Indicator Products .



Table of Contents

| PRESSLITE | | | | |
|---|-----------|----------------|--|--|
| DESCRIPTION | TYPE | PAGE NUMBER | | |
| Friction Cap Bases | | | | |
| Alternate Action 5 Amp S.P.D.T Form | | | | |
| С | 516 | 17 | | |
| General Purpose Indicator Base | 532 | 17 | | |
| Momentary Action S.P.D.T | | | | |
| 3 Amp | 545 | 17 | | |
| Momentary Action S.P.D.T | | | | |
| 5 Amp | 518 | 18 | | |
| Alternate or Momentary Action - 10.1 | | | | |
| Amp D.P.D.T. Form C | 5720 | 18 | | |
| Low Profile Switches | | | | |
| Low Profile Switch Snap Action - 5 Amp | 616 | 18 | | |
| Low Profile Switch - 10.1 Amp Snap | | | | |
| Action | 6710/6720 | 19 | | |
| Snap In Switch | | | | |
| Snap-In Switch Momentary Action - 5 | | · | | |
| Amp | 591 | 19 | | |

| OPTOLITE | | | | | |
|--|----------------------|----|--|--|--|
| DESCRIPTION | SCRIPTION TYPE | | | | |
| General Purpos | General Purpose | | | | |
| Incandescent Subminiature Size T-1 | 99-33180 | 20 | | | |
| Incandescent Miniature Size T-1 3/4 | 11-33480 | 20 | | | |
| Incandescent Miniature Size T-1 3/4 | 14-30080 | 20 | | | |
| Incandescent General Purpose Size T-3 1/4 | 13-VM305 | 21 | | | |
| Incandescent Miniature Size T-1 3/4 | 14-35180 | 21 | | | |
| Incandescent Miniature Size T-1 3/4 | 14-32280 | 21 | | | |
| Incandescent Miniature Size T-1 3/4 | 59-52480 | 22 | | | |
| Neon Miniature Size T-1 3/4 | 33-30881 | 22 | | | |
| Watertight | | | | | |
| Incandescent Subminiature Size T-1 | 95-33180 | 23 | | | |
| Neon Miniature Size T-2 w/internal 27k or 68k resistor | 31-36681 31-36680 | 23 | | | |
| Incandescent Miniature Size T-1 3/4 | 11-35182 | 23 | | | |
| Incandescent Vaportight Size T-3 1/4 | VM-700 | 24 | | | |

| OPTOLITE CONTINUED | | | | | |
|---|----------------------|----------------|--|--|--|
| DESCRIPTION | TYPE | PAGE NUMBER | | | |
| EMI Suppresso | EMI Suppressed | | | | |
| Incandescent Subminiature Size T-1 | 99-36980 99-36982 | 24 | | | |
| Neon Miniature Size T-2 | 38-36180 | 25 | | | |
| Neon Miniature Watertight Size T- 1 3/4 | 38-36680 38-36681 | 25 | | | |
| Incandescent Miniature Size T-1 3/4 Incandescent Miniature Watertight | 18-36880 | 26 | | | |
| Size T-1 3/4 | 18-36680 | 26 | | | |
| Press To Tes | t | | | | |
| Incandescent Miniature General Purpose Size T-1 3/4 | 03-91080 | 27 | | | |
| Incandescent Miniature Optional Press To Test Size T-1 3/4 | 59-52280 | 27 | | | |
| Incandescent Miniature Size T-1 3/4 | 01-91180 | 27 | | | |
| Incandescent Miniature Size T-1 3/4 | 03-90980 | 28 | | | |
| Incandescent Standard Size T-3 1/4 | 02-91180 | 28 | | | |
| Incandescent Miniature Watertight Size T-1 3/4 | 05-90880 05-90881 | 28 | | | |
| Incandescent Miniature Watertight Size T-1 3/4 | 05-91182 | 29 | | | |
| Incandescent Watertight Size T-3 1/4 | 06-91182 | 29 | | | |
| Incandescent Miniature EMI Suppressed Size T-1 3/4 | 08-83281 | 29 | | | |
| Incandescent Miniature EMI Suppressed Watertight Size T-1 3/4 | 08-83283 | 30 | | | |
| Incandescent General Purpose Size T-3 1/4 | 04-VM906 | 30 | | | |
| Incandescent Miniature General Purpose Size T-1 3/4 | 03-93480 03-93481 | 31 | | | |
| Push In | | | | | |
| Incandescent Subminiature General Purpose Size T-1 | 99-33080 99-33081 | 31 | | | |
| Cross Reference Tables | | | | | |
| Cross Reference | | 32 | | | |
| Lamp Selection Guide | | 33 | | | |



Presslite Products

2.188 1/2-32 Thread .562 Dig. - .750-



Terminal Assignment



Schematic

Switch Characteristics
Contact rating:
5 amps resistive at 115 VDC ir28 VDC.
Nominal pushbutton travel:
219 in
Nominal operating force:
24 oz.
Material and Finishes
Pushbutton: high impact resistant

Pushbutton: high impact resistant plastic per L-P-349.
Pushbutton retention and knurled

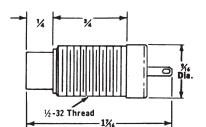
Pushbutton retention and knurled nut: aluminum, bright anodized. Keywasher and mounting nut: brass, nickel plated. Housing: aluminum, anodized. Terminals and Contacts: coin silver Terminal Board: molded thermoset plastic Lamp

T-1¾ incandescent or T-2 neon with midget flange base. See Lamp Selection Guide. Lamp may be replaced from front of panel by removing pushbutton retention nut. Switches will not operate with lamp removed. Weight Approximately .5 oz. Styles
Where maximum indication of pushbutton illumination is of

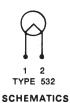
pushbutton illumination is of primary importance, the reflector style retention nut is recommended.

