

ø22mm Ultra-bright LED Pilot Lights

AP22 Series



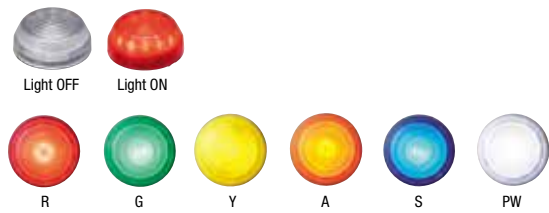
Outstanding visibility, even in direct sunlight.



• See website for details on approvals and standards.

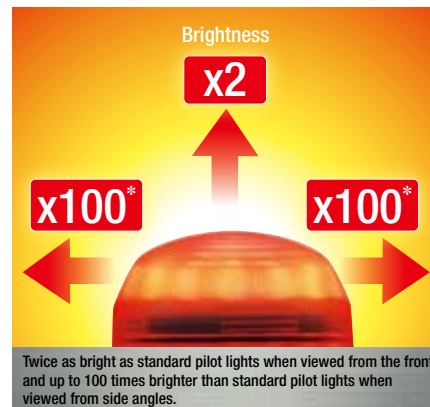
Six different color variations

Viewable in direct sunlight.
Clear lens available (except PW)



High visibility from all directions Unique optical design

Visible from all directions.



Easy wiring

Integrated terminal cover is IP20 (finger protection), preventing electrical shocks.

Great visibility - even from inside a train (automatic safety fence on a train station platform)



Compact size - Perfect for mounting in small or narrow surfaces.



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Specifications

Operating Temperature	-25 to +55°C (no freezing)	
Storage Temperature	-45 to +80°C (no freezing)	
Operating Humidity	45-85%RH (no condensation)	
Insulation Resistance	100MΩ (DC500V megger)	
Over Voltage Category	II (IEC60664-1)	
Impulse Dielectric Strength	2.5kV (IEC60664-1, IEC60947-5-1)	
Pollution Degree	3 (IEC60947-5-1)	
Dielectric Strength	Between terminals of different poles: 2,000V AC, 1 min Between live and non-live parts: 2,000V AC, 1 min	
Vibration Resistance	Operation limit	5-55Hz half amplitude: 0.5mm
	Damage limit	30Hz half amplitude: 1.5mm
Shock Resistance	Operation limit	100m/s ² (10G)
	Damage limit	1000m/s ² (100G)
Degree of Protection	Panel front: IP66 (IEC 60529), UL Type 4X Terminals: IP20	
Terminal Size	M3.5 screw	
Tightening Torque	Terminal Screw	1.0N·m
	Locking Ring	2.0N·m
Wire Size	AWG16 to AWG14, 2 wires max.	
Weight (approx.)	18g	

LED Lamp Ratings

Rated Voltage	24V DC	
Voltage Range	24V DC ±10%	
LED Illumination Color	Red (R), Green (G), Yellow (Y), Amber (A), Blue (S), and White (PW)	
Rated Current	Amber (A)	13mA
	Red (R), Green (G), Blue (S), Yellow (Y), and White (PW)	15mA
LED Life (Ref.)	Approx. 30,000 Hrs. at rated voltage @ 25°C in specified environmental conditions (The brightness reduces to 50% of initial value.)	
Equivalent Circuit	All colors	
	<p>Note: The number of LED chips varies depending on the color. Note: X1 and X2 have no polarity.</p>	

APEM

Switches & Pilot Lights

Control Boxes

Emergency Stop Switches

Enabling Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets

Circuit Protectors

Power Supplies

LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø22

ø30

Miniature

Pilot Lights

HW1Z

AP22



A Series

LD6A

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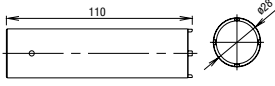


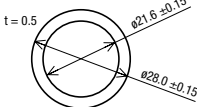
Part Numbers

Pilot Lights

Appearance	Lens	Rated Voltage	Part Number	Lamp Color
	Color	24V DC	AP22M-2Q4 *	R G Y A S PW
	Clear			

