Flashtube			S82108 1
6	Lens - Half w/Optics			T0202X 2
	- Half smooth			T0204X 2
	- Full w/Optics			T0203X 1
	- Full smooth			T0206X 1
7	Lower Case Half			T06571 1
8	Case Screws - #8x1/2", "B", Hex, Philips			T00238 4
Not Shown	Mounting bracket/Tether Cord Kit			S65492 1
	Rear-Deck Mounting Kit (Optional)			RDMNT
	Hook and Loop Mounting Kit (Optional)			HLMNT
	Suction-Cup Mounting Kit (Optional)			SCMNT

Troubleshooting

PROBLEM	PROBABLE CAUSE	REMEDY
Unit does not flash.	No power connected to unit. Blown fuse. (External) Worn flashtube or halogen lamp. Circuit board failure. Reversed polarity on power.	Connect unit to power. Check user-installed fuse. Replace with properly sized fuse. Replace flashtube or halogen lamp with recommended replacement. Replace circuit board assembly or send unit in for service.
Unit flashes intermittently	Loose connection in wiring. Flashtube installed incorrectly. Worn flashtube or halogen lamp.	Check wiring for loose connection. Check flashtube for proper installation as illustrated in Fig. 6. Replace flashtube or halogen lamp with recommended replacement.
Light output appears dim.	Dirty lens. Voltage drop in wiring. Worn flashtube or halogen lamp	Clean lens. Check power wire sizing. Replace with larger wire to reduce voltage drop. Replace flashtube or halogen lamp with recommended replacement.
Flashrate not correct	Low input voltage.	Check input voltage to unit and make sure it is between 10 and 16 VDC.



Deckblaster Parts List (Non-Remote Models)

<u>Ref No.</u>	<u>Description</u>	<u>Part No.</u>	<u>Qty.</u>
1	Upper Case Half	T06570	1
2	Circuit Board - Basic Halogen	S65175	1
	- Basic Strobe	S70170	
	- Switchable Halogen	S65190	
3	Wiring - Straight Cord	S65490	1
	- Coil Cord	S65493	
	- Steady Burn Wires	S65497	
4	Reflector	T05555	1
5	Flashtube Grommet (strobe only)	T03341	2
6	Flashtube	T07210	1
7	Halogen Lamp (27 Watt)	T03346	1
8	Lens - Half w/Optics	T0202X	2
	- Half smooth	T0204X	2
	- Full w/Optics	T0203X	1
	- Full smooth	T0206X	1
9	Lower Case Half	T06571	1
10	Case Screws - #8x1/2", "B", Hex, Philips	T00238	4
Not Shown	Mounting bracket/Tether Cord Kit	S65492	1
	Rear-Deck Mounting Kit (Optional)	RDMNT	
	Hook and Loop Mounting Kit (Optional)	HLMNT	
	Suction-Cup Mounting Kit (Optional)	SCMNT	

Options and Specifications

Operating voltage range: 10-16 VDC (Currents are calculated at 12.8 volts)

PRODUCT (MODEL)	HEIGHT	WIDTH	CURRENT DRAW	FLASH-RATE	ENERGY OR POWER
Basic Strobe (805)	2.50"	5.65"	2.5 A	80	9 J
Basic Halogen (800)	2.50"	5.65"	1.25 A	110	27 W
Switchable Halogen (810)	2.50"	5.65"	1.25 A (flash)	110	27 W
Steady Burn Halogen (820)	2.50"	5.65"	2.5 A (steady)	N/A	27 W

NOTES

WARRANTY

This product was tested and found to be operational at the time of manufacture. Provided this product is installed and operated in accordance with the manufacturer's recommendations, Public Safety Equipment guarantees all parts and components except the lamps for a period of 1 year from the date of purchase or delivery, whichever is later. Units demonstrated to be defective within the warranty period will be repaired or replaced at the factory service center at no cost.

Use of a lamp or other electrical load of a wattage higher than installed or recommended by the factory, or use of inappropriate or inadequate wiring or circuit protection causes this warranty to become void. Failure or destruction of the product resulting from abuse or unusual use and/or accidents is not covered by this warranty.

CODE 3 shall in no way be liable for other damages including consequential, indirect or special damages whether loss is due to negligence or breach of warranty.

CODE 3 MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY INCLUDING, WITHOUT LIMITATION, WARRANTIES OF FITNESS OR MERCHANTABILITY, WITH RESPECT TO THIS PRODUCT.

PRODUCT RETURNS

In order to provide you with faster service, if you are going to return a product for repair or replacement*, please contact our factory to obtain a Return Goods Authorization Number (RGA number) before you ship the product to CODE 3. Write the RGA number clearly on the package near the mailing label. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.

*CODE 3 reserves the right to repair or replace product at its discretion. CODE 3 assumes no responsibility or liability for expenses incurred for the removal and/or reinstallation of products requiring service and/or repair.

Problems or Questions? Call The Electronics Technical Assistance HOTLINE - (314) 996-2800

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