516 Type **Alternate Action 5 Amp** S.P.D.T. Form C









• Provides same pushbutton projection as Presslite switch bases in all styles of mounting hardware

Material and Finishes
Pushbutton: high impact resistant plastic per L-P-349.
Pushbutton retention and knurled nut: aluminum, bright anodized. Keywasher and mounting nut: brass, nickel plated.

Housing: aluminum, anodized. Terminals and Contacts: coin silver Terminal Board: molded thermo-

set plastic

Lamp

T-1¾ incandescent or T-2 neon
with midget flange base. See Lamp Selection Guide. Lamp may be replaced from front of panel by removing pushbutton retention nut. Switches will not operate with lamp removed.

Weight

Approximately .5 oz.

532 Type **General Purpose Indicator Base**

545 Type

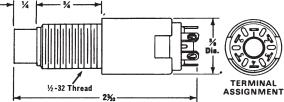
3 Amp

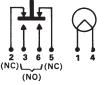


Momentary Action SPDT 3A @ 30VDC or 115VAC

- · Contacts: Gold plated for low level switching
- including 1/32" pre travel and 1/32" over travel







SCHEMATIC



Presslite Products



518 Type **Momentary Action S.P.D.T.** 5 Amp



Switch Characteristics

Contact rating: 5 amps resistive at 115 VDC ir28

Nominal pushbutton travel:

.219 in Nominal operating force:

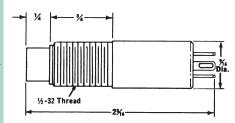
24 oz. Material and Finishes

Pushbutton: high impact resistant plastic per L-P-349. Pushbutton retention and knurled nut: aluminum, bright anodized. Keywasher and mounting nut: brass, nickel plated. Housing: aluminum, anodized. Terminals and Contacts: coin silver Terminal Board: molded thermoset plastic

Lamp
T-1¾ incandescent or T-2 neon with midget flange base. See Lamp Selection Guide. Lamp may be replaced from front of panel by removing pushbutton retention nut. Switches will not operate with lamp removed.

Approximately .5 oz.

- Nominal operating force: 32 oz.
- Nominal pushbutton travel: .094 in.





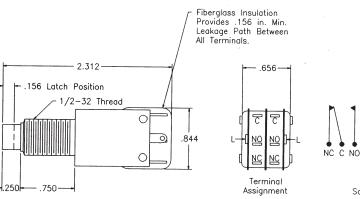


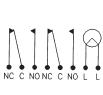
5720 Type **Alternate Action** 10.1 Amp D.P.D.T. Form C



Switch Characteristics

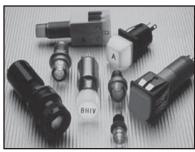
- · Double pole, double throw contact rating - 10.5 amp resistive @ 125/250 VAC or 28 VDC 5 amp resistive @ 30 VDC
- Nominal operating force: 20 oz.
- · Nominal pushbutton travel:
- · Latching action: Pushing plunger closes N.O. contacts and latches plunger. Pushing plunger again releases contacts and plunger return to "out" position. Plunger latch point is .156 in. from "out" position. Switch and latch interlocked to prevent teasing.





Schematic

616 Type **Low Profile Switch Snap Action** 5 Amp



Switch Characteristics Contact rating:

5 amps resistive at 115 VDC ir28 VDC. Nominal pushbutton travel:

.219 in Nominal operating force:

24 oz.

Material and Finishes

Pushbutton: high impact resistant plastic per L-P-349. Pushbutton retention and knurled nut: aluminum, bright anodized. Keywasher and mounting nut: brass, nickel plated.

Housing: aluminum, anodized. Terminals and Contacts: coin silver Terminal Board: molded thermoset plastic

Lamp

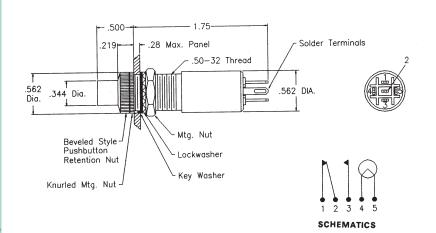
T-1¾ incandescent or T-2 neon with midget flange base. See Lamp Selection Guide. Lamp may be replaced from front of panel by removing pushbutton retention nut. Switches will not operate with lamp removed.

Weight

Approximately .5 oz.

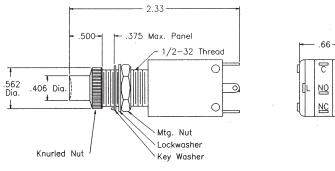
Styles

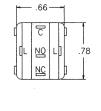
Where maximum indication of pushbutton illumination is of primary importance, the reflector style retention nut is recommended.





Presslite Products



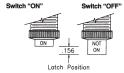


Schematics

.812

.768

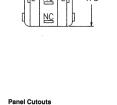
.094



Alternate action switches may be ordered with pushbuttons marked as shown to give positive indication of switch position.

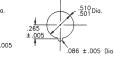
Lamp Terminal

Switch Terminal



Switch Terminal

Lamp Terminal



Switch Characteristics

Contact rating: 10.1 amps resistive at 125/250 VAC or 14 VDC

5 amps resistive at 30 VDC. Nominal pushbutton travel: Alternate action switches, .219 in Nominal operating force: Single pole switches, 12 oz.

Double pole switches, 20 oz. Material and Finishes

Pushbuttons: high impact resistant plastic per L-P-349. Knurled nut: aluminum, bright anodized. Keywasher and mounting nut: brass, nickel plated. Lockwasher: stainless steel.

Housing molded thermoplastic. Contacts: coin silver Lamp

T-1¾ incandescent with midget flange base or Al H neon. See Lamp Selection Guide. Lamp may be replaced from front of panel by removing pushbutton.

Weight

Approximately .6 oz.

Solder Terminals

Terminals accept AMP FASTON No. 60729-1 receptacles or equivalent.