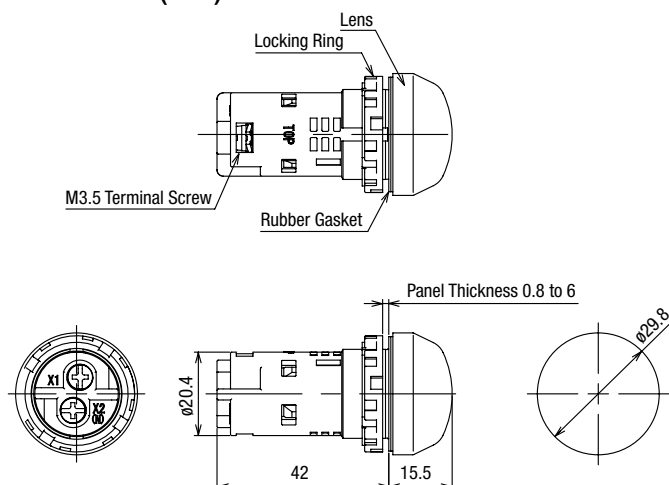
- In place of * insert LED color code: R (red), G (green), Y (yellow), A (amber), S (blue), and PW (white).
- White (PW) only available as colored lens.
- LED cannot be removed or replaced.

Accessories & Replacement Parts

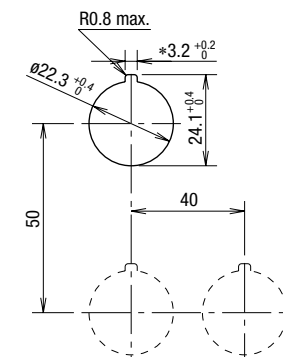
Appearance	Material	Part Number	Notes
	Metal (brass)	MW9Z-T1	Used for mounting unit into a panel. 
	Resin	YW9Z-PL12 *	Dimension: ø29.8mm H14.5mm In place of * insert color code: R (red), G (green), Y (yellow), A (amber), S (blue), C (clear) Note: Use a clear lens (C) for a PW (White) LED.
	Nitrile rubber	HW9Z-WM	

- Nameplates HWAM, HWAS-0, and CWAM can be used.

Dimensions (mm)



Panel cut-out (mm)



- * 3.2mm^{+0.2} opening (notch) is used to stop rotation. (Not necessary if a nameplate is not used.)

⚠ Safety Precautions

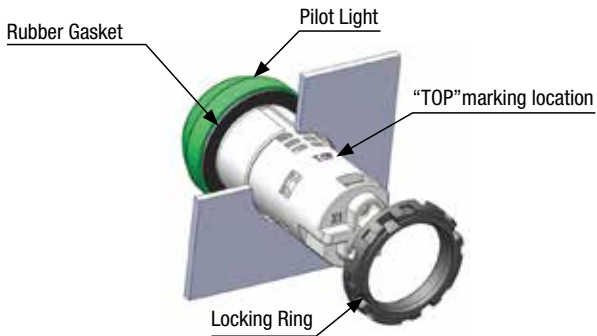
- Turn off the power before installation, removal, wiring, maintenance and inspection. Failure to turn off power may cause an electrical shock or fire hazard.

- When wiring, use proper size wires (AWG16 - AWG14) to meet voltage and current requirements. Tighten the terminal screws to the recommended tightening torque (1.0N·m). Operating with loose terminal screws may cause overheating and fire.

Installation Instructions

Panel Mounting

Remove the locking ring and check if the rubber gasket is properly aligned. Then insert the AP22M unit, align the "TOP" marking with the recess into the panel cut-out, and tighten the locking ring.



When installing the pilot light into a panel cut-out, use locking ring wrench (part number MW9Z-T1) to tighten the locking ring to the recommended torque of 2.0N·m. Do not use pliers and do not tighten excessively, otherwise the unit may become damaged.

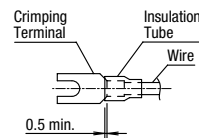
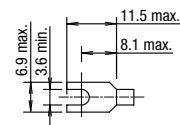
Mounting Notes

Applicable Wires

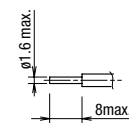
The applicable wire sizes are from AWG14 to AWG16 with 2 wires max. A ring-tongue terminal cannot be used.

