

## AP Series — Miniature Pilot Lights

### Miniature Pilot Lights with Super Bright LEDs

Key features of AP series include:

- Long service life, low maintenance
- Space saving miniature style
- Dome or flat lens models
- Built-in current-limiting resistor and reverse polarity protection diode
- Five illumination colors: red, green, amber, yellow, and white
- AC adaptor (120V AC and 240V AC) and DC-DC Converter (110V DC) options on 12mm and 16mm units



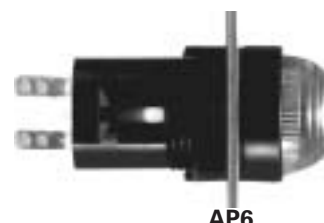
AP8



AP1



AP2



AP6

|                |                        |                                                                                                                                                                      |
|----------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specifications | Lamp                   | Built-in LED with current limiting resistor                                                                                                                          |
|                | Operational Voltage    | 6, 12, 24VDC (full voltage),<br>110/120, 220/240VAC, (transformer)<br>110VDC (with converter)                                                                        |
|                | Current Ratings        | AP8: 6VDC/18mA, 12VDC/18mA, 24VDC/12mA<br>AP1: 6VDC/18mA, 12VDC/18mA, 24VDC/12mA<br>AP2: 6VDC/33mA, 12VDC/22mA, 24VDC/11mA<br>AP6: 6VDC/33mA, 12VDC/22mA, 24VDC/11mA |
|                | Operating Temp.        | -20°C to +55°C                                                                                                                                                       |
|                | Operating Humidity     | 45 to 85% RH                                                                                                                                                         |
|                | Insul. Resistance      | 100MΩ min. (500V DC megger)<br>Between live and dead parts                                                                                                           |
|                | Rev. Withstand Voltage | AP2/AP6: 100V<br>AP1/AP8: 200V                                                                                                                                       |
|                | Solder Terminal        | Soldering 260°C maximum (5 sec.)                                                                                                                                     |
|                | Degree of Protection   | AP8: IP40 (dustproof)<br>Other Series: IP65 (oiltight)                                                                                                               |

| Optional Adaptors/Converters |                       | AC Adaptor                                                                           | DC-DC Converter                                                                      |
|------------------------------|-----------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                              | Applicable Units      | AP2 & AP6 (with 6V LED only)                                                         |                                                                                      |
|                              | Operating Voltage     | 110/120VAC 50/60 Hz<br>220/240VAC 50/60 Hz                                           | 110V DC (90 to 140V DC)                                                              |
|                              | Power Consumption     | 1.6 VA maximum                                                                       | 1W maximum                                                                           |
|                              | Insulation Voltage    | 250 V AC                                                                             | 140V DC                                                                              |
|                              | Insulation Resistance | 10MΩ min. (500V DC megger) Between live and dead parts                               |                                                                                      |
|                              | Dielectric Strength   | 2,000V AC, 1 minute Between live/dead parts<br>2,000V AC, 1 minute Between terminals | 2,000V AC, 1 minute Between live/dead parts<br>1,500V AC, 1 minute Between terminals |



Available as one piece only (replacement LEDs are not available).

## Miniature Pilot Lights (Assembled)

### Part Numbers: AP Miniature Pilot Lights

| Appearance                                                                                                 | Lens Style | Operating Voltage                                | Part Numbers                        |
|------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------|-------------------------------------|
| AP8 Series - Ø 8mm<br>    | Dome       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP8M266-②<br>AP8M211-②<br>AP8M222-② |
|                                                                                                            | Flat       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP8M166-②<br>AP8M111-②<br>AP8M122-② |
| AP1 Series - Ø 10mm<br>   | Dome       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP1M266-②<br>AP1M211-②<br>AP1M222-② |
|                                                                                                            | Flat       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP1M166-②<br>AP1M111-②<br>AP1M122-② |
| AP2 Series - Ø 12mm<br>   | Dome       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP2M266-②<br>AP2M211-②<br>AP2M222-② |
|                                                                                                            | Flat       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP2M166-②<br>AP2M111-②<br>AP2M122-② |
| AP6 Series - Ø 16mm<br> | Dome       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP6M266-②<br>AP6M211-②<br>AP6M222-② |
|                                                                                                            | Flat       | 6V DC +/- 5%<br>12V DC +/- 10%<br>24V DC +/- 10% | AP6M166-②<br>AP6M111-②<br>AP6M122-② |

### ② Color Code

| Color  | Code |
|--------|------|
| Amber  | A    |
| Green  | G    |
| Red    | R    |
| White  | W    |
| Yellow | Y    |