6710/6720 Type **Low Profile Switch** 10.1 Amp **Snap Action**



Switch Characteristics

Contact rating: .5 amp resistive at 30 VDC. .1 amp resistive at 115 VAC.

Pushbuttons: high impact plastic per L-P-349. Housing: black thermoplastic.

Mounting clip: stainless steel. Lamp terminals: beryllium copper, tin plated.

Lamp

T-1 3/4 incandescent, with midget flange base. See Lamp Selection Guide. Lamp remains stationary when pushbutton

±005 in. dia. holes from front of panel. Mounting clips accommodate panels from .063 in. to .188 in.

Nominal pushbutton travel: .1 in. Nominal operating force: 4 oz. **Material and Finishes**

Switch terminals and contacts: brass, gold plated.

is depressed.

MountingAssemblies press fit into .687 in.

Weight

Approximately 25 oz. **Solder Terminals** Terminals accept AMP FASTON No.60415-i receptacles or equivalent.





General Purpose



99-33180 Type **Incandescent Subminiature** Size T-1



Material and Finishes

Mounting tube, black glass filled nylon per MIL-M-19887. Mounting nut aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steeel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

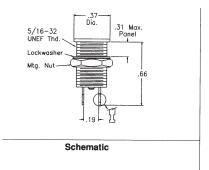
Lens, high impact-resistant plastic per L-P-349.

T-1 sub-midget flange base.

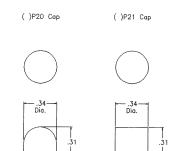
Mounting

Assembly mounts from front of panel. All mounting hardware supplied. Recommended mounting hole .328 in. +.015 in. -.000

Approx. .12 oz. less lamp







11-33480 Type Originally designed to meet MS 25256 **Base LH 73/1 Incandescent Miniature** Size T-1 ¾



Material and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

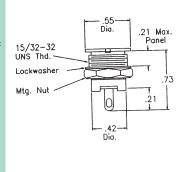
Lens, high impact-resistant plastic per L-P-349.

Lamp T-1 ¾ midget flange base.

MountingAssembly mounts from front of panel. All mounting hardware supplied.

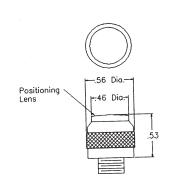
Weight

Approximately .2 oz. less lamp.



Schematic





14-30080 Type **Incandescent Miniature**



Materials and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

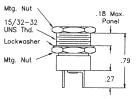
Lens, high impact-resistant plastic per L-P-349. Lens holders, aluminum, black anodized.

Lamp

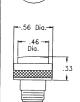
T-1 ¾ midget flange base.

MountingAssembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 in. +/- .015 in. dia. Weight

Approx. .27 oz. less lamp.



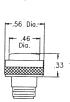




Sunlight Cap 91050M-()



91050-5()

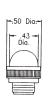














Schematic





General Purpose

Optolite Products

BASE ASSEMBLY 13-30080\$

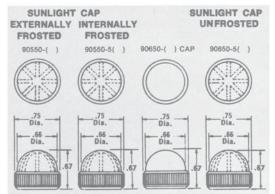
A

SCHEMATIC

%-24 UNEF

Identification

CAP STYLES



Materials and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

Lens, high impact-resistant plastic (nylon). Standard colors are semidiffusing.

Lamp

T-3 ¾ miniature bayonet base.

Mounting

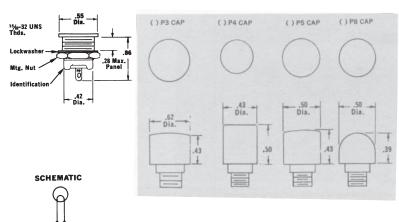
Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .640 in. +/- .015 in. dia.

13-VM 305 Type **Incandescent General Purpose** Size T-3 ¾



BASE ASSEMBLY 14-35180

CAP STYLES



Materials and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349.

Lamp

T-1 ¾ midget flange base.

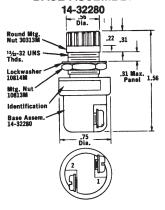
MountingAssembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 in. +/- .015 in. dia. Weight

Approx. .2 oz. less lamp

14-35180 Type **Incandescent Miniature** Size T-1 ¾



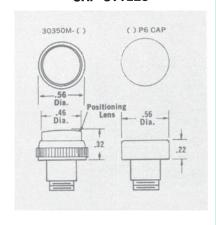
BASE ASSEMBLY



SCHEMATIC



CAP STYLES



Materials and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Terminals 6-32 screws, nickel plate. Round front mounting nut, bright nickel plate.

Lamp

T-1 ¾ midget flange base. Mounting

Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 in. +/- .015 in. dia.

14-32280 Type **Incandescent Miniature** Size T-1 34



General Purpose



59-52480 Type Incandescent Miniature Size T-1 ¾



Materials and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

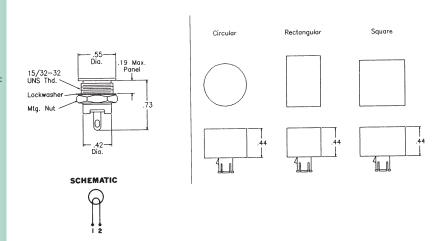
Cap Assembly Lens, high impact-resistant plastic

per L-P-349. **Lamp** T-1¾ midget flange base.

MountingAssembly mounts from rear of panel. All mounting hardware

Weight

Approx. .2 oz. less lamp.



33-30881 Type Neon Miniature Size T-2



Materials and Finishes

Mounting tube gold anodized, rear mtg. nut aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Terminals, brass, tin plated per MIL-T-10727A. Round front mtg. nut, bright nickel plate. Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Standard colors are transparent.

amp

A1G (std.) or A1H (high brightness) T-2 neon is furnished with each assembly.

