



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**TYPICAL INDICATOR ORDERING EXAMPLE**

**KB**    **02**    **K**    **W01**    —    **12**    —    **FF**

**Shapes**

Bushings Mounting	
01	Square
02	Round
03	Rectangular
Snap-in Mounting	
04	Square
05	Round
06	Rectangular

Housing	
K	Black only

Terminals	
W01	Silver Solder Lug*

\* Wire harness & cable assemblies offered only in Americas

**Lamps**

Incandescent Lamp Used with Solid Cap	
05	5-volt
12	12-volt

Incandescent or Neon Lamp Used with Insert Cap	
05	5-volt
12	12-volt
01	110-volt Neon

**Bright LED Used with Cap for LED**

Colors	Resistor	
	No Code	No Resistor
5C Red	05	5-volt
5D Amber	12	12-volt
5F Green	24	24-volt

**Super Bright LED Used with Cap for LED**

6B	White
6F	Green
6G	Blue

**Cap Types & Colors**

Solid Cap: Lens/Filter Colors			
BB	White/White	FB	Green/White
CB	Red/White	FF	Green/Green
CC	Red/Red	GB	Blue/White
EB	Yellow/White	GG	Blue/Blue

Insert Cap: Lens/Filter Colors	
JB	Clear/White
JC	Clear/Red
JE	Clear/Yellow
*JF	Clear/Green
*JG	Clear/Blue

\* JF & JG not suitable with neon.

**LED Cap: Lens/Diffuser Colors**

AB	Square Spot Illuminated Black Cap/White Window
JB	Clear/White
JC	Clear/Red
JD	Clear/Amber
JF	Clear/Green

**LED Cap: Lens/Diffuser Colors**

JB	Clear/White
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**DESCRIPTION FOR TYPICAL ORDERING EXAMPLE**

**KB02KW01-12-FF**



12-volt Incandescent Lamp Solid Cap with Green Lens and Green Filter

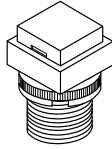
Black Housing Round with Bushing Mounting

Silver Solder Lug Terminals

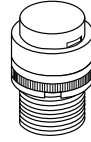
### SHAPES & MOUNTING TYPES

#### Bushing Mounting

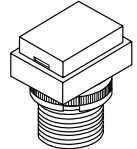
**01** .551" (14mm)  
Square



**02** .551" (14mm)  
Round

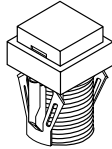


**03** .551" x .728" (14mm x 18.5mm)  
Rectangular

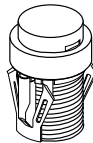


#### Snap-in Mounting

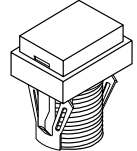
**04** .551" (14mm)  
Square



**05** .551" (14mm)  
Round



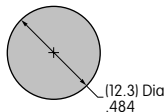
**06** .551" x .728" (14mm x 18.5mm)  
Rectangular



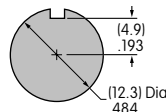
The bezel is an integral part of the indicator body.

#### Bushing Mounting

Without  
Keyway



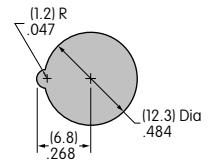
Panel Thickness:  
.020" ~ .315"  
(0.5 ~ 8mm)



With  
Keyway

#### Snap-in Mounting

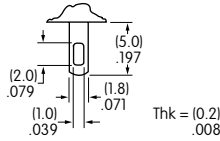
Panel Thickness:  
.039" ~ .138"  
(1.0 ~ 3.5mm)



### TERMINALS

**W01**

Silver Solder Lug



### LAMP COLORS & SPECIFICATIONS

The electrical specifications shown are determined at a basic temperature of 25°C.  
If the source voltage exceeds the rated voltage, a ballast resistor is required.  
The ballast resistor calculation and more lamp detail are shown in the Supplement section.

#### Incandescent & Neon Lamps

AT611 Incandescent	AT615 Neon		<b>05</b>	<b>12</b>	<b>01</b>	Recommended Resistors for Neon: 33K ohms for 110V AC; 100K ohms for 220V AC
			Voltage	V	5V AC	
Current	I	115mA	60mA	1.5mA		
Endurance	Hours	7,000 average		10,000		

#### Bright LED without Resistor

AT635	Red	Amber	Green	<b>No Code</b> No Resistor		
				Red	Amber	Green
Color Codes	<b>5C</b>	<b>5D</b>	<b>5F</b>			
Forward Peak Current	$I_{FM}$			30mA	30mA	30mA
Continuous Forward Current	$I_F$			20mA	20mA	20mA
Forward Voltage	$V_F$			1.9V	2.0V	2.1V
Reverse Peak Voltage	$V_{RM}$			5V	5V	5V
Current Reduction Rate Above 25°C	$\Delta I_F$			0.42mA/°C	0.29mA/°C	0.42mA/°C
Ambient Temperature Range				-25° ~ +50°C		

**AT635**

LEDs are colored  
in OFF state.