1. In place of ②, specify the color code.
2. For dimensions, see page A5-212
3. For accessories, see page A5-212.

### Part Numbers: Optional AC Adaptors and DC-DC Converters (for AP2 and AP6 only)

| Appearance                                                                                                    | Style           | Voltage                    | Part Numbers           |                        |
|---------------------------------------------------------------------------------------------------------------|-----------------|----------------------------|------------------------|------------------------|
|                                                                                                               |                 |                            | Used with AP2 Series   | Used with AP6 Series   |
| <br>Secondary Voltage = 6V | AC Adaptor      | 110/120V AC<br>220/240V AC | AP2-0126D<br>AP2-0246D | AP6-0126D<br>AP6-0246D |
|                                                                                                               | DC-DC Converter | 110V DC<br>(90-140V DC)    | AP2-016DD              | AP6-016DD              |



1. Optional AC adaptors and DC-DC converters snap onto the back of AP2 or AP6 pilot lights.
2. AC Adaptors and DC-DC Converters step down to 6V.
3. For dimensions, see page A5-213.

Accessories — AP Series

| Appearance                                                                                                         | Description                                                                                                              | Used With                                       | Part Number |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-------------|
| <br>Locking Ring Wrench           | Made of metal. Used for tightening plastic locking ring during installation. Tightening torque should not exceed 3kgf-cm | Ø 16mm units                                    | MT-001      |
|                                                                                                                    |                                                                                                                          | Ø 12mm units                                    | MT-002      |
|                                                                                                                    |                                                                                                                          | Ø 10mm units                                    | MT-003      |
|                                                                                                                    |                                                                                                                          | Ø 8mm units                                     | MT-004      |
| <br>Mounting Hole Plug            | Made of rubber. Fills unused mounting holes to provide IP65 protection                                                   | Unused 8mm panel cutouts                        | AL-B8       |
|                                                                                                                    |                                                                                                                          | Unused 10mm panel cutouts                       | AL-B1       |
|                                                                                                                    |                                                                                                                          | Unused 12mm panel cutouts                       | AL-B2       |
|                                                                                                                    |                                                                                                                          | Unused 16mm panel cutouts                       | AL-B6       |
| Transformer Removal Tool                                                                                           |                                                                                                                          | AP2 & AP6 snap on transformer & DC-DC converter | MT-100      |
| <br>Replacement Lenses            | Lenses (included with all units).                                                                                        | AP1M Flat                                       | AP1M-L1-②   |
|                                                                                                                    |                                                                                                                          | AP1M Dome                                       | AP1M-L2-②   |
|                                                                                                                    |                                                                                                                          | AP2M Flat                                       | AP2M-L1-②   |
|                                                                                                                    |                                                                                                                          | AP2M Dome                                       | AP2M-L2-②   |
|                                                                                                                    |                                                                                                                          | AP6M Flat                                       | AP6M-L1-②   |
|                                                                                                                    |                                                                                                                          | AP6M Dome                                       | AP6M-L2-②   |
| <br>Replacement Engraving Inserts | Allow legends under flat lenses (included with all flat lens models).                                                    | AP1M Flat                                       | AP1M-P1-W   |
|                                                                                                                    |                                                                                                                          | AP2M Flat                                       | AP2M-P1-W   |
|                                                                                                                    |                                                                                                                          | AP6M Flat                                       | AP6M-P1-W   |



In place of ②, specify the Lens Color Code.

② Lens Color Code

| Color  | Code |
|--------|------|
| Amber  | A    |
| Green  | G    |
| Red    | R    |
| White  | W    |
| Yellow | Y    |

## Dimensions — AP Series

### Pilot Lights (AP Series)

| Style                    | AP8                                        |      | AP1                                         |      | AP2                                      |      |                         | AP6                                      |      |                         |
|--------------------------|--------------------------------------------|------|---------------------------------------------|------|------------------------------------------|------|-------------------------|------------------------------------------|------|-------------------------|
|                          | Flat                                       | Dome | Flat                                        | Dome | Flat                                     | Dome | w/ Adaptor or Converter | Flat                                     | Dome | w/ Adaptor or Converter |
| <b>Panel Cut-out</b>     | Ø 0.319" (+0.0118, -0)<br>8.1mm (+0.3, -0) |      | Ø 0.398" (+0.0118, -0)<br>10.1mm (+0.3, -0) |      | Ø 0.480" (+0.0118, -0) 12.2mm (+0.3, -0) |      |                         | Ø 0.638" (+0.0118, -0) 16.2mm (+0.3, -0) |      |                         |
| <b>Outside Dimension</b> | Ø 0.386" (9.8mm)                           |      | Ø 0.472" (12mm)                             |      | Ø 0.551" (14mm)                          |      |                         | Ø 0.709" (18mm)                          |      |                         |

A5

Switches & Pilot Devices