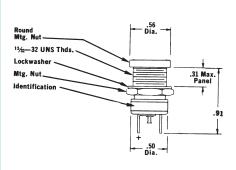
Mounting

Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 in. +/- .015 in. dia. **Weight**

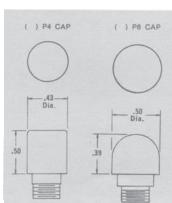
Approx. .35 oz. less lamp.

BASE ASSEMBLY

33-30881 (68KΩ Internal Resistor)



CAP STYLES



SCHEMATIC





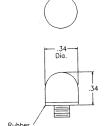
Watertight

Optolite Products

.28 Max. Panel Rubber Washer 5/16-32-UNEF Thd. Mtg. Nut

Schematic





2()P20 Cap

2()P21 Cap

Materials and Finishes

Mounting tube, black glass filled nylon per MIL-M-19887. Mounting nut, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Standard colors are transparent.

Lamp

T-1 sub-midget flange base.

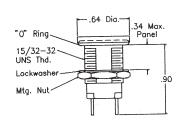
MountingAssembly mounts from front of panel. All mounting hardware supplied.

Weight

Approx. .12 oz. less lamp.

95-33180 Type **Incandescent Subminiature** Size T-1





Panel

Cutout

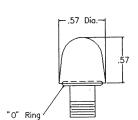
7.468 ±.003

Schematic

Center Terminal



()P25 Cap LC33



Materials and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A. "O" ring, silicone rubber.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Standard colors are transparent.

Lamp

C7A (std.) or C9A (high brightness) T2 neon lamp is furnished with each assembly.

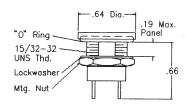
Mounting

Assembly mounts from front of panel. All mounting hardware supplied.

Approx. .3 oz. less lamp.

31-36681 Type w/68k Internal Resistor 31-36680 Type w/27k Internal Resistor **Neon Miniature, T-2**



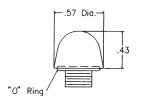


()P24 Cap LC35



Schematic





Materials and Finishes

Mounting tube, aluminum, black anodized per MIL-A-8625A. Mounting nut, steel cad plate per OO-P-416. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A. "O" ring, silicone rubber.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349.

Lamp T-1 ¾ midget flange base. Mounting

Assembly mounts from front of panel. All mounting hardware supplied.

Weight

Approx. .3 oz. less lamp.

11-35182 Type **Incandescent Miniature** Size T-1 ¾



Watertight



VM-700 Type **Incandescent Vaportight** Size T-3 1/4



Transparent plastic with O-ring. If translucent cap is desired, add "TL" to final dash number

Base Assembly

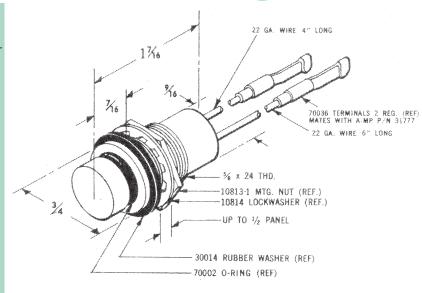
Aluminum - standard finish is bright anodize

Light Assembly

Completely sealed and will withstand immersion in liquid

Weight

Approx. 1 oz., less lamp



99-36980 Type 99-36982 Type **Incandescent Subminiature** Size T-1



Material and Finishes

Mounting tube and nut, stainless steel, passivated per MIL-S-5002. Wire leads #26 GA silver coated, stranded copper with TFE-fluro-carbon insulation.

Lens Assembly

Lens, high impact-resistant plastic per L-P-393 (polycarbonate).

MS24367-683 subminiature T-1 with 5.0V at .060 amp rating (nonreplaceable).

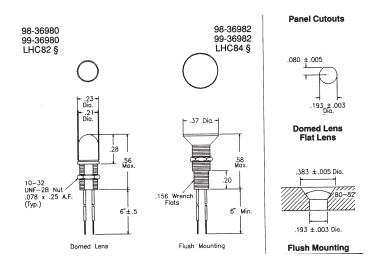
Mounting

Assembly mounts from front of panel. All mounting hardware supplied. E.M.I. suppressed assemblies require paint free area on back side of mounting for E.M.I. conductivity.

Weight

Approx. .005 lbs. max.

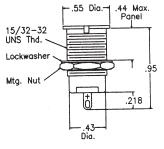
EMI Suppressed

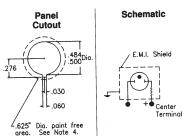




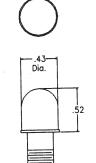
EMI Suppressed

Optolite Products





()P41 LC28



Material and Finishes

Mounting tube and nuts. brass plated, nickel plated per QQ-N-290. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-

Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Standard colors are transparent.

Lamp C7A (std.) or C9A (high brightness) T2 neon lamp is furnished with each assembly.

Mounting

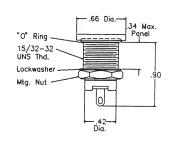
Assembly mounts from front of panel. All mounting hardware supplied. Recommended mounting hole .500 in. +/- .015 in. dia. Paint free area around backside hole required for E.M.I. conductivity.

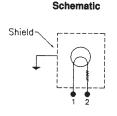
Weight

Approx. .3 oz. less lamp.

38-36180 Type **Neon Miniature** Size T-2

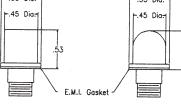












Material and Finishes

Mounting tube and nut, brass, bright nickel finish. Lockwasher stainless steel or steel nickel plate. Brass terminals, tin plated per MIL-T-10727A. "O" ring, silicone rubber.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349 Lens holders, brass, bright nickel plated.

Lamp T-1 ¾ midget flange base.

Mounting
Assembly mounts from front of panel. All mounting hardware supplied. Recommended mounting hole .500 in. ± 015 in. dia. Paint free area around back side of hole required for E.M.I. conductivity.

Weight

Approximately .35 oz. less lamp.