T-1 1/2 Bi-pin

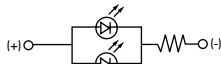
LAMP COLORS & SPECIFICATIONS

The electrical specifications shown are determined at a basic temperature of 25°C.  
 If the source voltage exceeds the rated voltage, a ballast resistor is required.  
 The ballast resistor calculation and more lamp detail are shown in the Supplement section.

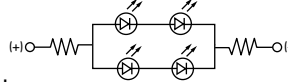
Bright LED with Resistor

<b>AT634</b>  LEDs are colored in OFF state.    T-1 1/4 Bi-pin	Color Codes:	Red <b>5C</b>	Amber <b>5D</b>	Green <b>5F</b>	Resistor Codes			
					<b>05</b>	<b>12</b>	<b>24</b>	
	Forward Peak Current				$I_{FM}$	—	—	—
	Continuous Forward Current				$I_F$	25mA	20mA	10mA
	Forward Voltage				$V_F$	5V	12V	24V
	Reverse Peak Voltage				$V_{RM}$	4V	8V	16V
	Current Reduction Rate Above 25°C				$\Delta I_F$	—	—	—
Ambient Temperature Range					-25° ~ +50°C			

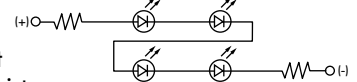
AT634  
5-volt  
2-element  
with 1 Resistor





AT634  
12-volt  
4-element  
with 2 Resistors



AT634  
24-volt  
4-element  
with 2 Resistors



Super Bright Single Element LED

<b>AT625G Blue</b>  <b>AT631B White</b>  <b>AT632F Green</b>    T-1 Bi-pin				<b>6B</b>	<b>6F</b>	<b>6G</b>	
	Color			White	Green	Blue	
	Forward Peak Current	$I_{FM}$			30mA	30mA	30mA
	Continuous Forward Current	$I_F$			20mA	20mA	20mA
	Forward Voltage	$V_F$			3.6V	3.5V	3.6V
	Reverse Peak Voltage	$V_{RM}$			5V	5V	5V
	Current Reduction Rate Above 25°C	$\Delta I_F$			0.50mA/°C	0.50mA/°C	0.50mA/°C
Ambient Temperature Range				-25° ~ +50°C			

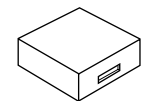
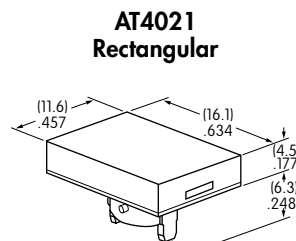
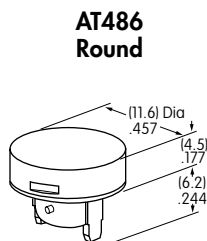
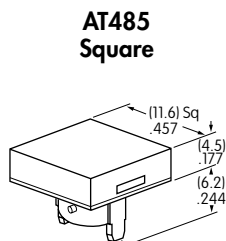
CAP TYPES & COLOR COMBINATIONS

Color Codes:    B White    C Red    E Yellow    F Green    G Blue    J Clear

Solid Cap for Incandescent Lamp

Lens/Filter Colors Available:

- BB**
- FB**
- CB**
- FF**
- CC**
- GB**
- EB**
- GG**



Translucent Colored Lens



Translucent Colored Filter



Lamp AT611

Material: Polycarbonate    Finish: Glossy

### CAP TYPES & COLOR COMBINATIONS

**Color Codes:** A Black B White C Red D Amber E Yellow F Green G Blue J Clear

#### Insert Cap for Incandescent or Neon Lamp

Lens/Filter Colors Available:

**JB**

**AT487**  
Square

**AT488**  
Round

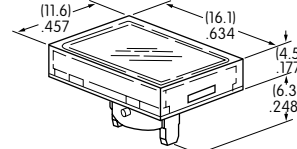
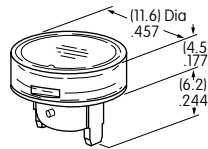
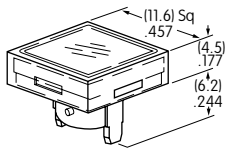
**AT4022**  
Rectangular



Transparent Clear Lens

**JC**

**JE**



Translucent Colored Filter

**JF**

**JG**



Lamp AT611 Lamp AT615

JF and JG not suitable with neon lamp.