Applicable Terminal

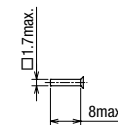
Fork Crimp Terminal



Bare Wire



Ferrule Crimp Terminal



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A Series

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Ordering Terms and Conditions

Thank you for using IDEC Products.

By purchasing products listed in our catalogs, datasheets, and the like (hereinafter referred to as "Catalogs") you agree to be bound by these terms and conditions. Please read and agree to the terms and conditions before placing your order.

1. Notes on contents of Catalogs

- (1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
Also, durability varies depending on the usage environment and usage conditions.
- (2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.
- (3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.
- (4) The content of Catalogs is subject to change without notice.

2. Note on applications

- (1) If using IDEC products in combination with other products, confirm the applicable laws / regulations and standards.
Also, confirm that IDEC products are compatible with your systems, machines, devices, and the like by using under the actual conditions. IDEC shall bear no liability whatsoever regarding the compatibility with IDEC products.
- (2) The usage examples and application examples listed in Catalogs are for reference purposes only. Therefore, when introducing a product, confirm the performance and safety of the instruments, devices, and the like before use. Furthermore, regarding these examples, IDEC does not grant license to use IDEC products to you, and IDEC offers no warranties regarding the ownership of intellectual property rights or non-infringement upon the intellectual property rights of third parties.
- (3) When using IDEC products, be cautious when implementing the following.
 - i. Use of IDEC products with sufficient allowance for rating and performance
 - ii. Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that an IDEC product fails
 - iii. Wiring and installation that ensures the IDEC product used in your system, machine, device, or the like can perform and function according to its specifications
- (4) Continuing to use an IDEC product even after the performance has deteriorated can result in abnormal heat, smoke, fires, and the like due to insulation deterioration or the like. Perform periodic maintenance for IDEC products and the systems, machines, devices, and the like in which they are used.
- (5) IDEC products are developed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use an IDEC product for these applications, unless otherwise agreed upon between you and IDEC, IDEC shall provide no guarantees whatsoever regarding IDEC products.
 - i. Use in applications that require a high degree of safety, including nuclear power control equipment, transportation equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.), equipment for use in outer space, elevating equipment, medical instruments, safety devices, or any other equipment, instruments, or the like that could endanger life or human health
 - ii. Use in applications that require a high degree of reliability, such as provision systems for gas / waterworks / electricity, etc., systems that operate continuously for 24 hours, and settlement systems
 - iii. Use in applications where the product may be handled or used deviating from the specifications or conditions / environment listed in the Catalogs, such as equipment used outdoors or applications in environments subject to chemical pollution or electromagnetic interference
If you would like to use IDEC products in the above applications, be sure to consult with an IDEC sales representative.

3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/maintenance regarding handling of the product before and during the inspection.

4. Warranty

- (1) Warranty period
The warranty period for IDEC products shall be one (1) year after purchase or delivery to the specified location. However, this shall not apply in cases where there is a different specification in the Catalogs or there is another agreement in place between you and IDEC.
- (2) Warranty scope
Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.
 - i. The product was handled or used deviating from the conditions / environment listed in the Catalogs
 - ii. The failure was caused by reasons other than an IDEC product
 - iii. Modification or repair was performed by a party other than IDEC
 - iv. The failure was caused by a software program of a party other than IDEC
 - v. The product was used outside of its original purpose
 - vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs
 - vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from IDEC
 - viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters)Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

6. Service scope

The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.

- (1) Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)
- (2) Maintenance inspections, adjustments, and repairs
- (3) Technical instructions and technical training
- (4) Product tests or inspections specified by you

The above content assumes transactions and usage within your region. Please consult with an IDEC sales representative regarding transactions and usage outside of your region. Also, IDEC provides no guarantees whatsoever regarding IDEC products sold outside your region.

IDEC CORPORATION

Head Office 6-64, Nishi-Miyahara-2-Chome, Yodogawa-ku, Osaka 532-0004, Japan

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