38-36680 Type w/68K Internal Resistor 38-36681 Type w/27K Internal Resistor **Neon Miniature Watertight** Size T-1 ¾



EMI Suppressed



18-36880 Type Base was designed to LH 73/2 Neon Miniature Size T-1 3/4



Material and Finishes

Mounting tube and nut, brass, bright nickel finish. Lockwasher stainless steel or steel nickel plate. Brass terminals, tin plated per MIL-T-10727A. "O" ring, silicone rubber.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349 Lens holders, brass, bright nickel plated.

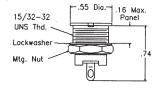
Lamp

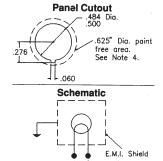
T-1 ¾ midget flange base. **Mounting**

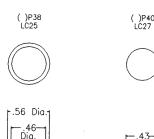
Assembly mounts from front of panel. All mounting hardware supplied. Recommended mounting hole .500 in. ± 015 in. dia. Paint free area around back side of hole required for E.M.I. conductivity.

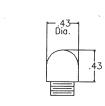
Weight

Approximately .35 oz. less lamp.









()P50

18-36680 Type Incandescent Miniature Watertight - Size T-1 ¾



Material and Finishes

Mounting tube and exposed hardware, brass, bright nickel plate per QQ-N-290. Lockwasher, stainless steel or steel, nickel plate. Terminals, brass, tin plated per MIL-T-10727A.

Cap Assembly

Lens is high impact-resistant plastic per L-P-349.

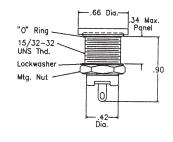
Lamp T-1 ¾ midget flange base.

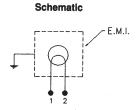
Mounting

Assembly mounts from front of panel. All mounting hardware supplied. E.M.I. suppressed assemblies require paint free area on back side of mounting hole for E.M.I. conductivity.

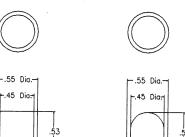
Weight

Approx. .35 oz less lamp.







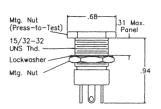




Press to Test

Optolite Products





Schematic





()P4 Cap



()P5 Cap





Material and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349.

Lamp

T-1 ¾ midget flange base. See Lamp Selection Guide.

Mounting

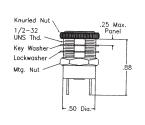
Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 in. ±015 in. dia.

Weight

Approximately .4 oz. less lamp.

03-91080 Type **Incandescent Miniature General Purpose** Size T-1 ¾

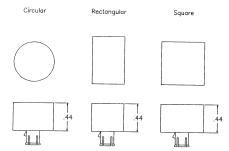




Panel Cutouts

.265 ±.005

.086 ±.005 Dia.



Schematic



Material and Finishes

Mounting tube and knurled nut, clear anodized per MIL-A-8625A. Mounting nut and key washer, brass, nickel plate. Lockwasher, stainless steel or steel, nickel plate, Brass terminals, tin plated per MIL-T-10727A

Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Friction fit lens caps, rotatable or keyed. Uses Presslite friction cap pushbuttons.

Lamp

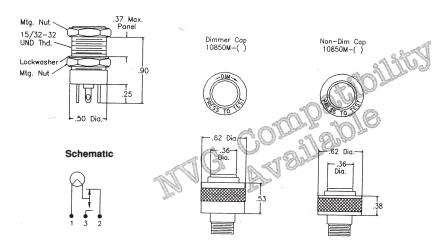
T-1 ¾ midget flange base Mounting
Assembly mounts from rear of

panel. All mounting hardware supplied. Recommended mounting hole, see drawing. **Weight**

Approximately .5 oz. less lamp.

59-52280 Type **Incandescent Miniature Optional Press to Test** Size T-1 ¾





Material and Finishes

Mounting tube and nuts, aluminum, black anodized per MtL-A-8625A. Lockwasher, stainless steel. Brass terminals, tin plated per MIL-T-10727A

Cap Assembly

Lens, high impact-resistant plastic per L-P-349, NVG Green, flat glass lens. Lens holders, aluminum, black anodized.

Lamp T-1 ¾ midget flange base.

Mounting

Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 in. ±.015 dia.

Identification

Identified with MS P/N and base assembly number.

Approximately .5 oz. less lamp.

01-91180 Type **Originally designed** to meet MS 25041 **Incandescent Miniature** Size T-1 ¾



Press to Test



03-90980 Type **Incandescent Miniature** Size T-1 ¾



Material and Finishes

Mounting tube, black glass filled nylon per MIL-M-19887. Mounting nut aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steeel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Lens holders are aluminum, black anodized.

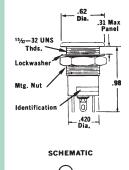
Lamp

T-1 ¾ midget flange base. Mounting

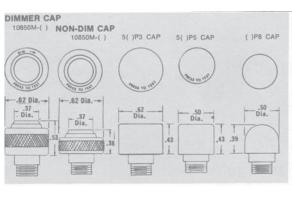
Assembly mounts from front of panel. All mounting hardware supplied. Recommended mounting hole .500 in. +/- .015 in. dia. Weight

Approx. .9 oz. less lamp.

BASE ASSEMBLY 03-90980



CAP STYLES



02-91180 Type **Originally designed** to meet MS 25331 **Incandescent Standard** Size T-3 1/4



Material and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A, Lockwasher, stainless steel, Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

Lens is high impact-resistant plastic per L-P-34g. Lens holders, aluminum, black anodized.

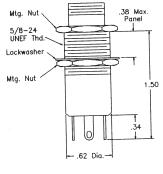
Lamp

T-3 ¼ miniature bayonet base. Mounting

Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .640 in. ± .015 in. dia.

IdentificationIdentified with MS P/N and base assembly number

Approximately .8 oz. less lamp.