Material: Polycarbonate Finish: Glossy

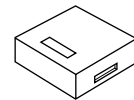
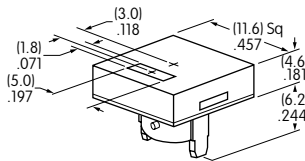
#### Spot Illuminated Cap for Bright LED without Resistor or with Resistor

Cap/Window Colors Available:

**AB**

Opaque Black Cap with Translucent White Window for Spot Illumination

**AT4051**  
Square



Bright LED AT635

Bright LED AT634

Material: Polycarbonate Finish: Matte

#### Cap for Bright LED without Resistor or LED with Resistor

Lens/Diffuser Colors Available: (AT4133, 4132, 4134 white diffusers; AT4158, 4160, 4159 colored diffusers)

**JB**

**AT4133**

**AT4132**

**AT4134**



Transparent Clear Lens

Square

Round

Rectangular

**JC**

**AT4158**

**AT4160**

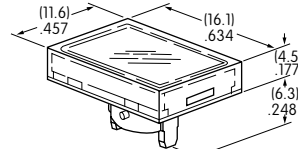
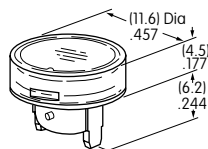
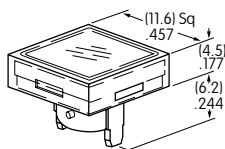
**AT4159**



Translucent Diffuser

**JD**

**JF**



Bright LED AT635

Bright LED AT634

Material: Polycarbonate Finish: Glossy

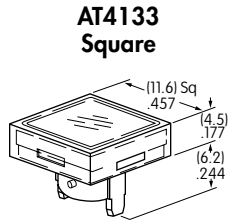
**CAP TYPES & COLOR COMBINATIONS**

Cap for Super Bright LED

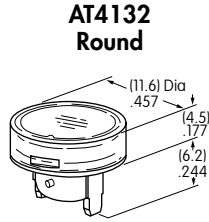
Lens/Diffuser  
Colors Available:



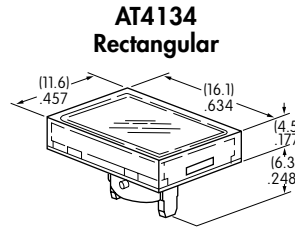
Clear Lens  
White Diffuser



**AT4133 Square**



**AT4132 Round**



**AT4134 Rectangular**



Translucent Clear Lens



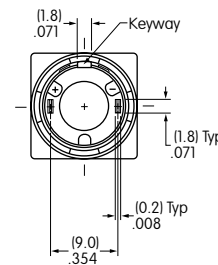
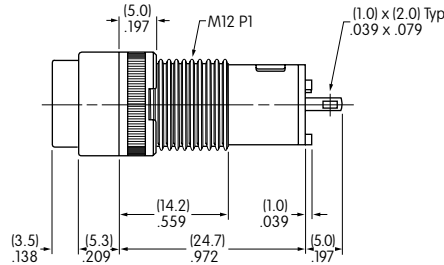
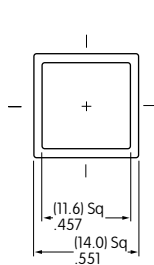
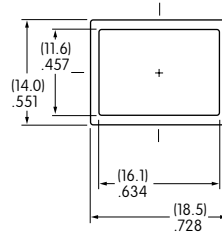
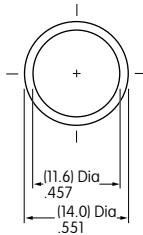
Translucent White Diffuser



Super Bright LEDs  
AT625, AT631, AT632

Material: Polycarbonate Finish: Glossy

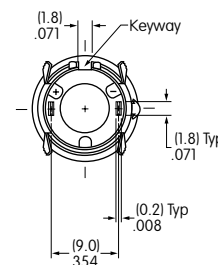
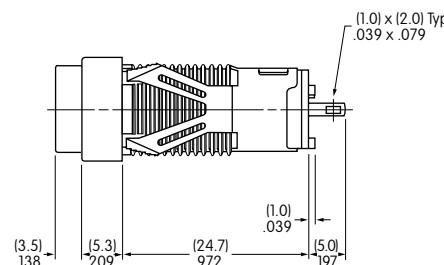
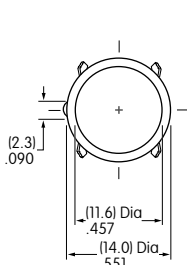
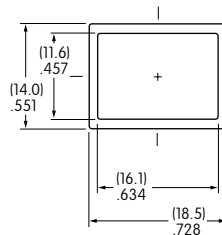
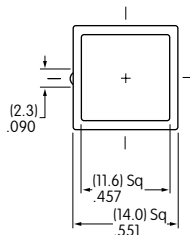
**TYPICAL INDICATOR DIMENSIONS**



**Bushing Mount**



**KB01KW01-05-GG**



**Snap-in Mount**



**KB05KW01-05-FF**