Schematic

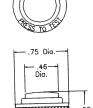




75 Dig. .56 Dia.









05-90880 Type 05-90881 Type **Incandescent Miniature** Watertight - Size T-1 ¾



Material and Finishes

Mounting tube, black glass filled nylon per MIL-M-19887. Mounting nut aluminum, black anodized per MIL-A-8625A, Lockwasher, stainless steeel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A. Rubber boot and washer, silicone rubber.

Cap Assembly

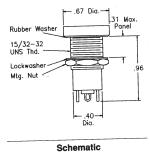
Lens, high impact-resistant plastic per L-P-349. Lens holders are aluminum, black anodized.

Lamp

T-1 ¾ midget flange base. Mounting

Assembly mounts from front of panel. All mounting hardware supplied. Recommended mounting hole .500 in. +/- .015 in. dia. Weight

Approx. .3 oz. less lamp.



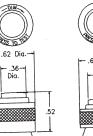




5()WT7











Press to Test

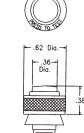
Optolite Products

.67 Dia. Mtg. Nut 5()WT7 Lockwasher Mtg. Nut **Schematic**





.22



Non-Dim Cap 90852-()

Material and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A. Rubber boot and washer, silicone rubber.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349 Lens holders are aluminum, black anodized. Lamp

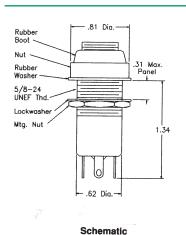
T-1 ¾ midget flange base. Mounting

Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 in. ± .015 in. dia. Weight

Approximately .44 oz. less lamp.

05-91182 Type **Incandescent Miniature** Watertight - Size T-1 ¾















Non-Dim Cap 10854-()



Material and Finishes

Mounting tube and nuts, aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plate. Brass terminals, tin plated per MIL-T-10727A. Rubber boot and washer, silicone rubber,

Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Lens holders, aluminum, black anodized.

Lamp

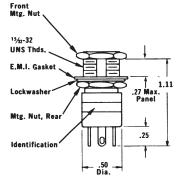
T-3 ¼ miniature bayonet base. Mounting

Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .640 in. ± .015 in. dia. Weight

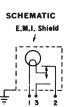
Approximately .85 oz. less lamp.

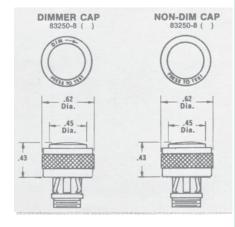
06-91182 Type **Incandescent Watertight Size T-3 1/4**











Material and Finishes

Lens holder and front mounting nut is black anodized per MIL-A-8625A. Mounting tube & rear Mtg. nut, is bright nickel plated per QQ-N-200. Lockwasher is stainless steel. Terminals brass, gold plated per MIL-G-45204.

Cap Assembly

Lens is high impact-resistant plastic per L-P-349. Lens. holders are aluminum, black anodized.

Lamp T-1 ¾ midget flange base.

Mounting Assembly mounts from rear of panel. All mounting hardware supplied. Flat on Mtg. tube pro-

vides for keyed installation. Weight

Approx. .5 oz less lamp.

08-83281 Type **Incandescent Miniature EMI Suppressed** Size T-1 ¾



Press to Test



08-83283 Type **Incandescent Miniature EMI Suppressed Watertight Size T-1** 3/4



Material and Finishes

Round mounting nut, aluminum, black anodized per MIL-A-8625A. Mounting tube and mounting nut, bright nickel plated per QQ-N-290. Lockwasher, steel, nickel plated. Rubber boot and washer, silicone rubber Brass terminals, gold plated per MIL-G-45204,

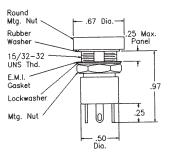
Cap Assembly

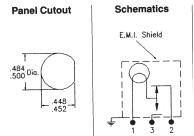
Lens, high impact-resistant plastic per L-P-349. Lens holders, aluminum, black anodized.

T-1 ¾ midget flange base. Mounting

Assembly mounts from rear of panel. All mounting hardware supplied. Flat on mounting tube provides for keyed installation.

Approximately .6 oz. less lamp.

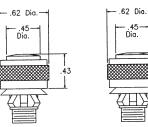








Non-Dim Cap 83250-8()WT



04-VM906 Type **Incandescent General Purpose Size T-3 1/4**



Material and Finishes

Mounting tube, aluminum, black anodized per MIL-A-8625A. Mounting nut, steel cad plate per QQ-P-416. Lockwasher, stainless steel or steel, nickel plate, Brass terminals, tin plated per MIL-T-10727A.

Cap Assembly

Lens, high impact-resistant plastic per L-P-349. Standard colors are semi-diffusing. Lamp

T-3 ¼ miniature bayonet base.

Mounting

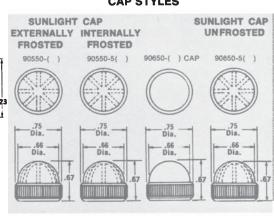
Assembly mounts from front of panel. All mounting hardware supplied. Recommended mounting hole .640 in. +/- .015 in. dia. Weight

Approx. .55 oz. less lamp.

Mtg. Nut (Press-To-Test) %-24 UNEF Thds. Lockwa Identification SCHEMATIC

BASE ASSEMBLY

CAP STYLES





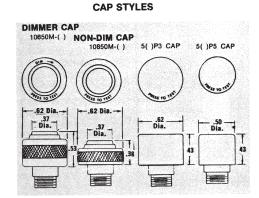
Press to Test

Optolite Products

03-93480 € .37 Dia. 15/₅₂--32 UNS Thds, Mtg. Nut 10813M Base Assem 03-93480

SCHEMATICS

BASE ASSEMBLY



Materials and Fiber

Mounting tube and nuts are aluminum, black anodized per MIL-A-8625A. Lockwasher, stainless steel or steel, nickel plated. Terminals are 4-40 screws, nickel plate OO-N-290.

Cap Assembly

Lens is high impact-resistant plastic per L-P-349a.

Lamp

T-1 ¾ midget flange base. Standard colors are transparent. Also available in translucent or diffusing caps.

Mounting

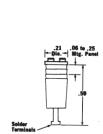
Assembly mounts from rear of panel. All mounting hardware supplied. Recommended mounting hole .500 ± .015 diameter. Weight

Approximately .50 oz. less lamp.

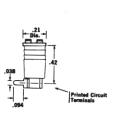
03-93480 Type 03-93481 Type **Incandescent Miniature** General Purpose - Size T-1 ¾



Push In



Base Assembly 99-33080



Base Assembly

99-33081

Cap Styles

() P46 CAP



Material and Finishes

Housing and lamp base, gray glass filled nylon. Terminals, beryllium copper, gold flashed. Retainer clip, stainless steel.

Lens Cap High impact-resistant plastic per L-P-393 (polycarbonate).

Lamp
T-1 wire terminal lamp; Lamp is replaced by removing snap-on

Mounting

Press-in: Assembly press fits into .189 in. dia. hole. No mounting hardware required. Retainer clip: For mounting assembly into .200 in. ± 005 in. dia. hole or panels less than .06 in. thick. Order clip 2-1186-643 separately

99-33080 Type 99-33081 Type **Incandescent Subminiature General Purpose - Size T-1**



| Cross Reference to Military Type Designations | | | | |
|---|----------------------------------|-------------------------------|--|--|
| | | Electroswitch Part | | |
| Specification | Type Designation LH 73/1 | Number 11-33480 | | |
| MIL-L-3661/5 | LH 73/2 | 18-36880 | | |
| | LH 74/1 | 31-36180 | | |
| | LH 74/2 LH 74/3 | 31-36280 38-36180 | | |
| MIL-3661/6 | LH 74/3 LH 74/4 | 38-36280 | | |
| | LC 11 RN2 | 6P35 | | |
| | LC 11 GN2 | 7P35 8P35 | | |
| | LC 11 YN2 LC 11 CN2 | 5P35 | | |
| | LC 11 RT2 | 6P35TL | | |
| | LC 11 GT2 | 7P35TL | | |
| | LC 11 YT2 LC 11 WT2 | 12P35TL 5P35TL | | |
| | LC 11 GD2 | 7P35IF | | |
| | LC 11 RD2 | 6P35IF | | |
| | LC 11 RB2 LC 11 GB2 | 46P35 47P35 | | |
| | LC 11 GB2 | 412P35 | | |
| MIL-L-3661/11 | LC 11 WB2 | 45P35 | | |
| | LC 13 RN2 LC 13 YN2 | 6P13 8P13 | | |
| | LC 13 YN2 LC 13 WT2 | 8P13 17P13 | | |
| | LC 13 CN2 | 5P13 | | |
| MIL-L-3661/13 | LC 13 GT2 LC 25 RN2 | 7P13TL | | |
| | LC 25 RN2 LC 25 GN2 | 6P38 7P38 | | |
| | LC 25 YN2 | 8P38 | | |
| | LC 25 CN2 | 5P38 | | |
| | LC 25 RT2 LC 25 GT2 | 6P38TL 7P38TL | | |
| | LC 25 YT2 | 12P38TL | | |
| MIL-L-3661/25 | LC 25 WT2 | 5P38TL | | |
| | LC 27 RN2 LC 27 YN2 | 6P40 8P40 | | |
| | LC 27 CN2 | 5P40 | | |
| | LC 27 RT2 | 6P40TL | | |
| | LC 27 GT2 LC 27 YT2 | 7P40TL 12P40TL | | |
| | LC 27 WT2 | 5P40TL | | |
| MIL-L-3661/27 | LC 27 GN2 | 7P40 | | |
| | LC 28 RN2 LC 28 YN2 | 6P41 8P41 | | |
| | LC 28 WT2 | 17P41 | | |
| MIL-L-3661/28 | LC 28 CN2 LC 33 RN2 | 5P41 6P25 | | |
| | LC 33 YN2 | 8P25 | | |
| | LC 33 WT2 | 17P25 | | |
| MIL-3661/33 | LC 33 CN2 LC 34 EN 2/DO2 | 5P25 80250-11 | | |
| | LC 34 EN 2/DO2 LC 34 CN 2/DO2 | 80250-11 | | |
| | LC 34 EN 2/EN2 | 80250-13 | | |
| | LC 34 CN 2/EN2 LC 34 EN 2/SO2 | 80250-14 80250-15 | | |
| MIL-L-3661/34 | LC 34 EN 2/SO2 LC 11 CN 2/SO2 | 80250-16 | | |
| | LC 35 RN2 | 6P24 | | |
| | LC 35 GN2 LC 35 YN2 | 7P24 8P24 | | |
| | LC 35 TN2 | 5P24 | | |
| | LC 35 GT2 | 7P24TL | | |
| | LC 35 YT2 LC 35 RT2 | 12P24TL 6P24TL | | |
| MIL-L-3661/35 | LC 35 HT2 LC 35 WT2 | 5P24TL | | |
| | LHC 82/1 WT2 | 99-36980-5TL | | |
| | LHC 82/1 RT2 LHC 82/1 GT2 | 99-36980-6TL 99-36980-7TL | | |
| | LHC 82/1 GT2 LHC 82/1 YT2 | 99-36980-71L 99-36980-12TL | | |
| | LHC 82/2 YT2 | 99-36980-12TL | | |
| | LHC 82/2 WT2 | 99-36980-5TL | | |
| MIL-L-3661/40 | LHC 82/2 RT2 LHC 82/2 GT2 | 99-36980-6TL 99-36980-7TL | | |
| | LH 88/1 | 31-36680 | | |
| MIL-L-3661/46 | LH 88/2 | 31-36681 | | |
| MIL-L-3661/47 MIL-L-3661/51 | LH 89/1 LH 92/1 | 11-35182 91-80280 | | |
| | | | | |

| Cross Reference "MS" Numbers | | | |
|------------------------------|-------------------|--|--|
| | Electroswitch Par | | |
| Military Standard | Number | | |
| MS 25041-1 | 01-91180-1 | | |
| MS 25041-2 | 01-91180-2 | | |
| MS 25041-3 | 01-91180-3 | | |
| MS 25041-4 | 01-91180-4 | | |
| MS 25041-5 | 01-91180-5 | | |
| MS 25041-6 | 01-91180-6 | | |
| MS 25041-7 | 01-91180-7 | | |
| MS 25041-8 | 01-91180-8 | | |
| MS 25041-10 | 01-91180-10 | | |
| MS 25041-11 | 01-91180-11 | | |
| MS 25256-2 | 11-33480-8P12 | | |
| MS 25256-4 | 11-33480-7P12 | | |
| MS 25256-6 | 11-33480-6P12 | | |
| MS 25256-8 | 11-33480-5P12 | | |
| MS 25256-10 | 11-33480-5P12TL | | |
| MS 25256-12 | 11-33480-11P12 | | |
| MS 25331-1 | 02-91180-1 | | |
| MS 25331-2 | 02-91180-2 | | |
| MS 25331-3 | 02-91180-3 | | |
| MS 25331-4 | 02-91180-4 | | |
| MS 25331-5 | 02-91180-5 | | |
| MS 25331-6 | 02-91180-6 | | |
| MS 25331-7 | 02-91180-7 | | |
| MS 25331-8 | 02-91180-8 | | |
| MS 25331-9 | 02-91180-9 | | |

Lamp selection guide

| | | INCANDE | SCENT TYPE | | | |
|---------------------------|--------------------------|---------------------|------------------|------------------------|------------------------|--------------|
| Size T-1 | LAMP NO. | RATED VOLTAGE | AMPERAGE | APPROX. CANDLEPOWER | AVERAGE LIFE (Hrs.) | NOTES |
| Sub-midget Flange Base | 682 | 5.0 | .060 | .03 | 100,000 | MS24515-682 |
| | 685 | 5.0 | .060 | .05 | 100,000 | MS24515-685 |
| | 718 | 5.0 | .115 | .15 | 40,000 | MS24515-718 |
| Group M | 6839 | 28.0 | .024 | .13 | 16,000 | MS3338-6839 |
| | 331 | 1.35 | :06 | .01 | 500 | |
| | 268 | 2.5 | .35 | .21 | 10,000 | |
| | 338 | 2.7 | .06 | .04 | 6,000 | MS25237-338 |
| | 345 | 6.0 | .04 | .03 | 10,000 | |
| C: T 43/ | 328 | 6.0 | .20 | .34 @ 5 V | 1,000 | MS25237-328 |
| Size T-13/4 Midget | 380 | 6.3 | .04 | .02 | 50,000 | |
| Flange Base | 350 | 6.3 | .15 | .45 | 3,000 | |
| | 349 | 6.3 | .20 | .55 | 3,000 | |
| | 381 | 6.3 | .20 | .40 | 50,000 | |
| Group A | 344 | 10.0 | .014 | .004 | 10,000 | |
| оло пр тт | 367X | 10.0 | .04 | .08 | 5,000 | |
| | 330 | 14.0 | .08 | .50 | 750 | MS25237-330 |
| | 370 | 18.0 | ,04 | .15 | 1,000 | |
| | 327 | 28.0 | .04 | .34 | 1,000 | MS25237-327 |
| | 387 | 28.0 | .04 | .30 | 25,000 | MS25237-387 |
| | 316 | 6.0 | .70 | 3.4 | 500 | MS25231-316 |
| Size T-31/4 | 44 | 6.3 | .25 | .9 | 3,000 | |
| Miniature Bayonet Base | 47 | 6.3 | .15 | .52 | 3,000 | |
| Single Contact | 1816 | 13.0 | .33 | 3.0 | 1,000 | |
| | 1815 | 14.0 | .20 | 1.4 | 3,000 | |
| | 313 | 28.0 | .17 | 3.0 | 500 | MS25231-313 |
| | 1819 | 28.0 | .04 | .34 | 1,000 | MS25231-1819 |
| | 1829 | 28.0 | .075 | 1.0 | 1,000 | MS25231-1829 |
| Group B | 1835 | 55.0 | .05 | 1.1 | 10,000 | |
| | | NEON (| GLOW TYPE | | | |
| Size T-2 | LAMP NO. | RATED VOLTAGE | START | | OMMENDED S RESISTOR | NOTES |
| | AIG | 105-125 AC OR DC | 65 V 95 V | /AC | 68KΩ | |
| | A1H | 105-120 VAC | 95 \ | /AC | 27ΚΩ | |
| Group C | (High Brightness) | 150 VDC 105-125 | 65 \ | I . | 211/22 | |
| Size T-2 | C7A | AC OR DC | 90 \ | | 68KΩ | MS25252-C7A |
| Group D | C9A (High Brightness) | 105-125 AC OR DC | 105 \ | /AC | 27 K Ω | MS25252-C9A |
| | | LAMPS WITH | BUILT-IN RES | SISTOR | | |
| Size T-2 | LAMP NO. | RATED VOLTAGE | STARTI | | NOTES | |
| | A1HR1 | 105-125 VAC | 65 VA(95 VD(| | · · | |
| | A1GR1 | 105-125 VAC | 95 VA | С | | |
| | A1GR2 | 105-125 VAC | 130 VA | С | | |

Candlepower values indicated are approximate initial mean spherical candlepower at rated voltage.
 Service conditions such as voltage surges, temperature, shock, and vibration may contribute to a shorter average life.